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REPORT TO THE CONGRESS:

Medicare Payment Policy

MEDPAC Medicare
Payment Advisory
Commission

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The Medicare Payment Advisory Commission (MedPAC) is an independent federal body that advises the U.S. Congress on issues affecting the Medicare program. It was established by the Balanced Budget Act of 1997 (P.L. 105–33), which merged the Prospective Payment Assessment Commission (ProPAC) and the Physician Payment Review Commission (PPRC).

The creation of MedPAC reflected a recognition by the Congress that with changes in the delivery of health care services—notably the growth of Medicare’s risk contracting program and substitution across sites of care—separating analytical capacity across two advisory bodies no longer made sense. Accordingly, the Commission’s statutory mandate is quite broad. In addition to advising Congress on payments to health plans and to providers in Medicare’s traditional fee-for-service program, it is also tasked with analyzing access to care, quality of care, and other issues affecting the program.

The Commission has 15 members (to become 17 members May 1, 1999), who bring a wide range of expertise in the financing and delivery of health care services. Commissioners are appointed to three-year terms by the Comptroller General and serve on a part-time basis. Terms are staggered, with the terms of five Commissioners expiring each year. The Commission is supported by a full-time Executive Director and a staff of about 30 analysts. Analysts typically have backgrounds in economics, health policy, public health, or medicine.

The Commission’s work is developed around an analytic cycle that begins in June when Commissioners meet to discuss the analytical issues and policy questions they wish to address in the coming year. Over the summer, Commission staff translate the results of that discussion into a research agenda. Beginning in September, the Commission begins a series of two-day public meetings to discuss the results of staff research and to formulate recommendations.

The primary outlet for the Commission’s recommendations are two reports, required by statute to be issued in March and June of each year. In 1999, the Commission is also required to issue a report on graduate medical education. In addition to these reports, MedPAC advises the Congress through other avenues, including comments on reports to the Congress by the Secretary of the Department of Health and Human Services, testimony, formal comments on proposed regulations, briefings for Congressional staff, and (forthcoming) a series of short issue briefs. This volume fulfills MedPAC’s requirement to submit an annual report to the Congress on Medicare payment policy.

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1730 K Street, NW • Suite 800 • Washington, DC 20006
(202) 653-7220 • Fax: (202) 653-7238 • www.medpac.gov

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Commission Members

Gail R. Wilensky, Ph.D., Chair

Project HOPE
Center for Health Affairs
Bethesda, MD

Joseph P. Newhouse, Ph.D.

Vice Chair
Harvard University
Boston, MA

Term Expires April 1999

P. William Curreri, M.D.

Strategem of Alabama, Inc.
Mobile, AL

Anne B. Jackson, M.A., R.N.

Sarasota, FL

Spencer Johnson

Michigan Health and Hospital
Association
Lansing, MI

D. Ted Lewers, M.D.

Private Practice of Medicine
Easton, MD

Janet G. Newport

PacifiCare Health Systems
Santa Ana, CA

Term Expires April 2000

Peter Kemper, Ph.D.

Center for Studying Health
System Change
Washington, DC

Judith Lave, Ph.D.

University of Pittsburgh
Pittsburgh, PA

Hugh W. Long, Ph.D., J.D.

Tulane Medical Center
New Orleans, LA

William A. MacBain

MacBain & MacBain, LLC
Ithaca, NY

Gerald M. Shea

AFL-CIO
Washington, DC

Term Expires April 2001

Woodrow A. Myers Jr., M.D.

Ford Motor Company
Dearborn, MI

Joseph P. Newhouse, Ph.D.

Alice Rosenblatt, F.S.A., M.A.A.A.

Wellpoint Health Networks
Thousand Oaks, CA

John W. Rowe, M.D.

Mount Sinai School of Medicine
Mount Sinai-NYU Medical Center
and Health System
New York, New York

Gail R. Wilensky, Ph.D.

Commissioners' Biographies

Gail R. Wilensky, Ph.D., is chair of the Commission. She is the John M. Olin senior fellow at Project HOPE, where she analyzes and develops policies relating to health care reform and ongoing changes in the medical marketplace. She also frequently advises members of the Congress and others on the policies and politics of health care reform. Former chair of the Physician Payment Review Commission, Dr. Wilensky has held several posts in the executive branch, most recently as deputy assistant to the President for policy development during the Bush Administration and, before that, as administrator of the Health Care Financing Administration. Recipient of numerous professional awards, she is a member of the Institute of Medicine, a trustee of the Combined Benefits Fund of the United Mine Workers of America, and a governor for the Research Triangle Institute. In addition to serving on many other professional committees and corporate boards, Dr. Wilensky is a well-known speaker who has published widely on health policy, economics, and financing. She received a B.A. in psychology and a Ph.D. in economics from the University of Michigan.

Joseph P. Newhouse, Ph.D., is vice chair of the Commission. He is the John D. MacArthur Professor of Health Policy and Management at Harvard University and director of Harvard's Division of Health Policy Research and Education. He has been at Harvard since 1988. Previously, Dr. Newhouse was a senior corporate fellow and head of the economics department at RAND. He has conducted research in health care financing, economics, and policy, and was the principal investigator for the RAND Health Insurance Experiment. Recipient of several professional awards, he is a member of the Institute of Medicine, a former chair of the Prospective Payment Assessment Commission, and a former member of the Physician Payment Review Commission. He is also a past president of the Association for Health Services Research and has been elected to the American Academy of Arts and Sciences. Dr. Newhouse is editor of the *Journal of Health Economics* and associate editor of the *Journal of Economic Perspectives*. He received a B.A. from Harvard College and a Ph.D. in economics from Harvard University.

P. William Curreri, M.D., is president of Strategem of Alabama, Inc., an international health care marketing and consulting firm. Dr. Curreri has served as professor, chairman, and chief of surgery at the University of South Alabama. He was also on the faculties of the University of Washington School of Medicine and Cornell Medical Center. He previously served on the Physician Payment Review Commission. Dr. Curreri is a former president of the American Burn Association, the Society of University Surgeons, the Halstead Society, and the American Association for the Surgery of Trauma. Author of numerous articles on surgery, Dr. Curreri is a member of the editorial boards of several major surgical and burn care journals and a past editor-in-chief of *The American Surgeon*. A frequent adviser to the National Institutes of Health, Dr. Curreri was a member and former chair of its Surgery, Anesthesia, and Trauma Study Section. He is also a member of the American Board of Surgery and a former member of the executive committee of the board of governors of the American College of Surgeons, where he was secretary from 1987 to 1989. Dr. Curreri received a medical degree from the University of Pennsylvania and completed a surgical residency at the Hospital of the University of Pennsylvania.

Anne B. Jackson, M.A., R.N., is a member of the National Legislative Council of the American Association of Retired Persons and served as chairperson of the Health and Future Generations Committee. She also previously served on the Physician Payment

Review Commission. A registered nurse for 45 years, she retired in 1989. Mrs. Jackson was a professor in the Department of Nursing at City University of New York and was medical supervisor, head nurse, and staff nurse for the Veterans Administration (now the Department of Veterans Affairs). She is a member of the Institute of Medicine's Roundtable on Research and Development of Drugs, Biologics, and Medical Devices. Mrs. Jackson received a bachelor's degree in education from Hunter College and a master's degree in nursing administration from Columbia University Teachers College.

Spencer Johnson is president of the Michigan Health and Hospital Association (formerly the Michigan Hospital Association), which is the principal statewide advocate for hospitals, health systems, and other health care providers who are committed to improving community health status. Before assuming this position in early 1985, Mr. Johnson was executive vice president of the Hospital Association of New York State. Before that, he was involved in the development of federal health policy and legislation as associate director of the Domestic Council at the White House during the Ford Administration and as a professional staff member of the U.S. Senate and the House of Representatives. He has served on the Prospective Payment Assessment Commission and is a board member of both Blue Cross Blue Shield of Michigan and the MHA Insurance Company. Mr. Johnson holds a master's degree in public administration from Cornell University and a bachelor's degree in journalism from St. Bonaventure University.

Peter Kemper, Ph.D., is vice president of the Center for Studying Health System Change. He is principal investigator of the Center's Community Tracking Study, a major national study of change in the health care system and its effect on health care delivery, access, cost, and quality. Before that, he was director of the Division of Long-Term Care Studies at the Agency for Health Care Policy and Research, where he headed studies of nursing home and home health care. Dr. Kemper has published widely on long-term care of the elderly, including home care for those with chronic care needs, nursing home use, and financing of care. His current research is on the effects of various types of managed care on patients' access, service use, and perceived quality. Earlier in his career, he was director of the Madison Office of Mathematica Policy Research and an assistant professor at Swarthmore College. Dr. Kemper received a B.A. in mathematics from Oberlin College and a Ph.D. in economics from Yale University.

Judith Lave, Ph.D., is professor of health economics at the Graduate School of Public Health and codirector of the Center for Research on Health Care at the University of Pittsburgh. She holds secondary appointments in the Katz Graduate School of Business and in the departments of economics and psychiatry. Previously, she served on the Prospective Payment Assessment Commission. At the U.S. Department of Health and Human Services, she was the director of the Division of Economic and Quantitative Analysis in the office of the deputy assistant secretary and director of the Office of Research in the Health Care Financing Administration. Dr. Lave is currently on the editorial boards of *Health Affairs* and the *Journal of Health Politics, Policy, and Law* and a member of both the Institute of Medicine and the National Academy of Social Insurance. She is past president of the Association for Health Services Research and the Foundation for Health Services Research. In addition, Dr. Lave chaired the technical panel on health and was a member of the expert panel on income and health care for the Advisory Council on Social Security. She served on the editorial board of the Health Administration Press. She received a B.A. from Queen's University in Canada, from which she also received an honorary LL.D., and a Ph.D. in economics from Harvard University.

D. Ted Lewers, M.D., a nephrologist and internist, is on the staff at the Memorial Hospital in Easton, Maryland. A member of the board of trustees and vice chair of the American Medical Association, Dr. Lewers is chair of the board and chief executive officer at the Medical Mutual Liability Insurance Company of Maryland and chair of the board of Health Enhancement Center, Inc. Previously, he served on the Physician Payment Review Commission. Long active in organized medicine, Dr. Lewers served as president of the Medical and Chirurgical Faculty of Maryland from 1985 to 1986 and as vice chair of the American Medical Association's Relative Value Scale Update Committee. Dr. Lewers received a B.A. from the University of Maryland and a medical degree from the University of Maryland School of Medicine. He completed an internship at the University of Maryland (Baltimore), a residency at Maryland General Hospital, and a fellowship in nephrology at Georgetown University Hospital.

Hugh W. Long, Ph.D., J.D., is professor of health systems management at the Tulane University School of Public Health and Tropical Medicine in New Orleans. He also holds appointments at Tulane's School of Law and the Freeman School of Business and is a member of Tulane's graduate faculty. Dr. Long is the founder and faculty director of Tulane's master of medical management degree program for physicians. Previously, he served on the Prospective Payment Assessment Commission. He has also taught at Yale, Stanford, San Jose State, and Ohio State universities. Dr. Long has served as an ad hoc adviser on health care financing to the Committee on Ways and Means of the U.S. House of Representatives and to the Committee on Finance of the U.S. Senate and has testified before these committees. He currently serves as the chairman of the Medicare Geographic Classification Review Board. He is the author of numerous articles on health care financing and management and a member of the faculty of the American College of Physician Executives. Dr. Long received a B.A. from Ohio State University, an M.B.A. and a Ph.D. in business administration and finance from Stanford University, and a J.D. from Tulane University.

William A. MacBain is a founding principal of MacBain & MacBain, LLC, a management consulting firm that specializes in managed care. He was formerly senior vice president - health plan operations for Geisinger Health System and executive director of Penn State Geisinger Health Plan, Inc. (New York). Before joining Geisinger in 1988, Mr. MacBain was chief operating officer of HMO of Western Pennsylvania, a health plan and clinic network based on the Miners Clinic in New Kensington, Pennsylvania. Before that, he held senior operations and finance posts with health plans in Tulsa, Oklahoma, and Nassau County, New York. He began his career with Health Services Association, a primarily rural prepaid group practice plan and family health center program north of Syracuse, New York. Mr. MacBain has served as a board member of the American Association of Health Plans, the Group Health Association of America, and the Managed Care Association of Pennsylvania. He chaired the Pennsylvania association for several years. He is also a past commissioner of the Prospective Payment Assessment Commission. He has a B.A. and a master's degree in hospital and health services administration, both from Cornell University.

Woodrow A. Myers Jr., M.D., is director of health care management for the Ford Motor Company, where he is responsible for health benefits for active and retired employees and their dependents, for occupational health and safety services, and for disability and workers' compensation programs. Previously, he was senior vice president and corporate medical director of The Associated Group (now Anthem Blue Cross Blue Shield). He was New York City Health Commissioner and served as Indiana State Health Commissioner and secretary to the Indiana State Board of Health. Before that, Dr. Myers was associate director of the medical-surgical intensive care unit and chairman of the quality assurance program at the San Francisco General Hospital and an

assistant professor of medicine at the University of California, San Francisco. A past president of the Association of State and Territorial Health Officials and former adviser to the U.S. Senate Committee on Labor and Human Resources, Dr. Myers has taught at Cornell University; University of California, San Francisco; and Indiana University. He is on the boards of Harvard University, UCSF/Stanford University Health Systems, and the Charles Drew Medical School in Los Angeles. He is also a master, American College of Physicians, a fellow of the American College of Physician Executives, and a member of the Institute of Medicine. Dr. Myers received a B.S. from Stanford University, a medical degree from Harvard Medical School, and an M.B.A. from Stanford University Graduate School of Business.

Janet G. Newport is corporate vice president of regulatory affairs at PacifiCare Health Systems, Inc., the nation's largest coordinated care Medicare contractor. Her responsibilities include monitoring and supporting internal operational compliance, policy development, and regulatory interpretation. She also acts as the liaison with key regulatory agencies. Ms. Newport serves on several technical and advisory committees for the American Association of Health Plans and is an industry representative on the Health Care Financing Administration's (HCFA) Medicare Council. In addition, Ms. Newport has served as an industry representative on HCFA technical committees and is a former chair of the American Managed Care and Review Association's Medicare Task Force. She has more than 20 years of public affairs experience, including 10 years directing the Washington, D.C. office of another Medicare risk contractor. Ms. Newport received a B.A. from American University.

Alice Rosenblatt, F.S.A., M.A.A.A., is senior vice president of Merger and Acquisition Planning at WellPoint Health Networks. She previously was responsible for its corporate actuarial and strategic planning. Before joining WellPoint in 1996, she was a principal at Coopers & Lybrand L.L.P., where she consulted with insurers, health plans, providers, and employers. She is a former senior vice president and chief actuary of Blue Cross Blue Shield of Massachusetts and Blue Cross of California. Other positions include work for The New England and William M. Mercer, Inc. Ms. Rosenblatt has served on the board of governors of the Society of Actuaries and the American Academy of Actuaries. She previously chaired the academy's federal health committee and work group on risk adjustment. Ms. Rosenblatt has testified on risk adjustment before subcommittees of the Committees on Ways and Means and Commerce of the U.S. House of Representatives. She has a B.S. and an M.A. in mathematics from City College of New York and the City University of New York, respectively.

John W. Rowe, M.D., is president and chief executive officer of Mount Sinai-New York University Medical Center and Health System and president of the Mount Sinai School of Medicine, where he also serves as professor of medicine and geriatrics. Before the Mount Sinai-New York University Medical Center merger, he was president of the Mount Sinai Hospital in New York City. Before joining Mount Sinai in 1988, Dr. Rowe was a professor of medicine and the founding director of the Division on Aging at Harvard Medical School and chief of gerontology at Boston's Beth Israel Hospital. He has authored 200 scientific publications, mostly in the physiology of the aging process, and a leading textbook of geriatric medicine. Dr. Rowe has received many honors and awards for his research and health policy efforts regarding aging and care of the elderly. He is director of the MacArthur Foundation Research Network on Successful Aging and is coauthor, with Robert Kahn, Ph.D., of "Successful Aging" (Pantheon 1998). He served on the board of governors of the American Board of Internal Medicine and as president of the Gerontological Society of America. He is a member of the Institute of Medicine of the National Academy of Sciences.

Gerald M. Shea is assistant to the president for government affairs at the American Federation of Labor–Congress of Industrial Organizations (AFL–CIO). Previously, he served as executive assistant to both the union president and to its secretary-treasurer, as director of the AFL–CIO’s employee benefits department, and as head of its health care reform campaign. He also served on the Prospective Payment Assessment Commission. Mr. Shea worked with the national office of the Service Employees International Union for 12 years, where he held various positions, including assistant to the president for government affairs and health care division director. Before that, he was executive director and business manager of two local unions. Mr. Shea is a member of the Joint Commission on the Accreditation of Health Care Organizations, the Foundation for Accountability, and the advisory board of the Social Security Administration. He received a B.A. from Boston College.

Commission Staff

Murray N. Ross, Ph.D.

Executive Director

Stuart Guterman, M.A.

Deputy Director

Jennifer Jenson, M.P.H., M.P.P.

*Special Assistant to the
Executive Director*

Helaine I. Fingold, J.D.

General Counsel

Analysts

Jack Ashby, M.H.A.
Stephanie Bernell, Ph.D.
Louisa A. Buatti, M.H.S.
Andrew L. Cosgrove, M.P.P.
Elizabeth Docteur, M.S.
David V. Glass, M.S.
Janet C. Goldberg, M.P.H.
Timothy F. Greene, M.B.A.
Scott Harrison, Ph.D.
Kevin J. Hayes, Ph.D.
Dana K. Kelley, M.P.A.
Thomas B. Kornfield, M.P.P.
Craig K. Lisk, M.S.
James E. Mathews, Ph.D.
Stephanie Maxwell, Ph.D.
Michael J. O'Grady, Ph.D.¹
Julian H. Pettengill, M.A.
Susan Philip, M.P.P.
Nancy Ray, M.S.
David W. Shapiro, M.D., J.D.
Sarah S. Thomas, M.S.
Deborah Walter, M.P.A.
Susanne Weinrauch, M.D., M.P.A.
Judy A. Xanthopoulos, Ph.D.
Daniel Zabinski, Ph.D.

Administrative Staff

Wylene Carlyle
Diane Ellison
Delores Hinson
Plinie (Ann) Johnson
Molly Ryan
Cynthia Wilson

¹ On detail to the National Bipartisan Commission on the Future of Medicare

Executive Summary

Executive Summary

The Medicare Payment Advisory Commission (MedPAC) presents in this report its recommendations on Medicare payment policy issues for fiscal year 2000. The Commission's recommendations fulfill MedPAC's legislative mandate to consider, develop, review, and advise the Congress on improvements to the program. In arriving at these recommendations, we have taken into account Medicare's role in the broader health care financing and delivery system and the changes occurring in both the program and the environment in which it functions. Our recommendations are intended to ensure that the Medicare program pays appropriately for covered services and maintains access to quality health care for its beneficiaries.

The Commission's recommendations address the following areas of concern:

- the Medicare+Choice program,
- the acute care hospital inpatient prospective payment system,
- payments for facilities exempted from the acute care prospective payment system,
- development of new payment systems for post-acute care providers,
- modification of payment for services provided in ambulatory care facilities,
- continued reform of the Medicare fee schedule for physicians, and
- the composite rate for outpatient dialysis services.

They represent the collective judgment of MedPAC's 15 commissioners, based on qualitative and quantitative analyses of the relevant issues, discussion of the findings and implications, and deliberations as to the appropriate policy responses.

Payment policy framework

This report begins by describing a framework for considering Medicare payment policy issues. Because the predominant focus of Medicare payment policy over the past 15 years, and a primary emphasis of the Balanced Budget Act of 1997 (BBA), has been on developing prospective payment systems (PPS) for a growing list of provider categories, the chapter focuses on these systems. Key design decisions and the factors that may influence choices among alternative options are illustrated by examining existing fee-for-service systems, such as those used by Medicare for hospital inpatient care and physicians' services. The same approach can be applied to developing payment rates for Medicare+Choice organizations, so that system also is considered in this context.

Medicare's payment policies should ensure that beneficiaries have access to medically necessary care of reasonable quality in the most appropriate setting. At the same time, the program should not spend more than is required to achieve that goal. Payment rates must then be consistent with the costs of efficiently providing the necessary level of care, offering fair payment to providers while not interfering with clinical decisions as to the amount of care or the setting in which it is provided. Accomplishing these objectives involves numerous decisions that determine the level of payment, how it is distributed, and how the system is maintained over time.

Although the decisions themselves may vary with the circumstances related to each type of provider or service, a consistent framework for making those decisions can and should be used.

The Medicare+Choice program

One of the major initiatives of the BBA was to make a wider variety of private health care coverage options available to Medicare beneficiaries by expanding the previous risk contracting program into Medicare+Choice. However, changes in the way the payment rates are determined, the establishment of new regulations in implementing the program, and concurrent trends in the health insurance environment have resulted in the availability of few new options and, in fact, a decline in the number of Medicare risk plans.

It is too soon to tell whether the recent departures from Medicare stem from systematic problems with the level or distribution of payment, but we plan to monitor this situation further in the next year. In the meantime, however, the Health Care Financing Administration (HCFA) should continue to work with the relevant parties to identify specific changes to regulations or other policies that would reduce the burden of compliance without compromising the objectives of the program. Two such changes include moving the deadline by which Medicare+Choice organizations must file their premiums and benefit packages and allowing them to vary their benefit packages by county within their service areas.

The Commission supports the Secretary of Health and Human Services' plan to phase in, beginning in 2000, an interim risk adjustment mechanism for Medicare+Choice payments, which is based solely on data from hospital admissions. As quickly as feasible, however, the risk adjustment mechanism should incorporate diagnosis data from all sites of care. These changes should improve the correspondence between payments to Medicare+Choice organizations and the costliness of their enrollees.

The acute care hospital inpatient prospective payment system

Although the annual updates to the operating payment rate under the Medicare hospital inpatient PPS already are set in law, MedPAC each year provides guidance to the Congress on the appropriate update for the upcoming fiscal year. Based on our ongoing analyses of the factors that determine year-to-year changes in hospital costs, we believe that the operating update for fiscal year 2000 that was enacted in the BBA—1.8 percentage points less than the increase in HCFA's hospital operating market basket index—will provide reasonable payment rates. If the current market basket forecast holds, the update would be 0.7 percent.

The PPS capital payment rate update is set by the Secretary of Health and Human Services each year. The Commission's recommendation on the PPS capital update for fiscal year 2000 is a range between 3.0 percentage points and 0.1 percentage point below the increase in HCFA's hospital capital market basket index, which would be between -1.1 percent and 1.8 percent if the current forecast holds.

These recommendations are made in the context of evidence that the hospital industry has thus far successfully adapted to a more competitive market by changing

its practice patterns and reducing its costs, but also out of concern that many of the major effects of the BBA are not yet fully evident. Therefore, reducing payment rates below the level prescribed in the BBA would not be prudent, at least for this year.

MedPAC also is recommending a revision in the methodology for providing extra payments to hospitals that care for a disproportionate share of poor patients. These disproportionate share payments are made through a complex formula that determines the percentage add-on to each hospital's PPS payments based on its location, size, certain other characteristics, and a measure of care to the poor. The measure of care to the poor, however, excludes uncompensated care and local indigent care programs, which represent a large share of the burden faced by many hospitals that treat poor patients. Moreover, under the current formula, rural and small urban hospitals that treat a disproportionate share of poor patients receive a much smaller adjustment (if any) than large urban hospitals with the same share. Our recommendations are intended to eliminate these flaws.

Payments for facilities exempted from the acute care prospective payment system

Certain types of hospitals and distinct part units of hospitals are exempt from the acute care PPS. PPS-exempt facilities are a diverse group that share a common Medicare payment method established by the Tax Equity and Fiscal Responsibility Act of 1982; they include rehabilitation, long-term, psychiatric, children's, and cancer hospitals, and rehabilitation and psychiatric units in acute care hospitals. Each of these facilities is paid an amount based on its own costs in the payment year relative to a per-discharge target that depends on its costs in a base year, updated to the payment year.

MedPAC's analysis of the factors that determine year-to-year cost increases for PPS-exempt facilities indicates that the update factor applied to the per-discharge targets in fiscal year 2000 should be increased by 0.4 percentage point more than in the formula prescribed in the BBA. The BBA also established a category-specific cap on the per-discharge targets for rehabilitation and psychiatric facilities and long-term hospitals but did not provide that these nationwide caps be adjusted for differences in input prices across areas. We recommend the correction of that technical oversight.

The BBA also required that Medicare implement a new payment system for rehabilitation facilities, and that the Secretary of Health and Human Services develop a proposal for long-term hospitals; it did not mention psychiatric facilities, however. MedPAC encourages additional research in case-mix classification for psychiatric patients, with an eye toward developing a PPS for them in the future.

New payment systems for post-acute care providers

The BBA mandated substantial changes in Medicare payment policy for providers of post-acute care. In addition to the above-mentioned work on new payment systems for rehabilitation facilities and long-term hospitals, a PPS for skilled nursing facilities (SNF) was implemented in July 1998, and an interim payment system for home health agencies was put in place in October 1997 until a PPS can be developed. To guide the development of consistent payment policies across post-acute care settings, MedPAC recommends that common data elements be collected to help identify and quantify the overlap of patients treated and services provided. Further, it is important to put in

place quality monitoring systems in each setting to ensure that adequate care is provided in the appropriate site. We also support research and demonstrations to assess the potential of alternative patient classification systems for use across settings to make payments for like services more comparable.

The Commission has several recommendations to improve the PPS for SNFs. More work is needed in refining the patient classification system used in the PPS for SNFs, particularly in its ability to predict the costs of nontherapy ancillary services. Alternative ways of grouping rehabilitation services provided in SNFs also may be called for to reduce reliance on measurements of rehabilitation time. A methodology for updating the relative weights that determine how much facilities are paid for each type of patient is crucial as the system and the types of services that are provided change over time. In general, as better data become available with the new system, distortions in the base payment rates due to imperfections in the initial data and measures used should be detected and corrected. To avoid future problems, facilities must be accountable for accurately assessing patients' needs and reporting the data used to determine payment for each case. Finally, the distribution of payments would be more appropriate if they were adjusted using a wage index based on data from SNFs, rather than hospitals.

As payment systems for rehabilitation facilities and long-term hospitals are developed, a number of crucial decisions must be made. Among them is the unit of payment. MedPAC recommends that a per-discharge mechanism be adopted for rehabilitation services. A system currently exists that could serve as a basis for such an approach, perhaps with some modifications. We also recommend that, in choosing a patient classification methodology for a long-term hospital PPS, HCFA consider not only per diem but also existing and potential per-discharge approaches.

The interim payment system for home health agencies that was created in the BBA was the subject of a great deal of controversy in the year following its enactment. This controversy stems, in part, from the use of payment policy as a vehicle for curbing the rapidly rising cost of a vaguely defined benefit. Although the debate appears to have at least temporarily subsided with recent changes in the system, MedPAC believes that more fundamental changes are necessary even as a new payment system is being developed. We urge the Congress, in consultation with the Department of Health and Human Services, to enact clearer eligibility and coverage guidelines for Medicare home health services. To understand better the content of home health visits, agencies' bills should describe the specific services provided. Moreover, we recommend that an independent assessment of need be conducted for Medicare beneficiaries who receive extensive home health care to ensure that care is appropriately coordinated and suits the needs of the patient within the proscription of the benefit. Finally, modest beneficiary cost-sharing should be introduced for home health services; copayments should be subject to an annual limit, and low-income beneficiaries and those eligible for Medicaid should be exempt from this requirement.

Payment for services provided in ambulatory care facilities

Spending for facility-based ambulatory services has grown substantially since the early 1980s, partly because the combination of financial incentives and technological advances encouraged the shifting of services that once were provided exclusively in the inpatient setting to hospital outpatient departments (OPD) and ambulatory surgical centers (ASC) as well as physicians' offices. Medicare pays for many of these services differently according to where they are provided. MedPAC offers several recommendations on making payments more equitable across settings and services.

The Commission makes several recommendations that apply to payment for ambulatory care in general. Consistent with the way that Medicare pays for physicians' services, the unit of payment should be the individual service (the primary service and the ancillary supplies and services integral to it), rather than a larger bundle of services. Accordingly, the relative costs of the individual service should determine payment, rather than groups of services taken together. In setting payment rates, the pattern of services and costs across ambulatory settings should be taken into account. Moreover, a single update mechanism, linking updates to spending growth across all ambulatory care settings, should be applied to the payment rates for each type of provider.

The Secretary of Health and Human Services has proposed a new payment system for hospital outpatient services (as required in the BBA) and major modifications in the payment system for ambulatory surgical centers. MedPAC recommends that these changes be closely monitored to ensure that beneficiary access to appropriate care is not compromised in the face of substantial reductions in payments to hospital OPDs. In particular, payments should reflect the higher costs of treating certain types of patients; in the absence of adequate patient-level indicators, facility-level adjustments may be required for the time being. We also are concerned that the loosening of guidelines for determining whether a procedure is eligible for coverage in an ASC may lead to inappropriate changes in the pattern of service provision across ambulatory settings.

In addition, although the BBA provided for a gradual reduction in the amount of beneficiary coinsurance for hospital OPD services, it would be years before that amount were reduced to a level comparable with that for similar Medicare-covered services. MedPAC recommends that the reduction in this amount be accelerated, with increased program spending used as necessary to avoid corresponding decreases in hospital payments.

The Medicare fee schedule for physicians

The BBA mandated a number of changes in the Medicare fee schedule for physicians. Although the resource-based work component of the fee schedule has been in place for several years, HCFA recently began a phase-in of a new resource-based methodology for the practice expense component (which it intends to refine as it is used) and is developing revisions to the professional liability component. In addition, the BBA replaced the mechanism by which the payment rates for physicians' services are updated.

For some services, it is appropriate to pay a lower practice expense amount when physicians perform the service in facility-based settings outside the office. MedPAC recommends using a service-by-service approach to decide which services are subject to this site of service differential, rather than applying the same decision to entire groups of services. Services generally recognized as inappropriate to perform in a physician's office should be paid at the lower facility practice expense level. Participants with a wide variety of relevant expertise should be included in developing refinements to the practice expense component of payment.

The professional liability component of the fee schedule should reflect the risk involved in providing each service and, therefore, conform more closely to the notion of resource-based payment.

MedPAC also recommends several modifications to the sustainable growth rate (SGR) system enacted in the BBA for updating physician payment rates. These include revising the SGR to include measures of changes in the composition of Medicare fee-for-service enrollment to reflect cost increases due to desirable improvements in medical capabilities and technology and to correct for inaccuracies in the forecasts used in estimating the SGR each year. We also call for a reduction in time lags between the periods on which the various components of the SGR are based and the earlier availability of estimated updates for each upcoming year.

The composite rate for outpatient dialysis services

MedPAC is required to recommend an appropriate update to the composite rate for outpatient dialysis services each year. The Commission's analysis indicates that, although the dialysis industry has been profitable and firms continue to enter the market despite the lack of a significant update in the composite rate since it was established in 1983, costs have been approaching payments in recent years. We are concerned that further increases in dialysis costs relative to the payment rate may cause quality to deteriorate and, therefore, recommend that the rate be increased by between 2.4 percent and 2.9 percent. We also urge that the increasing emphasis on the quality of care received by dialysis patients continue, and efforts to collect and evaluate information on patient care and treatment patterns proceed. ■

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Acronyms

AAHCC	American Accreditation Health Care Commission
AAHP	American Association of Health Plans
AAPCC	adjusted average per capita cost
ACRP	adjusted community rate proposal
ADL	activity of daily living
AHA	American Hospital Association
AMA	American Medical Association
APC	ambulatory payment classification
ASC	ambulatory surgical center
BBA	Balanced Budget Act of 1997
BCBSA	Blue Cross Blue Shield Association
BLS	Bureau of Labor Statistics
CBO	Congressional Budget Office
CFR	<i>Code of Federal Regulations</i>
CMI	case-mix index
CPEP	Clinical Practice Expert Panel
CPI	consumer price index
CPT	Current Procedural Terminology
DCG	diagnostic cost group
DRGs	diagnosis related groups
DSH	disproportionate share hospital
ESRD	end-stage renal disease
FDA	Food and Drug Administration
FDO	formula-driven overpayment
FIM-FRG	Functional Independence Measure-Function Related Group
FTE	full-time equivalent
FY	fiscal year
GAO	General Accounting Office
GDP	gross domestic product
GME	graduate medical education
GPCI	geographic practice cost index
HCFA	Health Care Financing Administration
HCPCS	HCFA Common Procedure Coding System
HHA	home health agency
HHS	Department of Health and Human Services
HMO	health maintenance organization
IADL	instrumental activity of daily living

ICD-9-CM	International Classification of Diseases, Ninth Revision, Clinical Modification
IME	indirect medical education
JCAHO	Joint Commission on Accreditation of Healthcare Organizations
LOS	length of stay
MDC	major diagnostic category
MedPAC	Medicare Payment Advisory Commission
MDS	Minimum Data Set
MDS-PAC	Minimum Data Set-Post Acute Care
MEI	Medicare Economic Index
MSA	metropolitan statistical area
NCQA	National Committee for Quality Assurance
NRAA	National Renal Administrators Association
NSI	Nursing Severity Index
OASIS	Outcomes and Assessment Information Set
OBRA	Omnibus Budget Reconciliation Act (OBRA-89, for example)
OPD	outpatient department
PEAC	Practice Expense Advisory Committee
PIP	principal inpatient diagnosis
PIP-DCG	principal inpatient diagnosis-diagnostic cost group
PLI	professional liability insurance
PPO	preferred provider organization
PPRC	Physician Payment Review Commission
PPS	prospective payment system
PRO	peer review organization
ProPAC	Prospective Payment Assessment Commission
QISMC	Quality Improvement System for Managed Care
RN	registered nurse
RUC	Relative Value Scale Update Committee
RUG-III	Resource Utilization Groups, Version III
RVU	relative value unit
SGR	sustainable growth rate
SMS	Socioeconomic Monitoring System
SNF	skilled nursing facility
SSI	Supplemental Security Income
TEFRA	Tax Equity and Fiscal Responsibility Act of 1982
UDSMR	Uniform Data System for Medical Rehabilitation
VPS	volume performance standard

Terms

Access

The ability to obtain needed health care services.

Activities of daily living (ADLs)

Measures, used in an index or scale, of an individual's degree of independence in bathing, dressing, using the toilet, eating, and moving across a small room. See Instrumental activities of daily living.

Adjusted average per capita cost (AAPCC)

A county-level estimate of the average cost Medicare incurs for each beneficiary in the fee-for-service program.

Adjustments are made so the AAPCC represents the level of spending that would occur if each county contained the same demographic mix of beneficiaries. Before enactment of the Balanced Budget Act of 1997, Medicare paid health plans 95 percent of the AAPCC, adjusted for the characteristics of the enrollees in each plan.

Adjusted community rate proposal (ACRP)

A document in which a health plan contracting with Medicare estimates the cost of providing services to its Medicare enrollees and documents the actual value of the benefit package it plans to market to Medicare beneficiaries. Health plans submit ACRPs annually.

Ambulatory payment classification (APC)

A system for classifying outpatient services and procedures for purposes of payment. The APC system classifies some 7,000 services and procedures into about 300 procedure groups.

Ambulatory surgical center (ASC)

A freestanding or provider-based facility that Medicare certifies to perform certain types of procedures on an outpatient basis.

Beneficiary

A person who is eligible to receive benefits under the Medicare program.

Beneficiary liability

The amount beneficiaries or their insurers must pay providers for Medicare-covered services. Liability includes copayments, coinsurance, and deductibles.

Benefit package

Services a health insurance plan covers and the financial terms of such coverage, including cost-sharing, limitations on amounts of services, and additional premiums.

Blended payment rate

A monthly Medicare+Choice county payment rate. This rate is a combination of local and national payment rates and is designed to reduce variation in payment rates between counties. See Medicare+Choice, Local payment rate, and National Medicare+Choice payment rate.

Budget neutrality

For the Medicare program, the adjustment of payment rates when policies change so that total spending under the new rules is the same as it would have been under the previous payment rules.

Capital costs

Depreciation, interest, leases and rentals, taxes, and insurance on tangible assets such as physical plant and equipment.

Capitation

A payment mechanism that pays a fixed amount per person per time period to cover services. Purchasers may use capitation to pay health plans, or plans may use it to pay providers. See Fee-for-service, Medicare risk contract, Medicare+Choice.

Case mix

The mix of patients treated within a particular institutional setting, such as a hospital or nursing home. Patient classification systems—such as diagnosis related groups (DRGs) and Resource Utilization Groups, Version III (RUG-III)—can be used to measure hospital and nursing home case mix, respectively. See Case-mix index, DRGs, and RUG-III.

Case-mix index (CMI)

In hospitals, the average diagnosis related group (DRG) weight for all cases classified according to DRGs. The CMI is a measure of the relative costliness of patients treated in each hospital or group of hospitals. See DRGs.

Coinsurance

A type of cost sharing in which the insured party and insurer share payment of the approved charge for a covered service in a specified ratio. For example, for Medicare physicians' services, beneficiaries pay coinsurance of 20 percent of allowed charges. See Copayment, Deductible.

Conversion factor

The multiplicative factor used to translate relative value units (RVUs) into dollar amounts for physician payment under the Medicare Fee Schedule or the outpatient department prospective payment system. See Medicare Fee Schedule, Relative value unit.

Conversion factor update

The annual percentage change to the conversion factor. For Medicare, the update is set by a formula to reflect medical inflation, changes in enrollment, growth in the economy, and changes in spending due to other changes in law. See Conversion factor, Sustainable growth rate, Sustainable growth rate system, Volume performance standard system.

Copayment

A type of cost-sharing in which the insured party pays a fixed dollar amount for a covered service. See Coinsurance, Deductible.

Cost-sharing

Payments health insurance enrollees make for covered services. Examples of cost-sharing include coinsurance, copayments, deductibles, and premiums.

Deductible

A type of cost-sharing in which the insured party pays a specified amount of approved charges for covered medical services before the insurer will assume liability for all or part of the remaining covered services. See Coinsurance, Copayment.

Diagnosis related groups (DRGs)

A system for determining case mix, used for payment under Medicare's prospective payment system (PPS) for inpatient hospital services and by some other payers. The DRG system classifies patients into groups based on principal diagnosis, type of surgical procedure, presence or absence of significant comorbidities or complications, and other relevant criteria. DRGs are intended to categorize patients into groups that are clinically meaningful and homogeneous with respect to resource use. Medicare's PPS currently uses almost 500 mutually exclusive DRGs, each of which is assigned a relative weight that compares its costliness to the average for all DRGs. See Case mix.

Disproportionate share (DSH) adjustment

A payment adjustment for hospitals that serve a relatively large volume of low-income patients under Medicare's prospective payment system or Medicaid.

Encounter data

Description of the diagnoses made and services provided when a patient visits a health care provider under a managed care plan. Encounter data provide much of the same information available on the bills submitted by fee-for-service providers.

Exempt hospitals and distinct-part units

Specialty hospitals (rehabilitation, psychiatric, long-term care, children's, and cancer) and distinct-part units in general hospitals (rehabilitation and psychiatric) that are exempt from Medicare's hospital inpatient prospective payment system. Federal hospitals, hospitals located in U.S. territories, and Christian Science Sanatoria also are exempt from prospective payment.

Fee-for-service

A method of paying health care providers for individual medical services, as opposed to paying them salaries or capitated payments. See Capitation.

Fee schedule

A list of predetermined payment rates for medical services. See Medicare Fee Schedule.

Fee schedule payment area

A geographic area where payment for a given service under the Medicare Fee Schedule does not vary. See Geographic practice cost index.

Fiscal year

A 12-month period for which an organization plans the use of its funds, such as the federal government's fiscal year (October 1 to September 30). Fiscal years are referred to by the calendar year in which they end; for example, the federal fiscal year 1999 began October 1, 1998. Hospitals can designate their own fiscal years, and this is reflected in differences in the time periods covered by Medicare cost reports. See PPS year.

Flexible benefits policy

An administrative policy that allows Medicare risk contractors to vary their benefit packages within their service areas. A Medicare risk contractor would describe its minimum benefit package in its adjusted community rate proposal but then could add more benefits or reduce cost sharing in any part of its service area. See Adjusted community rate proposal, Service area segments.

Floor rate

The minimum county payment rate for Medicare+Choice organizations. The Balanced Budget Act of 1997 set the floor rate at \$367 for 1998 and increases this amount each year by the estimated growth rate of Medicare fee-for-service per capita spending, minus a statutory reduction of 0.5 percentage point from 1999 to 2002.

Geographic adjustment factor

A composite of the geographic practice cost indexes for physician payment. To calculate the geographic adjustment factor, the Health Care Financing Administration weights the individual indexes for physician work, practice expense, and professional liability insurance using the contribution of each of these components to physician revenues. The geographic adjustment factor is used to adjust the national Medicare+Choice payment rate before it is blended with the local amounts. See Geographic practice cost index, National Medicare+Choice payment rate, Local payment rate.

Geographic practice cost index (GPCI)

An index summarizing the prices of resources required to provide physicians' services in each payment area relative to national average prices. Each component of the Medicare Fee Schedule—physician work, practice expense, and malpractice expense—has a GPCI. The indexes are used to adjust relative value units to determine the correct payment in each fee schedule payment area. See Medicare Fee Schedule, Relative value unit, Fee schedule payment area.

Graduate medical education (GME)

The period of medical training that follows graduation from medical school, commonly referred to as residency, internship, and fellowship training. Medicare provides payments to hospitals to support its share of the direct costs related to these training programs and to support the higher patient care costs associated with the training of residents.

Graduate medical education (GME) carveout

Under the Balanced Budget Act of 1997, the percentage of payments associated with GME costs removed from the local rate calculation for Medicare+Choice plans. By 2002, all GME payments will be removed. See Local payment rate.

Gross domestic product (GDP)

The total current market value of all goods and services produced domestically during a given period. It differs from the gross national product by excluding net income that residents earn abroad.

Health Care Financing Administration Common Procedure Coding System (HCPCS)

A coding system based on the American Medical Association's Current Procedural Terminology (CPT) coding system, expanded to accommodate additional services covered by Medicare.

Health maintenance organization (HMO)

A type of managed-care plan that acts as both insurer and provider of a comprehensive set of health care services to an enrolled population. Benefits are typically provided with limited copayments, and services are furnished through a system of affiliated providers. See Managed care.

Health plan

An organization that acts as insurer for an enrolled population. See Fee-for-service, Managed care.

Health Plan Employer Data and Information Set (HEDIS)

A set of standardized measures of health plan performance. HEDIS allows comparisons between plans on quality, access, and patient satisfaction; membership and use; financial information; and health plan management. Employers, health maintenance organizations, and the National Committee for Quality Assurance developed HEDIS.

Hospital insurance

See Medicare Part A.

Hospital wage index (HWI)

A measure of the prices of hospital inputs in an area, calculated by the Health Care Financing Administration. The hospital wage index is used to adjust the national Medicare+Choice payment rate before it is blended with the local amounts. See National Medicare+Choice payment rate, Local payment rate.

Indirect medical education (IME) adjustment

An adjustment applied to payments under the prospective payment system for hospitals that operate an approved graduate medical education program. For operating costs, the adjustment is based on the hospital's ratio of interns and residents to the number of beds. For capital costs, it is based on the hospital's ratio of interns and residents to average daily occupancy. See Graduate medical education.

Instrumental activities of daily living (IADLs)

Measures, used in an index or scale, of an individual's degree of independence in aspects of cognitive and social functioning, including shopping, cooking, doing housework, managing money, and using the telephone. See Activities of daily living.

Intensity of services

The quantity and mix of resources used in producing a patient care service, such as a hospital admission or home health visit. Intensity of services reflects, for example, the amount of nursing care or the number of diagnostic procedures furnished.

International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM)

A diagnosis and procedure classification system designed to facilitate the collection of uniform and comparable health information. This system is used to group patients into diagnosis related groups. See Diagnosis related groups.

Local payment rate

A rate calculated as part of blended rates for Medicare+Choice organizations. The local rate is what a county would receive once a portion of GME payments are removed, updated by the growth rate in Medicare per capita fee-for-service spending. See Blended payment rate, Graduate medical education carveout, National Medicare+Choice payment rate, Medicare per capita fee-for-service spending.

Locality (Medicare)

See Fee schedule payment area.

Major teaching hospital

A hospital with an approved graduate medical education program and a ratio of interns and residents to beds of 25 percent or greater. See Other teaching hospital, Graduate medical education, Indirect medical education adjustment.

Malpractice expense

The cost of professional liability insurance for physicians. Malpractice expense is a component of the Medicare relative value scale. See Relative value scale.

Managed care

Any system of health service payment or delivery arrangements in which the health plan attempts to control or coordinate use of health services by its enrolled members to contain health expenditures, improve quality, or both. Arrangements often involve a defined delivery system of providers with some form of contractual arrangement with the plan. See Health maintenance organization, Preferred provider organization.

Market basket index

An index of the annual change in the prices of goods and services providers use for producing health services. Separate market baskets exist for operating and capital inputs in skilled nursing facilities, home health agencies, renal dialysis facilities, and hospitals paid under the prospective payment system; and for operating inputs in facilities excluded from payment under the inpatient hospital prospective payment system.

Medicare

A health insurance program for people over 65, those eligible for Social Security disability payments, and those who need kidney dialysis or transplants. See Medicare Part A, Medicare Part B.

Medicare+Choice

A program created by the Balanced Budget Act of 1997 to replace the existing system of Medicare risk and cost contracts. During an open season each year, beneficiaries will have the choice to enroll in a Medicare+Choice plan or to remain in traditional Medicare. Medicare+Choice plans may include coordinated care plans (health maintenance organizations, preferred-provider organizations, or plans offered by provider-sponsored organizations), private fee-for-service plans, or high-deductible plans with medical savings accounts.

Medicare+Choice organization

An entity holding a state license to offer health insurance or health benefits on a risk basis or an entity that has been approved by the Health Care Financing Administration as a provider-sponsored organization under federal rules. Medicare+Choice organizations hold a contract with the Secretary of the Department of Health and Human Services and are responsible for meeting program terms and conditions. These organizations may offer more than one plan to Medicare beneficiaries. See Medicare+Choice, Plan.

Medicare Economic Index (MEI)

An index that tracks changes over time in physician practice costs.

Medicare Fee Schedule

The resource-based fee schedule Medicare uses to pay for physicians' services. See Sustainable growth rate system, Conversion factor, Geographic practice cost index.

Medicare Part A

Also called hospital insurance. This part of the Medicare program covers the cost of hospital and related post-hospital services. Eligibility is normally based on prior payment of payroll taxes. Beneficiaries are responsible for an initial hospital deductible per spell of illness and copayments for some services.

Medicare Part B

Also called supplementary medical insurance. This part of the Medicare program covers the cost of physicians' services, outpatient laboratory and X-ray tests, durable medical equipment, outpatient hospital care, and certain other services. This voluntary program requires payment of a monthly premium, which covers about 25 percent of program costs, with the general revenues covering the rest. Beneficiaries are responsible for an annual deductible and coinsurance payments for most covered services.

Medicare per capita fee-for-service spending

The average amount Medicare spends, per beneficiary, for a given year in the traditional fee-for-service program. The Health Care Financing Administration projects the growth rate of this spending for each year and uses this calculation to determine payment increases for Medicare+Choice organizations. See Floor rate, Local payment rate.

Medicare risk contract

A contract between Medicare and a health plan under which the plan received monthly capitated payments to provide Medicare-covered services for enrollees, and thereby assumed insurance risk for those enrollees. See Adjusted average per capita cost, Adjusted community rate proposal, Medicare+Choice.

Metropolitan statistical area (MSA)

A core area containing a large population nucleus, together with adjacent communities having a high degree of social and economic integration with that core. Defined by the Office of Management and Budget, these areas must contain at least one city with a population of 50,000 or more or a U.S. Census Bureau defined urbanized area with a population of at least 50,000.

National Medicare+Choice payment rate

A rate calculated as part of blended rates for Medicare+Choice organizations. The national rate measures average payments to Medicare+Choice organizations, standardized for differences in hospital and physician input prices among counties based on the contribution of these inputs for Part A and Part B costs. See Blended payment rate, Medicare+Choice organization, Hospital wage index, Geographic adjustment factor.

Other teaching hospital

A hospital with an approved graduate medical education program and a ratio of interns and residents to beds of less than 25 percent. See Major teaching hospital, Graduate medical education, Indirect medical education adjustment.

Outliers

Cases that substantially differ from the rest of the population. In the hospital inpatient prospective payment system, outliers are defined as cases with extraordinarily high costs compared with the payment rates for the same diagnosis related groups (DRGs). Hospitals receive additional payments for these cases.

Physician work

A measure of physicians' time, physical effort and skill, mental effort and judgment, and stress associated with providing a medical service. Physician work is a component of the Medicare relative value scale. See Relative value scale.

Plan

A set of benefits, cost-sharing, and premiums offered by a Medicare+Choice organization. See Medicare+Choice, Medicare+Choice organization.

Practice expense

The cost of nonphysician resources incurred by physicians in providing services. Examples include the salaries and fringe benefits of physicians' employees and expenses associated with the purchase and use of medical equipment and supplies in physicians' offices. Practice expense is a component of the Medicare relative value scale. See Relative value scale.

Practice expense relative value

A value that reflects the average amount of practice expenses incurred in performing a particular service. All values are expressed relative to the practice expenses for a reference service whose value equals one practice expense unit. See Relative value scale.

Preferred provider organization (PPO)

A managed-care plan that contracts with networks or panels of providers to furnish services and be paid on a negotiated fee schedule. Enrollees are offered a financial incentive to use providers on the preferred list, but may use non-network providers as well. See Managed care.

Premium

An amount paid periodically to purchase health insurance.

Principal inpatient diagnostic cost groups (PIP-DCGs)

A risk adjustment method that is the basis for the interim risk adjustment system for Medicare+Choice payment rates. Beneficiaries' relative health status will be measured using the principal diagnoses of inpatient hospitalizations. The model is prospective, meaning that payments in a year will be based on inpatient hospitalizations that occurred the previous year and that payment levels will reflect the spending associated with inpatient diagnoses from the previous years.

Private fee-for-service plan

A Medicare+Choice option that allows all providers to contract with the plan if they are willing to accept the plan's payment terms. See Medicare+Choice.

Productivity

The ratio of outputs (goods and services produced) to inputs (resources used in production). Increased productivity implies that an organization is producing more output with the same resources or the same output with fewer resources.

Professional liability insurance (PLI)

The insurance physicians purchase to help protect themselves from the financial risks associated with medical liability claims.

Prospective payment system (PPS) inpatient margin

A measure that compares PPS operating and capital payments with Medicare-allowable inpatient operating and capital costs. Calculated by subtracting total Medicare-allowable inpatient operating and capital costs from total PPS operating and capital payments and dividing by total PPS operating and capital payments. See PPS operating margin.

Prospective payment system (PPS) operating margin

A measure that compares PPS inpatient operating payments with Medicare-allowable inpatient operating costs. This measure excludes Medicare costs and payments for capital, direct medical education, organ acquisition, and other categories not included among Medicare-allowable inpatient operating costs. Calculated by subtracting total Medicare-allowable inpatient operating costs from total PPS inpatient operating payments and dividing by total PPS inpatient operating payments. See PPS inpatient margin.

Prospective payment system (PPS) year

A designation referring to hospital cost reporting periods that begin during a given federal fiscal year and that reflects the number of years since the initial implementation of prospective payment for hospital services. For example, PPS 1 refers to hospital fiscal years beginning in federal fiscal year 1984. For a hospital with a fiscal year beginning July 1, PPS 1 covers the period from July 1, 1984, through June 30, 1985. See Fiscal year.

Rate book

A set of payment rates for private insurance plans. Under Medicare+Choice, the Health Care Financing Administration has calculated a separate payment rate for each county. To calculate the payment amount for an enrollee, HCFA multiplies the rate book amount by the enrollee risk score. See Medicare+Choice, Risk adjustment, Risk score.

Relative value scale (RVS)

An index that assigns weights to each medical service; the weights represent the relative amount to be paid for each service. The RVS used in the Medicare fee schedule consists of three components: physician work, practice expense, and malpractice expense. See Medicare Fee Schedule, Physician work, Practice expense, Malpractice expense.

Relative value unit (RVU)

The unit of measure for a relative value scale. RVUs must be multiplied by a dollar conversion factor to establish payment amounts. See Relative value scale, Conversion factor.

Resource Utilization Groups, Version III (RUG–III)

A system for determining case mix in nursing facilities. The RUG–III system classifies patients into groups based on functional status (as measured by an index of activities of daily living) and the number and types of services used. Each RUG has a nursing index or weight indicating the average level of resources needed to provide nursing services to patients in the group. Rehabilitation RUGs also have indexes indicating the average level of resources required to furnish therapy services. See Case mix, Activities of daily living.

Risk adjustment

The process used to adjust plan payments to compensate for differences in the health status of enrollees across plans. See Medicare risk contract.

Risk score

The expected costliness of a beneficiary relative to an average national beneficiary. See Risk adjustment, Rate book.

Risk selection

Any situation in which health plans differ in the health risk associated with their enrollees because of enrollment choices made by the plans or enrollees. As a result, one health plan's expected costs differ from another's due to underlying differences in their enrolled populations.

Risk sharing

A method—such as outlier payments that place a health plan at less than full risk by covering the cost of selected services—providing additional payment amounts for high cost patients or to offset plan losses.

Service area

The geographic region in which a Medicare+Choice plan is available to beneficiaries. See Medicare+Choice, Medicare+Choice organization, Service area segments.

Service area segments

A transitional Medicare+Choice policy that allows participating organizations to provide different minimum packages in different parts of their service area. Segments must be defined along county lines (though they may include multiple counties) and may not overlap. Organizations must file a separate adjusted community rate proposal for each plan offered in each segment. See Flexible benefits policy.

Site-of-service differential

The difference in the amount paid to physicians when the same service is performed in different practice settings, for example, a colonoscopy in a physician's office or a hospital clinic.

Skilled nursing facility (SNF)

An institution that has a transfer agreement with at least one hospital, provides primarily inpatient skilled nursing care and rehabilitative services, and meets other specific certification requirements.

Standardization

A process of adjusting payment rates to account for geographic differences such as price levels, demographic characteristics, or health risk.

Supplementary Medical Insurance

See Medicare Part B.

Supplier

A provider of health care services, other than a practitioner, that is permitted to bill under Medicare Part B. Suppliers include independent laboratories, durable medical equipment providers, ambulance services, orthotists, prosthetists, and portable X-ray providers.

Sustainable growth rate

The target rate of spending set by the sustainable growth rate system. Similar to the performance standard under the previous volume performance standard system, except that the target depends on growth of gross domestic product instead of historical trends. See Sustainable growth rate system, Volume performance standard system.

Sustainable growth rate system

A revision to the volume performance standard system, enacted as part of the Balanced Budget Act of 1997. This system is the mechanism for setting fee updates for the Medicare Fee Schedule. It uses a single conversion factor, bases target rates of growth on gross domestic product, and changes the previous method for calculating the conversion factor update. See Volume performance standard system, Medicare Fee Schedule, Conversion factor update.

Uncompensated care

Care rendered by hospitals or other providers without direct payment from the patient or a government-sponsored or private insurance program. It includes both charity care, which is furnished without the expectation of payment, and bad debts, for which the provider has made an unsuccessful effort to collect payment due from the patient.

Update

The factor used for increasing Medicare+Choice payment rates. The update is equal to the Health Care Financing Administration's estimate of the annual growth in Medicare fee-for-service per capita spending, minus a statutory reduction of 0.8 percentage point for 1998, and 0.5 percentage point for 1999 to 2002. See Medicare+Choice, Medicare per capita fee-for-service spending.

Volume performance standard (VPS) system

A recently replaced mechanism for adjusting updates to the Medicare Fee Schedule. It was based on how annual increases in actual spending compared with previously determined rates of increase. See Sustainable growth rate system.

Work relative value

A value that reflects the average amount of physician work to perform a particular service, relative to that of other services. See Relative value scale.

C H A P T E R

1

**A Framework for Considering
Medicare Payment Policy Issues**

A Framework for Considering Medicare Payment Policy Issues

Medicare's payment policies determine the amounts providers will be paid for covered services and supplies used by its beneficiaries. To ensure that beneficiaries have access to necessary care, these policies must work appropriately for thousands of distinct products and services furnished by a multitude of providers—health care professionals, facilities, suppliers, and health care organizations—in hundreds of market areas nationwide. To guide its analysis of payment issues in all of these settings, the Medicare Payment Advisory Commission has begun developing a payment policy framework. This chapter lays out the issues that must be addressed in designing or updating prospective payment systems and a framework for thinking about them. In the coming year we intend to refine this framework and identify explicitly a set of consistent principles that policymakers should follow when they make payment policy decisions.

In this chapter

- Payment policy objectives and environment
 - Major design decisions
-

Historically, Medicare has used a variety of methods to determine providers' payments, including retrospective reimbursement of allowable costs, allowed fees or charges, and prospective payment.¹ Today, payments for most services furnished by hospital outpatient facilities, home health agencies, inpatient rehabilitation facilities, long-term care hospitals, rural health clinics, and several other types of providers are still at least partially determined by the facility's incurred costs. Cost-based payment methods have long been criticized because they are complex, they result in unpredictable payments and spending for providers and Medicare, and they weaken providers' incentives for efficiency.

The Balanced Budget Act of 1997 (BBA) required the Health Care Financing Administration (HCFA) to replace cost-based methods with new prospective payment systems (PPSs) for many types of providers operating in the traditional fee-for-service program. New systems must be implemented for skilled nursing facilities (SNFs), hospital outpatient departments (OPDs), home health agencies, and inpatient rehabilitation facilities. Further, HCFA must submit a report to the Congress by October 1, 1999, on a PPS design for long-term care hospitals. The statute also modified the existing prospective payment systems for hospital inpatient care and physician services. In addition, HCFA has proposed revising its prospective payment system for ambulatory surgical centers (ASCs). Finally, the BBA changed the method for determining prospective capitation payments for health care organizations that enroll beneficiaries in the new Medicare+Choice program.

Under the law, the Medicare Payment Advisory Commission (MedPAC) must review the design and implementation of these policies. In addition, we make annual payment update recommendations to the Congress for Medicare's payment systems (discussed in this report). To guide our analysis of payment issues in all

of these settings, we have begun developing a payment policy framework. Our immediate goal is to lay out the issues that must be addressed in designing or updating prospective payment systems and a framework for thinking about them.² In the longer term, we intend to refine this framework and identify explicitly a set of consistent principles that policymakers should follow when they make payment policy decisions.

This chapter describes our policy framework by:

- outlining Medicare's payment objectives, the payment principles that flow from buying health care in local markets, and payment system design challenges for policymakers, and
- highlighting major design decisions, related payment system components, design options, and implementation issues.

The policy framework focuses on the issues policymakers confront in designing prospective payment systems. We illustrate key decisions and the factors that may influence choices among options by examining similar decisions that have been made in developing existing systems, such as those for hospital inpatient care and physicians' services. Because the same design issues must be resolved in setting payments for Medicare+Choice organizations, we also consider that payment system in this context. These illustrations suggest a set of common design questions that must be resolved in designing any prospective payment system. They also highlight some important design principles and show how their application may lead to different decisions across health care settings.

Payment policy objectives and environment

A framework for analyzing Medicare's payment systems must account for both

Common design questions

What is Medicare buying in a particular setting?

What factors account for predictable variation in the cost of producing these products?

How should we determine the level of payment?

How would we know if payment rates were too high or too low?

What factors should be considered in adjusting the payment rates over time?

Are similar services or products available in another setting?

Under what circumstances should Medicare pay more for a service in one setting than in another?

payment policy objectives and the major features of the environment in which the payment systems will operate. Building a payment policy framework, therefore, raises several immediate questions:

- What are Medicare's payment policy objectives?
- What does buying health services from private providers in local markets imply for setting Medicare payment rates?
- What challenges must policymakers overcome in designing payment systems for multiple settings in a complex and dynamic health care delivery system?

Medicare's payment policy objectives

Medicare's primary goal is to ensure that its elderly and disabled beneficiaries have access to medically necessary acute care of high quality.³ Federal spending to meet this goal is financed by a combination of payroll taxes,

1 Under prospective payment, a provider's payment is based on predetermined rates and is unaffected by its incurred costs or posted charges. Examples of prospective payment systems include the one Medicare uses to pay hospitals for inpatient care and the physician fee schedule.

2 Payments also could be based on negotiated rates or on amounts set by competitive bidding. This chapter focuses on prospective payment systems because Medicare is required by law to use that approach for most services.

3 Medicare also provides limited coverage of long-term care furnished in a skilled nursing facility or through home health visits; it does not cover custodial care.

general revenues, and beneficiaries' premiums. To minimize the financial burden on taxpayers and beneficiaries, Medicare has an obligation to purchase appropriate care as efficiently as possible. Thus, Medicare's payment policies should promote efficient production and distribution of acute care products and services.

Buying health care in private markets

Medicare buys covered products and services from providers who compete for resources in private markets.

Consequently, Medicare's payment systems should strive to establish payment rates that approximate the competitive prices that would prevail in the long run in local health care markets.

If the program's payment systems were successful in meeting this objective, then its payment rates would be:

- high enough to stimulate adequate numbers of providers to offer services to Medicare beneficiaries,
- sufficient to enable efficient providers to supply high quality services given the trade-offs between cost and quality that exist with current medical technology and local supply conditions for labor and capital inputs, and
- low enough to avoid imposing unnecessary burdens on taxpayers and beneficiaries through the taxes and the premiums they pay to finance the program.

Setting the right price

Approximating long-run market prices is not an easy task, partly because no one knows what they would be. Theoretically, long-run market prices in a competitive health care market would equal providers' long-run marginal costs per unit. This suggests that Medicare should pay rates that are equal to providers' long-run marginal costs, as long as those amounts also cover their long-run average costs (Pauly 1980).⁴

In the short-run, however, providers' costs may be above or below their long-run

marginal costs. Moreover, substantial discrepancies between Medicare's prospective payment rates and providers' short-run costs may lead to serious problems for beneficiaries or taxpayers. When providers' marginal costs for individual patients may differ substantially from Medicare's payment rates, providers have incentives to engage in risk selection, seeking only the least costly patients and avoiding those who are likely to need unusually expensive care.⁵ When payment rates fall short of the marginal costs of providing additional services, providers have incentives to stint on the services or inputs used to produce care. Thus, rates that are below marginal costs might cause access and quality problems for beneficiaries. Conversely, when rates are set above marginal costs, providers have incentives to furnish too many services, thereby exposing patients to unnecessary health risks and creating unwarranted financial burdens for beneficiaries and taxpayers.

These potential consequences suggest that Medicare's payment rates should be consistent with efficient providers' marginal costs. Providers' costs are difficult to determine, however, because the available measures are based on accounting costs, which may differ from true economic costs. Further, most health care providers produce multiple products and some operate across two or more settings—hospital inpatient and outpatient care, for instance—making it difficult to disentangle the costs associated with specific services. Nevertheless, markets for most products and services appear to accommodate a fairly substantial range of price and cost variation. Consequently, Medicare's payment rates need only to fall within that range.

Payment rates, incentives, and unintended consequences

In designing a PPS, it is crucial to keep in mind the potential for unintended consequences. Just like market-determined prices, Medicare's prospective payment rates create incentives for efficiency by placing

providers at risk. Providers whose costs exceed the predetermined payment rate will take a loss; those whose costs remain below the payment rate keep the gain. Providers thus have an incentive to improve efficiency for the products and services included in the payment rate.

Providers can lower the risk of loss, however, by reducing their costs or increasing their revenues in ways that are inconsistent with Medicare's goals. As mentioned, these include risk selection, stinting, and increasing the volume of services provided. But others are possible as well even when the payment rates are neither too low nor too high: unbundling the product by shifting some component services to another setting; using the gray areas of diagnosis and procedure coding systems to overstate the complexity of care and receive higher payments; submitting false claims; or ceasing to participate in Medicare.

Each of these strategies has potential short-run and long-run costs for providers, such as loss of reputation, risk of malpractice claims, return of unwarranted payments, or loss of market share. These costs generally encourage providers to respond appropriately to payment incentives. But one or more of these responses may become attractive if Medicare's payment rates depart substantially from efficient providers' production costs. Consequently, payment system design decisions frequently involve carefully considering how the available options may raise or lower the likelihood of unintended responses.

Challenges for policymakers

Designing new payment systems and updating existing payment rates for a variety of health care settings raise several challenges for policymakers. First, circumstances differ among settings, so one challenge is to recognize differences among types of providers, the services they furnish, the beneficiaries they serve, and the tools and information available.

4 Some local markets—for example, those that have only one hospital or one specialist physician—may not be competitive now or in the future. In these and some other situations, providers' long-run average costs may be higher than their long-run marginal costs. Because technology changes and capital assets deteriorate, however, Medicare's payment rates ultimately must cover providers' long-run average costs. Thus, in some instances, Medicare may have to set payment rates that are higher than the prices that might have prevailed in a hypothetical competitive market.

5 To act on this incentive, providers would have to be able to identify patient characteristics that predictably lead to relatively high or low marginal costs.

As later discussion will show, payment system design is largely driven by policymakers' understanding of the clinical characteristics of the products Medicare is buying in each setting and the main features of providers' cost structures.

A second challenge arises because the delivery of health care is complex. In a single episode of care, for example, beneficiaries may receive physician visits, hospital outpatient diagnostic procedures, a surgical procedure during a hospital inpatient stay, physical therapy in an inpatient rehabilitation unit, post-acute care in a skilled nursing facility, and home health visits. At various points during the episode, the same or similar services could be furnished in two or more settings in which providers are paid under different payment systems with potentially different payment rates and financial incentives.

This complexity means that policymakers must recognize the potential for overlap among settings and avoid introducing inconsistencies among payment systems that might distort the behavior of providers or beneficiaries in determining the types and amounts of services consumed and the settings in which they are furnished. Other factors being equal, Medicare should pay the same amount for identical services regardless of the setting in which they are furnished. In applying this principle, however, policymakers need to be sure that services with the same description are in fact identical. This would not be true if the patients served in alternative settings present different clinical risks or needs for support services that may legitimately affect providers' costs. The challenge of appropriately addressing potential overlaps among settings has been growing with the introduction of new organizational arrangements for the delivery of care.

The dynamism of the health care system raises a final challenge. Continuing advances in medical science and technology and innovations in the organization and delivery of care alter the services available, where they can be produced, and providers' costs of production. Medicare's administered pricing systems (and those used by other health insurers), however, lack the full

complement of competitive market feedback mechanisms.

Normal market feedback mechanisms generate prices that lead providers and consumers to adjust their behavior in response to changes in supply and demand conditions. Health care markets are unusual, however, because insured consumers face drastically reduced prices in purchasing services and because consumers and their physicians are both usually separate from the payer. One result is that consumers' decisions about service use are often distorted. Another is that shifts in demand among consumers in response to changes in product content or in service availability across settings do not automatically alter insurers' payment rates.

Consequently, Medicare must adjust its payment rates over time to reflect changes in prices that otherwise would occur automatically in a competitive market. This means that mechanisms for updating the payment rates and related factors must be designed and implemented in each setting to respond appropriately to changes in underlying supply and demand conditions. To support this effort, Medicare must devote substantial resources to monitoring and evaluating changes in the clinical technology and organization of care. In addition, the program must monitor beneficiaries' access to services, the quality of care they receive, and other indicators that suggest when payment rates diverge too far from providers' costs.

Major design decisions

All prospective payment systems must ultimately resolve the same set of issues:

- **Establishing the unit of payment.** Will providers be paid for an individual service or a bundle of services, such as an inpatient day, an inpatient stay, an episode of care or illness, or a month of care?
- **Establishing relative values.** How will payment rates based on the selected unit of payment be differentiated among distinct services, bundles of care, or beneficiary

characteristics to recognize appropriate and predictable differences in providers' costs?

- **Defining local input price adjustments.** How will payment rates be adjusted to recognize differences in local prices for inputs such as labor and capital? Local input price differences, which reflect variations in supply and demand conditions among market areas, may substantially raise or lower providers' costs. Payment rates must be adjusted accordingly to avoid creating arbitrary gains and losses for providers based solely on their location.
- **Defining other rate adjustments.** How will payment rates be adjusted to accommodate unusual circumstances of providers or special characteristics of services and beneficiaries that affect providers' costs but are not accounted for by the basic payment model? One example is how to adjust the payment rate when physicians perform surgery in an OPD or an ASC, thereby avoiding some costs that otherwise would be incurred in their offices. Another is how to adjust the payment rate when a patient's care turns out to be unusually costly.
- **Setting the initial level of payment.** How will the initial level of the payment rates be determined? Options include providers' historical costs or past Medicare spending for services in the particular setting.
- **Updating the payment rates over time.** How will payment rates and related factors be updated to reflect changes in technology, practice patterns, and market conditions? Update mechanisms must be designed to detect changes in these factors and make appropriate revisions to each of the main payment system components while maintaining the affordability of the program.

Policymakers' decisions on these issues define the components of a PPS. The essential character of any PPS primarily reflects choices on the unit of payment and the relative values. These two interrelated

General prospective payment formula

In a prospective payment system, the payment rate for a specific product in a particular market area is determined by the following general formula:

Payment rate for product A in market area B =

Initial base payment amount

x update factor

x input-price adjustment factor for market area B

x relative value for product A

x other rate adjustment factors

The initial base payment amount is usually a national dollar amount for a specific year that reflects policymakers' decisions on the unit of payment and the appropriate initial level of payment for the

average unit. The update factor adjusts the initial base amount for inflation and other factors to set the base level of payment for the rate year. The input-price adjustment factor then raises or lowers the national base amount to reflect the relative level of input prices in the particular market area compared with the national average. Next, the relative value adjusts the market-specific base amount to reflect the expected relative costliness of the particular product compared with that of the average unit. Finally, the local rate for the specific product may be modified by one or more additional rate adjustment factors designed to accommodate unusual characteristics of the provider, the service, or the specific patient.

hospital stay—a completed episode of acute inpatient care, beginning at admission and ending when the patient no longer needs the acute level of care hospitals offer. In contrast, the unit of service for physician care could be thought of as either an episode of care or as an individual instance of service.

Defining and measuring the product or service requires identifying the clinical factors that account for variation in the content and duration of care. In addition, reliable information on those factors must be readily available at the appropriate level (service, episode of care, or beneficiary). Lack of sufficient knowledge and information has often prevented policymakers from using a larger payment unit in some settings. For example, the recently implemented SNF payment system is based on a per diem payment unit rather than a complete stay because the clinical and other factors that account for differences in patients' lengths of stay are not well understood. Similarly, payment for home health care is based on visits rather than episodes of care because no one knows how to appropriately differentiate home care episodes.

Are effective product classification systems and related data available?

Using a particular unit of payment requires a compatible and effective classification system that identifies distinct services, patient care products (types of days or cases), or beneficiaries that are expected to require different amounts of providers' resources. In the physician fee schedule, this function is performed by HCFA's Common Procedure Coding System (HCPCS). The hospital inpatient PPS is based on the diagnosis related groups (DRG). The Medicare+Choice program classifies beneficiaries based on their demographic characteristics and institutional status and soon will add health status. In each instance, the categories in the classification system define the products for which Medicare will pay.

decisions define the products for which Medicare will pay. They also determine the scope of the payment system's incentives and its potential power to influence service use and program spending.

Establishing the unit of payment

Choosing a unit of payment depends on several issues:

- How well can the product be defined?
- Are effective product classification systems and related data available?
- How will policymakers balance trade-offs between the scope of the payment incentives and potentially undesirable provider responses?
- Is it desirable to bundle services furnished by complementary providers?
- What supporting rules are needed to define the boundaries of the payment unit?

How well can the product be defined?

One of the most important factors influencing the unit of payment decision is how well the product or service can be defined. If the product cannot be defined well, setting payment rates that accurately reflect providers' expected costs will be difficult, and providers' gains and losses could be largely unrelated to their performance. It also would be difficult in this case to monitor providers' performance and ensure that they deliver what Medicare wants to buy. Moreover, a PPS based on a poorly defined product gives providers both incentives and opportunities to benefit financially without improving efficiency.

Ideally, the unit of payment should match the unit of service, which reflects the way providers think about the product and provides context for their decisions about care.⁶ The unit of service for hospital inpatient care, for instance, is a

6 The unit of payment may be changed intentionally to alter the mindset of providers. In the early 1980s, HCFA replaced per diem limits on hospitals' allowable costs for routine inpatient care (room, board, and nursing care) with per case payments, partly to stimulate changes in hospitals' and physicians' thinking about the production of inpatient care.

The need for an effective classification system can be seen by considering how hospitals' financial incentives would change if Medicare paid a single fixed price for all inpatient stays. Although hospitals still would face strong incentives to reduce the cost of care for any patients they might serve, they also could realize large gains by engaging in risk selection, admitting only patients with relatively low-cost conditions. Conversely, they would experience large losses for patients with high-cost conditions, for example, those who required a bone marrow transplant or those with severe burns. Consequently, a per case PPS without an effective classification system like the DRGs would surely create access problems for beneficiaries with serious illnesses.

Effective classification systems generally meet two essential criteria. First, they account for a reasonably high proportion of the predictable variation in providers' costs. A successful system thus captures most of the systematic cost differences that result from clinical or other differences among services, patients, or beneficiaries. To the extent that this criterion is not met, providers have incentives for risk selection.⁷ Equally important, providers that have established a reputation for expertise may attract patients who are more seriously ill and more costly than the average patient. When the classification system fails to capture such severity differences, these providers may be penalized because they cannot balance losses on high cost patients with gains from low cost ones.

Second, the classification variables, such as diagnoses or procedures, must be reasonably objective and easily monitored. If this criterion were not met, providers would have incentives to increase their revenues by manipulating the classification variables (called code creep) so that services or patients were assigned to higher paid categories.

The relevant information—procedures, patient diagnoses, or beneficiary characteristics—needed to assign services, patients, or beneficiaries to the appropriate classification categories also must be readily available. The lack of relevant data on beneficiary health status has retarded development of more effective classification systems and prevented payment system improvements in most post-acute care settings and in Medicare's managed care program for many years.

How will policymakers balance trade-offs between the scope of incentives and potentially undesirable provider responses?

Other factors being equal, policymakers should choose a large unit of payment over a small one because it gives broader scope to providers' incentives for efficiency. This choice, however, also affects the potential undesirable actions providers might take. Whether this trade-off is important largely depends on the extent to which providers control product content and volume.

The scope of providers' incentives for efficiency depends on the size of the product or unit included in the price. Larger units include more services, thereby increasing the provider's opportunity to economize on the mix and quantity of services and related inputs used to produce the unit. Thus, a hospital inpatient stay or a month of care provides broad incentives for efficiency because many services are included in the product. In contrast, a narrow unit of payment—individual services, such as office visits or X-rays for instance—provides narrower incentives for efficiency. The provider's opportunities to reduce costs are limited to altering the mix and quantity of inputs used to produce each service.

Providers may respond to these incentives as intended, or some may respond in less desirable ways, such as

stinting on services or inputs and increasing the number of units they furnish. The potential actions they might take, however, depend on the size of the payment unit, their control over the product, and the likelihood of oversight.⁸

When providers have direct control over product content and volume, a small payment unit—the service for instance—generally creates relatively little concern about stinting, but substantial concern about potential increases in the volume of units. Conversely, a large payment unit usually generates more concern about potential stinting but less about unintended changes in volume. Large payment units, such as hospital stays, generally include broad opportunities for stinting, but they often involve significant risks for patients and substantial costs and thus are more likely to attract oversight and review.

Providers' control over content and volume varies among care settings. In many facility settings, such as hospital inpatient units or ambulatory surgical centers, physicians' orders largely determine both the mix and quantity of services furnished and the number of patients served. In these settings, the potential for adverse responses to payment incentives by the facility provider may be limited to some degree by physician oversight. The strength of physician influence varies among settings, however, reflecting the extent to which they actively direct the care patients receive. Thus, the potential for both stinting on services and unintended volume growth might be of greater concern in a SNF payment system based on a per diem payment unit, for instance, than it would be in a hospital PPS with a per stay payment unit.⁹

Physicians' roles have been changing, however, raising some uncertainty about whether the traditional independence of their patient care decisions may be eroding. This uncertainty reflects physicians' growing interrelationships with

7 Medicare generally does not pay for physicians' services based on episodes of care because it lacks an effective episode-based classification system. One exception is surgical episodes in which pre- and post-operative office visits are bundled together with the surgical procedure and paid under a global surgical fee. Another is end-stage renal disease; Medicare pays for physician management of dialysis services on a monthly capitation basis.

8 The likelihood that providers would take undesirable actions also may be affected by other factors, such as related potential costs (loss of reputation, for example), how well the product is defined, and the degree of consensus about its medical necessity. Personal and professional ethics and values also play a significant role.

9 The potential for unintended volume growth has been a major concern in the physician fee schedule and in other ambulatory care settings where the payment unit is the individual service.

other providers, especially hospitals and health care organizations, through contractual incentives that affect their compensation or through practice ownership.

Is it desirable to bundle services furnished by complementary providers?

Although a larger payment unit generally is preferred over a smaller one, the larger unit may be rejected because of concerns about the potential effects on patients. In the hospital inpatient PPS, for example, physician services related to a hospital inpatient stay could have been combined with the hospital facility services included in each DRG. This probably would have had little effect on the way in which diagnoses and procedures were grouped in defining the DRGs, but it certainly would have affected the relative values across DRGs and the initial level of payment.

Paying the combined rate to physicians would have potentially exposed them to high levels of financial risk. Although hospitals were better able to bear the financial risk, many physicians were concerned that giving hospitals control over the combined payment would compromise their independence in making patient care decisions. In the end, policymakers were persuaded that preserving physicians' independent patient advocacy role provided valuable protection for Medicare beneficiaries and outweighed potential efficiency gains that might have been obtained by using a broader payment unit.

What supporting rules are needed?

Payment policy cannot stand alone. Policymakers also must define the boundaries of the payment unit because

providers facing a fixed payment rate have financial incentives to unbundle the product by billing separately for individual services that should be included in the payment unit or by shifting some of these services to another setting.

In the hospital inpatient PPS, for instance, hospitals have a strong incentive to shift diagnostic services to the outpatient department or a physicians' office. Hospitals also can reduce inpatient costs by discharging patients earlier to a long-term care hospital, rehabilitation facility, SNF, or home health care, all of which are paid under separate payment systems. SNFs have similar incentives to reduce per diem costs. Their ability to realize savings depends on how the boundary is defined between the bundle of services a SNF is expected to furnish and services that may be provided by an independent provider or in another setting—diagnostic imaging services furnished in a nearby hospital outpatient department, for instance.

To limit potential unbundling, HCFA has implemented a variety of rules. For example, hospital outpatient services furnished within 72 hours before a patient's admission for care are assumed to be part of the inpatient stay and may not be billed separately under the hospital outpatient payment system. To mitigate shifting of services at the end of a stay, hospitals' per discharge payments are reduced in 10 DRGs when a patient is discharged to a rehabilitation facility, long-term care hospital, SNF, or to related home health care after a stay that is two or more days shorter than the national average length of stay for the DRG.¹⁰ The 10 DRGs include categories in which a high proportion of Medicare patients go on to use post-acute care.

Establishing relative values

Relative values measure the expected costliness of a unit in each classification category compared with the overall average costliness of all units.¹¹ Relative values may be structured in different ways depending on policymakers' understanding of the clinical components of care and providers' cost structures. Thus, for each setting, policymakers must decide what components are combined to produce the product, how those components vary among product categories, and what factors are likely to affect efficient providers' component production costs. These decisions produce a model of provider cost structure, which identifies a set of factors that are expected to account for variation in the unit cost of services.

The model of hospital costs that is implicit in the hospital inpatient PPS, for example, is relatively simple. Hospitals' costs are assumed to be the sum of operating and capital costs. Each component is expected to vary in the same way across DRGs. Consequently, only one set of DRG relative values is needed to determine both the operating and capital components of a hospital's payment rates for all DRGs.¹²

The model of provider cost structure implicit in the physician fee schedule is more complicated. The value of each physician service is assumed to include three parts: physician work, practice expenses, and professional liability insurance costs. The value or cost of each component is expected to vary across the service categories of the HCPCS coding system, but the distribution is different in each instance. Consequently, three sets of relative values are needed to determine the

10 Such early discharges are considered transfers, and the hospital is paid based on a per diem rate up to a maximum of the full per discharge payment rate for the DRG.

11 Relative values also may be thought of as measuring the relative worth of each product or service compared with that of all services in the particular setting. Conceptual distinctions between cost, worth, and value, however, generally have little practical significance.

12 Other factors differ between the operating payment rates and those for capital—geographic input-price adjustments for example—but the DRG relative values are the same. Although it is highly likely that the distribution of capital costs among DRGs differs from that for operating costs, it would be difficult to measure accurately capital costs by DRG. Moreover, policymakers anticipated that the capital and operating payment rates eventually would be combined in a single rate for each DRG. Consequently, they chose to use the same relative values for both components.

payment rate for a service.¹³

In the Medicare+Choice payment system, the relative values are based on a risk adjustment model that estimates expected annual spending for all Medicare-covered services given a beneficiary's demographic characteristics, eligibility for Medicaid benefits, and institutional status. HCFA has proposed using a new model that also takes into account beneficiaries' health status as indicated by the principal diagnosis for the most costly hospital stay (if any) they had during the previous year.

Constructing relative values

Relative values are often based on estimates of providers' costs. HCFA originally developed the DRG relative values for Medicare's hospital inpatient PPS, for example, using estimates of hospitals' average costs per case in each DRG. These estimates were derived from provider-specific billed charges and cost to charge ratios for each component type of service, adjusted to reflect national average input price levels.¹⁴ Relative values for OPD services in HCFA's proposed outpatient PPS are determined similarly.

In the Medicare+Choice payment system, relative values are based on estimated average annual spending for Medicare-covered services for each beneficiary category. This method is appropriate because spending for covered services accounts for the overwhelming majority of a health plan's costs. These estimates are developed from HCFA's annual claims database, which includes all fee-for-service bills paid under the traditional program.

Sometimes, however, the data needed to estimate providers' costs at the product or component level are unavailable. In these instances, policymakers have used two alternative approaches. Occasionally, relative values have been based on a measure that reflects a major component

of costs. Relative values for different categories of patient days in the recently implemented PPS for SNF services, for instance, were based on data from staff time studies. Although the mix and quantity of staff time accounts for much of the cost of a day of SNF care, this approach may result in payment errors if other components of costs follow a different pattern. Pending collection of data on actual cost differences among services, physicians' historical charges were used as a proxy for costs in developing relative values for the practice expense and professional liability insurance components of the physician fee schedule.

In other instances, relative values have been based on expert opinion. Service-specific data on resource use for the physician work component are almost unimaginable. To fill this void, panels of physicians assigned relative values to individual services by comparing them with a set of reference services usually performed by different physician specialists. These values were intended to measure the relative amount of work for each service based on several criteria, such as the amount of physician time, intensity of effort, skill, and risk to the patient, compared with those for the reference services.

Defining local input price adjustments

Input-price differences among market areas may account for 50 percent or more of the observed nationwide variation in providers' costs for a given product. Consequently, an effective input-price adjustment is essential in setting appropriate payment rates for each market area.

Input-price adjustments are made using a price index, which compares prices in each market area with the national average. The index is applied to raise or lower all or a portion of the base payment amount to reflect each area's input-price level. The price index is

based on two types of information: an input-price data set, which shows the average price in each market area for each type of resource; and a set of weights indicating the relative importance of each input in the production process, as indicated by its share of providers' costs.

Product components that are affected by input-price variation

Designing appropriate input-price adjustments requires decisions on three issues. First, policymakers must decide which product components—and corresponding portions of the base payment amount—should be adjusted for local price variation. This decision is based on knowledge of the production process, which identifies components whose inputs vary in price among local markets, and the proportion of component production costs that are affected. In the hospital inpatient PPS, for instance, HCFA has determined that 71 percent of hospital operating costs are affected by local variation in prices for labor. The other 29 percent is largely made up of supplies and minor equipment items, which are assumed to be purchased in national markets and thus need no adjustment.¹⁵

Defining input market areas

In addition, policymakers must decide how market areas will be defined. This is critical both for measuring price differentials for specific inputs and for determining the adjustment that applies for any provider. HCFA generally has used metropolitan statistical areas and statewide rural areas to define market areas for most facility PPSs, such as those for hospitals, ASCs, and SNFs. In the physician fee schedule, market areas in some states are defined by administrative regions (called localities), and in others they are statewide. In the Medicare+Choice program, market areas are defined by collections of counties

13 Anesthesia services are priced separately using a single set of relative values based on the sum of a fixed component and a time-based component, which varies by procedure.

14 Later analysis showed that adjusted costs per case were highly correlated with adjusted charges among DRGs. Consequently, DRG relative values have been based on billed charges for more than a decade.

15 A cost of living adjustment is applied to adjust the nonlabor component for hospitals in Alaska and Hawaii.

representing where each county's resident fee-for-service beneficiaries received care.

Measuring input prices

The third issue is how to measure input prices in each area. For each setting, policymakers must choose the specific inputs for which prices will be measured; whether to use prices paid only by providers in a specific setting or prices for the same or similar inputs paid by a broader spectrum of providers; and how to account for differences among settings in the mix of inputs used. In recent years, HCFA has annually collected data on total wages and hours from most facilities, such as hospitals and SNFs. HCFA uses these data, without adjusting for differences in the mix of occupations employed, to calculate wage indexes for each type of facility in more than 300 market areas. The lack of an adjustment for occupational mix differences may cause the hospital and SNF wage indexes to overstate substantially the actual relative level of wages in some market areas and understate it in others.

For the physician fee schedule, HCFA calculates separate geographic practice cost indexes for physician work, practice expenses, and professional liability insurance expenses for 89 payment localities. To calculate these indexes, HCFA uses data from the decennial census, residential rent indexes, and other sources. Because each service is described by separate relative values that account for its particular mix of physician work, practice expenses, and professional liability expenses, the potential for systematic distortions across areas may be lower than that in the hospital and SNF wage indexes.

In the Medicare+Choice program, the most relevant inputs are the services that health plans purchase from physicians, hospitals, outpatient facilities, SNFs, and home health agencies. However, policymakers cannot easily obtain data on the prices health plans paid for a representative set of services, and many market areas have no health plans serving Medicare beneficiaries.

Consequently, an input-price adjustment based on service prices is probably not a reasonable option in the near term.

Providers in virtually all health care settings employ workers in many of the same occupations, although the proportions probably vary substantially among settings. An alternative to the current approach thus might be to collect occupation-specific wage data from a representative set of providers operating in all health settings in each market area. These data then could be used with occupation cost shares for specific settings to obtain a set of indexes that could be applied in individual payment systems.

Defining other rate adjustments

Policymakers must decide whether and how to adjust the payment rate for a service or bundle of services to accommodate unusual characteristics of the patient or the services provided, the provider, or the market area in which the provider operates. Generally, rate adjustments should be applied for factors that would affect an efficient provider's costs and are beyond the provider's control. In some instances, policymakers also have added payment adjustments to provide explicit support for certain socially valued activities.

Special characteristics of patients or services provided

The product classification systems used in setting payment rates often fail to capture all of the patient characteristics that may affect providers' costs of delivering care. Some of these characteristics may be predictable. For example, extremely frail patients or those with severe cognitive impairment may require extra assistance for services as simple as a chest X-ray. In other instances, higher costs may be triggered by the occurrence of random events. Patients who suffer serious complications, such as a pulmonary embolism or a stroke during a hospital stay, can double or triple the hospital's costs compared with those for typical patients with the same underlying illness.

A payment system that fails to recognize predictable additional costs would give providers strong disincentives to treat patients who have high cost characteristics. Further, the extra costs associated with random catastrophic events could threaten providers' financial viability and thus beneficiaries' access to care.

In the hospital inpatient PPS, the latter problem is addressed by an outlier policy, which operates much like a mandatory reinsurance policy. Medicare makes additional payments to hospitals when costs for a patient exceed a DRG-specific loss threshold. The difference between the loss threshold and the usual DRG payment rate is a fixed loss amount, which acts like a deductible that must be exceeded before outlier payments begin. Payments above the deductible loss amount are subject to a 20 percent coinsurance (borne by the hospital) because Medicare pays only 80 percent of the additional amount. Outlier payments substantially reduce the losses hospitals otherwise would incur on unusually high cost patients, thereby limiting hospitals' incentives to avoid those who are seriously ill. These payments are financed by an equivalent aggregate reduction in all DRG payments, thus distributing the burden of unusually costly patients among all hospitals in proportion to their DRG revenue.

The physician fee schedule includes modifiers that a physician may apply to raise the physician work relative value when the services provided are greater than those usually required for a procedure. Other fee schedule modifiers may apply when a return trip to the operating room is required for a related or unrelated procedure during the postoperative period.

The opposite situation also may arise—when not all of the services included in the unit of payment are needed. This may occur, for instance, when a patient is transferred from one hospital to another after only a few days. To reflect the transferring hospital's lower costs, payment for these cases under the inpatient PPS is based on a DRG-specific

per diem rate, which is equal to the hospital's full DRG payment rate divided by the national average length of stay for the DRG. This policy recognizes that the first day of care is usually much more costly than subsequent days of inpatient care. The transferring hospital thus receives twice the per diem rate for the first day and the per diem amount for each additional day, up to the full DRG rate.

Analogous adjustments are made in the physician fee schedule for situations in which the physician's service is less than that usually required. For example, modifiers are applied to reduce the relative value for the procedure if the physician acts as an assistant surgeon or if review of the medical record indicates that the usual services were not fully furnished. For many services, the practice expense component of the physician's payment is reduced by a site-of-service differential when the service is provided in an OPD or an ASC rather than the physician's office.

In the Medicare+Choice payment system, payments to an organization are reduced substantially when an enrolled beneficiary is employed and covered under the employer's health insurance plan. Under the law, the employer is primarily responsible for making payments to the plan and Medicare is considered the secondary payer. In this case, the organization's costs are unaffected, but it would be overpaid if Medicare made its usual payment.

Special characteristics of providers or market areas

Some providers offer specialized types of care that are not available from otherwise similar entities, thereby incurring unusual costs. Hospitals that provide organ transplant surgery, for example, bear highly variable costs for organ acquisition. Failing to recognize this extra burden would give hospitals strong incentives to cease offering transplant services. Consequently, these costs are excluded from the hospital inpatient PPS and paid separately based on the reasonable amount actually incurred. Other hospitals treat a disproportionate

share of patients with end-stage renal disease (ESRD). To preserve access to care, the payment system accounts for the extra costs these facilities incur in providing dialysis services for ESRD patients when they are treated for unrelated conditions. The inpatient PPS thus makes extra payments based on the weekly cost of dialysis to hospitals in which more than 10 percent of Medicare patients have ESRD but are admitted for unrelated care.

Other providers serve sparsely populated or economically depressed market areas. One example is hospitals that are the sole providers in their communities. Another is physicians who practice in urban or rural health professional shortage areas. These providers may face higher costs or other disincentives to continue serving such markets. Both the hospital inpatient PPS and the physician fee schedule provide special treatment for providers in these circumstances.

Similarly, health care organizations participating in Medicare's managed care program (now the Medicare+Choice program) have been reluctant to serve counties with low payment rates. These counties may be unattractive because they have relatively small populations of beneficiaries or few hospitals and other providers with whom organizations might contract. To overcome these disadvantages and improve beneficiaries' access to health plans, the Congress established a floor payment rate, raising payment rates for some counties by 20 percent or more.

Explicit subsidies for socially valued activities

Developing a prospective payment system forces policymakers to make explicit decisions about whether to provide subsidies for certain socially valued activities. Before the hospital inpatient PPS was adopted, Medicare reimbursed hospitals for its share of the costs they incurred for certain activities, such as medical education and training programs. Unpaid costs incurred by hospitals that serve large numbers of poor patients generally were not reimbursed by

Medicare unless they were related to the care furnished to Medicare patients. When the Congress adopted the inpatient PPS, it decided to make extra payments to hospitals to support both of these activities.

Extra payments for these activities generally have not been made in other settings. HCFA's proposed hospital outpatient PPS, for example, does not include payment adjustments for hospitals that operate teaching programs or those that serve a disproportionate share of poor patients (see Chapter 6). Moreover, policymakers generally have not been willing to adopt payment adjustments to support costs associated with other potentially valuable activities, such as hospitals' participation in trials of experimental therapies.

Setting the initial level of payment

Given the decisions they have made on the unit of payment, relative values, and payment adjustments, policymakers must establish the initial level of the base payment amount in each payment system. Combined with actual service use by type of service and location, the initial payment amount will determine the level of the payment rates, total program spending for the setting, and the level and distribution of beneficiaries' related copayments in the first payment year.

The base payment amount represents the amount Medicare pays for a standard service, product, or beneficiary in an area with national average input price levels. In the hospital inpatient PPS, for example, the base payment amount is Medicare's payment for an average case (a case in a DRG in which the relative value is 1.0) in a hospital located in an area with national average wage rates (the wage index equals 1.0), if no other adjustments are applicable.

Major issues

The obvious issue is how to calculate an initial value for the base payment amount that is consistent with earlier payment design choices. The answer depends on three issues:

- whether pertinent information on providers' costs and payments, is available,
- whether, and how, to allow for regional differences in practice patterns, and
- whether the proposed payment system will be constrained to meet a specified aggregate spending target. A spending target may maintain aggregate spending at the level anticipated under the previous payment system (called budget neutrality) or achieve specified budget savings.

Availability of pertinent information.

HCFA has used providers' reported costs and claims data to develop cost-based payment amounts when cost data have been available—for example, in payment systems for services provided in hospital inpatient and outpatient facilities, ASCs, SNFs, and home health agencies. When cost data have not been available, or relevant, HCFA has used data on claims payments and total spending instead, for instance in the physician fee schedule and in Medicare's managed care program.

Regional differences in practice patterns. Providers located in different regions may use varying amounts and mixtures of services and inputs to provide patient care.¹⁶ As a result, providers' costs for a standard service unit or product may differ substantially among regions. In this case, policymakers face three options. One is to set payment rates based on a national base payment amount, thereby ignoring regional cost differences. With the same aggregate spending, this option would likely result in substantial redistribution of payments among providers based on their regional location. A key question in evaluating this option is whether any resulting changes in practice patterns would be harmful to beneficiaries. The answer depends on whether more costly practice patterns are associated with substantial improvements in patient outcomes.

A second option is to set payment rates based on separate regional base payment amounts, thereby fully recognizing regional differences in average cost. This approach would likely result in relatively little payment redistribution, and providers in all regions would face comparable incentives to alter their practice patterns to improve efficiency. On the one hand, this approach might seem attractive if higher cost practice patterns were associated with better outcomes. On the other hand, it would tend to freeze practice patterns for providers and beneficiaries in low cost regions, preventing them from realizing available quality improvements by adopting the practice patterns used in high cost regions.

The third option is a compromise, blending national and regional base payment amounts in specified proportions. This option may be used as a transition mechanism to blend national and regional amounts in varying proportions over time, thus allowing providers a reasonable period to make practice adjustments. Moreover, the transition may end with a single national payment amount or with a specific permanent blend of national and regional amounts. Policymakers might choose a permanent blend if they were uncertain about the extent of the association between quality and cost.

Two examples illustrate how policymakers have addressed this issue. In the early 1980s, hospital inpatient operating costs per case exhibited substantial regional variation, partly because average lengths of stay were about twice as long in the Northeast and the Midwest as they were in the South and the West. After much debate, the Congress decided to include regional and national payment amounts in a transition mechanism that also included updated hospital-specific base year costs. The four-year transition ended with a PPS based on separate urban and rural base

payment amounts which reflected a judgment that regional differences in practice patterns were not strongly associated with quality differences.

The second example concerns Medicare's original risk contracting program. Policymakers initially decided that managed care organizations should be able to provide all Medicare-covered services to beneficiaries in return for 95 percent of the estimated monthly per capita amount Medicare would expect to spend in the traditional fee-for-service program in each county. This decision recognized the full effects of differences in fee-for-service practice patterns on county per capita spending. For example, monthly per capita payment rates for managed care organizations in 1997 ranged from \$221 to \$767 among counties, with practice variation accounting for roughly 30 to 40 percent of the total variation (ProPAC 1997).¹⁷

The Congress revisited this issue in the BBA and decided to reduce substantially payment variation among counties by blending each county's updated base year payment rate with an input-price adjusted national average payment rate. At the end of the five-year transition period in 2002, the updated county and national rate components will each account for 50 percent of the county payment rate, thus recognizing one-half of the practice pattern variation in traditional Medicare spending among counties.

Constraining the payment amount to meet a spending target. A budget neutrality requirement or other spending target shifts the policy focus from concerns about how the initial base payment amount should be developed to the assumptions that are made to ensure that actual spending reaches the target. This shift in focus occurs because a spending target, together with the other components of a payment system's design, fully determines the initial level of the base payment amount.

16 This variation may have developed in response to differences among market areas in the supply of specific resources or as a result of historical factors, such as state policies, that influenced the organization of care. Long-term care hospitals and ASCs, for example, tend to be highly concentrated in certain regions.

17 The Prospective Payment Assessment Commission (ProPAC) estimated that adjusting the county payment rates for variation in input prices would reduce the range by roughly one-half. The remaining variation comprises some combination of unmeasured differences in average risk (expected costliness) for the beneficiaries in each county and differences in the mix and quantities of services used (practice variation). If the former represents roughly 10 to 20 percent of the total variation, the latter must account for 30 to 40 percent.

A spending target is sufficient to determine the initial base payment amount because of the way in which targets are implemented. First, HCFA develops a projection of the expected aggregate program payments that would be made under the current payment system during the initial year of the new system. This spending target is generally based on the most recent claims (and cost) data available and anticipated trends in factors that are expected to affect service use and costs in the projection year. HCFA then develops a similar projection of total program spending anticipated under the new payment system. This projection is based on the same data but takes into account the payment rates in the new system, and anticipated responses to those rates by providers and beneficiaries. Although aggregate spending under the new system cannot be estimated without plugging in an initial payment amount, this amount is not really needed. Because the spending target is known, HCFA can infer what the initial payment amount would have to be, given its data and assumptions, to produce projected spending equal to target spending.

To project spending under the new system, HCFA must decide how providers are likely to change their behavior in response to altered payment incentives. Among other responses, providers may unbundle services, improve the quality and completeness of diagnosis and procedure coding, or increase the volume of service units they furnish. All of these actions would increase spending within the particular setting, or in the case of unbundling, in other settings. HCFA often tries to capture the overall effect of such responses in a behavioral offset assumption. In implementing the physician fee schedule, for example, HCFA assumed a 50 percent behavioral offset; 50 percent of the savings that otherwise would accrue from the new system would be lost to the combination of these responses. This assumption played an important role in determining the initial level of the

conversion factor and thus the level of physicians' fees.

Setting the initial payment amount in the absence of a spending target

Without a budget neutrality requirement or other spending target, policymakers must decide how to determine the initial level of the base payment amount using data on providers' costs, paid claims, and annual program spending. Three methods generally have been used. All three require prior development of the product classification system, relative values, and payment adjustment factors that will be applied in the proposed payment system.

The first method uses providers' historical cost information, Medicare claims data for the relevant services or products, and the proposed payment system components. HCFA combines these elements to build up a base payment amount for a standard product or service. Variations on this approach have been used to set base payment amounts for the hospital inpatient, outpatient, and SNF payment systems.

The second method uses claims data for all covered services, demographic characteristics for all fee-for-service beneficiaries living in each county, and relative values for demographic categories. HCFA uses these data to estimate per capita program spending for a standard beneficiary (one who has national average demographic characteristics) in a geographic area and in the nation. This approach has been used to establish a base payment amount per enrollee for each county in Medicare's managed care program.

The third method is based on claims data, estimated total spending for the relevant services (including both program spending and beneficiary copayments), and the proposed payment components. As in the budget neutrality calculation described earlier, HCFA combines these elements to infer the base payment amount that would generate the same expected total spending. This method has been used to establish conversion factors for the physician fee schedule.

Building initial payment amounts using providers' costs and claims

The details of developing a base payment amount for the first payment year would vary somewhat according to the choice of method and the payment design decisions made earlier for a particular setting. HCFA has frequently used the first method based on cost and claims data because almost all types of facilities have been paid on the basis of incurred costs, making cost data for individual providers readily available. Using this method, however, raises three sets of issues:

- **Adjusting providers' base year costs.** Policymakers must decide how to adjust providers' reported base year costs to reflect earlier policy decisions about specific cost components and to improve comparability among providers. Cost elements that will be paid separately should be excluded from each provider's costs. Comparability may be improved by adjusting unaudited costs for the average effect of auditing and all providers' costs to reflect a common fiscal period rather than provider-specific reporting periods.
- **Standardizing for product mix, input prices, and other payment adjustments.** Policymakers also must decide how to adjust the revised provider-specific cost data to remove cost differences that reflect variations in service or product mix, local input-price levels, and other activities for which special payment adjustments will be made. These adjustments are necessary to make the base payment amount consistent with the various payment adjustments included in the payment system.
- **Computing and updating the base year amount.** The remaining decisions involve how to compute the base year amount per unit and update it to the first payment year. Policymakers could decide, for example, to compute the base year per unit amount using a simple

average, a volume-weighted average, or the median of providers' per unit standardized costs. Alternatively, policymakers could attempt to identify a subset of relatively efficient providers and use only their standardized costs to compute the base year amount per unit.

Identifying efficient providers generally has proven to be difficult, however, partly because of the need to control for potential differences in product quality. The base year standardized amount per unit also must be updated to the first payment year.

Updating the payment rates and related factors

Once a new payment system has been implemented, policymakers must decide how to update the payment rates and related factors to reflect changes in technology, practice patterns, and market conditions. Thus, policymakers must develop methods and data sources for updating three sets of payment components: the base payment amount, the classification system and relative values, and the various payment adjustments.

Policymakers also must decide how often each payment component should be updated. This depends on how rapidly market conditions, technology, and other factors change. In most payment systems, the base payment amount has been updated annually to reflect inflation in input prices and other factors that are expected to alter the level of providers' unit costs in the forthcoming year.

The timing of updates may differ for other payment components. For example, although input prices may rise annually with inflation, the relative structure of prices across market areas may change less rapidly. Consequently, input-price indexes may not need revision more often than every three or four years. Similarly, the relative costliness of different products may be affected by changes in technology and practice patterns, but this is usually a slow process. The classification system and relative values in many settings may thus need only minor revisions each year, with

major revisions at longer intervals. Some of the other payment adjustments, such as outlier loss amounts for instance, may require annual updates, while others may be revised rarely, if at all.

Updating the base payment amount

Among these update issues, the lion's share of policymakers' attention has been focused on how to determine annual updates to the base payment amount in each payment system. This focus reflects the powerful role the base amount plays in determining the level of the payment rates and its strong influence on total program spending.

It is important to note that the update affects all payment rates equally. Although it influences the total amount of spending for a class of services or products, the update does not affect the distribution of spending among providers or regions. Consequently, the update has nothing to do with the question of whether Medicare's payment rates are at the right level for any specific service or in any particular market. Rather, the focus is on two questions:

- Is the overall national structure of the payment rates at the right level?
- What factors should be taken into account in deciding how much to change that level over time?

Payment updates often are used to address both questions at the same time. It is important to keep these questions distinct, however, because each requires different types of information and different judgments. The first question asks policymakers to consider what has been happening in the recent past that might signal a substantial divergence between the base payment amount and providers' current costs. The answer is important because payment rates that are too low may lead to a reduction in beneficiaries' access to care or the quality of care they receive, while rates that are too high may encourage overproduction of services, which would burden beneficiaries and taxpayers.

If the analysis suggests that the base payment amount has strayed too far from

providers' costs, then policymakers should make a corresponding adjustment. This is sometimes called rebasing because a similar adjustment would result if providers' most recent cost data were used to recalculate the base payment amount. Adjusting the base rate in this way does not recoup past over- or under-payments to providers. Rather, it simply makes the base payment rate more consistent with providers' costs in the future.

The second question asks policymakers to consider what objectives they want update policy to achieve. Update objectives may be limited to keeping the payment rates consistent with providers' costs, thereby focusing attention on factors that should legitimately affect those costs in the forthcoming year. Alternatively, policymakers also may seek to control growth in program spending for a particular set of services. This involves considering whether recent spending growth has been above or below the desired level and adjusting the update appropriately to rectify any discrepancy. In this case, policymakers use payment updates deliberately to signal providers that they have been producing too many or too few services.

These decisions about update objectives suggest the kinds of factors that should be considered in determining how much to raise payment rates for the forthcoming year. Assuming that the base payment amount is at the right level today, policymakers can use their knowledge of the recent past and their expectations about the future to develop a quantitative projection for each factor. These projections can then be combined to determine a specific update percentage. Finally, the resulting update percentage may be added to any rebasing adjustment determined earlier to produce a consolidated update for the coming year.

Evaluating the current level of payment. Policymakers may examine a broad array of information to evaluate whether the current base payment level is consistent with providers' costs. The direct relevance, availability, cost, and quality of each type of information will

vary by industry and setting:

- **Market prices and costs.** Policymakers could compare Medicare's payment rates directly with market prices and costs for services and products in each setting. Observing market prices and costs often is not feasible, however, because providers' posted fees or charges generally differ from the payments they actually receive from public and private payers. Moreover, measuring actual prices is difficult and extremely costly, partly because they often are determined in private negotiations between individual providers and payers, and neither party wants competitors to know the agreed amounts.
- **Access and quality of care.** Evidence of widespread access or quality problems for beneficiaries might suggest that Medicare's payment rates are too low. In the absence of such evidence, Medicare's rates could be either about right or too high.¹⁸
- **Entry and exit.** Rapid growth in the number of providers participating in Medicare across many market areas could indicate that Medicare's payment rates are too high. Conversely, widespread provider withdrawals from Medicare could suggest that the rates are too low.
- **Volume growth.** Rapid growth in the volume of services could suggest that Medicare's rates are too high. Declines in volume could indicate the opposite. Either trend, however, also could be explained by changes in technology, beneficiaries' preferences, or practice patterns.
- **Providers' costs, revenues, and margins.** Information on providers' costs and revenues sometimes can be obtained from HCFA's administrative files or from industry surveys. This information often is incomplete because it lacks accurate measures of each provider's overall product mix, and it is available only for some

types of providers. As noted earlier, accounting costs may differ from providers' true economic costs. Such cost and revenue data are valuable, however, because they provide a good picture of providers' overall financial condition and financial performance on their Medicare business. Often, these data provide fairly strong evidence about the overall relationship between Medicare's payment rates and providers' Medicare costs for broad sets of services, such as hospital inpatient and outpatient care. They also allow policymakers to track trends in providers' average costs.

- **Changes in the product.** Medicare administrative data and industry surveys also enable policymakers to examine broad trends in the nature of the providers' product. For example, recent declines in hospitals' inpatient costs per discharge partly reflect substantial declines in lengths of stay. Some part of both trends certainly results from ongoing changes in technology (new drugs and improvements in surgical techniques and anesthesia, for instance), but another part reflects a substantial shift in the site of care. More beneficiaries are using post-acute services in rehabilitation facilities, long-term care hospitals, SNFs, or home health care, and they are being discharged to these settings earlier than in the past. The shift in site of care has helped to reduce hospitals' costs per case, but it has not reduced Medicare's per case payment rates. These trends suggest that Medicare's current base payment amount for hospital inpatient care may be too high (see Chapter 3).

In isolation, none of these indicators provides direct evidence about the appropriateness of Medicare's current base payment amounts in any of its payment systems. Collectively, however, they often provide enough evidence for policymakers to make reasonable judgments for at least some settings, such

as hospital inpatient care.

Policy objectives and update methods. Once policymakers have decided whether to change the current base payment, they also must decide what factors should be considered in determining the update for the forthcoming year. This decision is driven by their update policy objectives. The objective of maintaining consistency with providers' costs in the next year is common to all update methods. But policymakers also may want to control total program spending.

Historically, differences in update objectives have led policymakers to determine updates using three approaches. One builds the percentage update by examining historical trends and future projections for factors that are expected to affect providers' costs in the forthcoming year. Although some factors may be quantified with reasonable precision, others require substantial judgment. This approach has been used by MedPAC and HCFA in developing update recommendations for most facility-based services, such as hospital inpatient care, SNF services and home health care (see Chapters 3 and 5).

The second approach takes some of the same kinds of factors into account but also considers whether cumulative changes in program spending are likely to be sustainable in light of projected changes in overall economic conditions. This approach, called the sustainable growth rate (SGR) system was adopted in the BBA to set updates for the conversion factor in the physician fee schedule. HCFA annually makes estimates of the update components specified in the law and applies the resulting update to the conversion factor. Technical judgment is required in making these estimates, but there is little room for policymakers' judgment. In this report, the Commission recommends that the Congress consider adopting a somewhat modified form of this approach to set coordinated updates for all ambulatory care payment systems, including those for physician services, hospital outpatient care, ASC services,

18 Issues regarding beneficiaries' access to care and the quality of care will be addressed in the Commission's June report to the Congress.

and various primary care clinics (see Chapter 6).

In the third approach, the update is based only on the projected growth in spending under the traditional fee-for-service program. This projection is used without considering changes in factors that might appropriately affect providers' costs or the affordability of any changes in program spending that might result. HCFA has used this approach in updating county payment rates for Medicare+Choice organizations (see Chapter 2).

Updates based on factors that affect costs. MedPAC and HCFA both use similar conceptual frameworks to arrive at recommendations for updating base payment amounts and cost limits for various facility services. Both frameworks explicitly consider five factors that are expected to affect efficient providers' costs:

- **Projected inflation in input prices.** Input-price inflation generally raises providers' costs, though probably not to the full extent of the rise in prices. Anticipated input-price inflation is indicated by the forecasted increase in an industry-specific (hospitals, for example) national input-price index called a market basket index. A market basket index tracks national average price levels for labor and other inputs, weighted to reflect the relative importance of each input category in the specific industry.
- **Anticipated scientific and technological advances.** This factor is intended to raise Medicare's payment rates to accommodate the expected effects of new technologies that improve quality of care but also increase costs. The idea is to ensure that the payment rates are high enough to allow providers to adopt significant cost-increasing innovations. The size of this factor is a judgment based on literature review and other surveillance methods designed to identify major innovations as they appear.

- **Expected productivity improvements.** This factor reflects the expectation that, in the aggregate, providers should be able to reduce the quantity of inputs required to produce a unit of service while maintaining service quality. Further, the Medicare program should benefit from some portion of this productivity improvement through lower payment rates, just as consumers in private markets do. The size of this downward adjustment is also a judgment. It is often based on analysis of past trends in the specific industry but also considers that the available productivity measures may be inaccurate because they lack adjustments for changes in the quality of care.
- **Site substitution.** This factor is intended to adjust the base payment amount to account for past changes in the product that have altered providers' costs without corresponding changes in Medicare's payment rates. The site substitution factor is a specific instance of the more general rebasing adjustment discussed earlier. Policymakers would apply this adjustment only if they believed that current Medicare payment rates had strayed too far from providers' costs. An adjustment for site substitution has been applied only in developing a consolidated update for hospital inpatient payments. In principle, the adjustment could either lower or raise the base amount. Substitution of post-acute care for hospital inpatient care, for example, may lead policymakers to conclude that the base amount for hospital inpatient payments should be reduced. The same shift, however, might result in an increase in the average severity of SNF patients, which would require more nursing care per day than in the past. Thus, it might be appropriate to raise the base payment amount for SNF services.
- **Case-mix change.** This factor is intended to adjust Medicare's

payment rates to reflect the real net change in resource requirements that results from measured and unmeasured changes in the mix of services or products. When the reported (billed) mix of services or cases shifts, the associated relative values ensure that providers' payments rise or fall appropriately. But changes in providers' coding practices could raise relative values and payments with no change in resource use. Conversely, payments would not increase appropriately if patients' average severity levels rose within each product category. This might happen if improvements in technology were to allow healthier patients to receive their care in other settings. The adjustment for case-mix change is intended to raise or lower the payment rates in the forthcoming year to reflect the net effect of this year's changes in coding and within-category severity levels.

Except for input-price inflation, the factors in this framework cannot be estimated with precision. Consequently, the Commission usually identifies a range of potential adjustments for each of the other four factors. The overall update recommendation that results from the framework, thus, is usually stated as a range of reasonable changes in the base payment amount that would keep Medicare's payment rates consistent with providers' costs in the forthcoming year.

This update framework is applied annually, but because judgments are based on both past trends and future projections, update recommendations generally are closely related from year to year. Nevertheless, this approach does not explicitly consider trends in total program spending for each type of service or whether recent spending trends are consistent with anticipated changes in overall economic activity. Consequently, updates based on this framework are not designed to recoup past discrepancies between desired and actual program spending. Instead, these updates are intended to ensure that the payment rates are at the appropriate level in the future.

The sustainable growth rate system.

Like the cost-based update approach, the SGR begins with the projected increase in providers' input prices as the base for the annual update. It then adds an update adjustment factor that explicitly considers whether cumulative actual Medicare spending for the specified services is above or below the cumulative level that policymakers believe would be sustainable. If cumulative actual spending exceeds the allowed level, the update is reduced to reestablish projected equality during the forthcoming year. Conversely, if cumulative actual spending is less than the allowed level, the update is increased enough to achieve projected equality. Consequently, updates based on this approach are designed to fully offset past discrepancies in program spending in a single year, if possible.¹⁹ The SGR approach is currently applied only in determining annual updates to the conversion factor in the physician fee schedule, but it could be extended to payments for other services.

To use this method, policymakers must decide how to measure anticipated changes in providers' input prices and what factors to consider in estimating the cumulative level of allowed spending. Anticipated increases in physicians' input prices are measured by a projection of the Medicare economic index (MEI), which tracks changes in physician's earnings, staff salaries, and prices for supplies, equipment, and professional liability insurance.

To determine allowed spending growth, policymakers must identify factors that are likely to cause legitimate changes in Medicare fee-for-service spending for physicians' services and are beyond physicians' control. In addition, they must choose a measure of the nation's capacity to afford increases in spending. Currently, annual allowed spending growth is based on four factors:

- **The percentage change in physicians' input prices.** If the mix and volume of physicians' services

remain unchanged, allowed program spending should increase enough to accommodate inflation in input prices for the goods and services physicians purchase to produce care. This factor is measured by the MEI.

- **The percentage change in Medicare Part B enrollment.** Allowed spending should reflect changes in the number of beneficiaries eligible to receive Medicare-covered physicians' services under the traditional fee-for-service program.
- **The percentage change in spending that results from changes in law or regulation.** Allowed spending should include the full effects of policy changes enacted in law and implemented in regulations.
- **The percentage change in real gross domestic product (GDP) per capita.** This factor is intended to measure the nation's capacity to afford additional increases in spending that are to some extent within physicians' control. It thus establishes a limit on increases in spending that result from growth in the volume and intensity of services. As long as per capita GDP is growing, however, it allows some increases in spending to accommodate advances in medical science and technology that enhance medical capabilities.

HCFA combines estimates for these four factors to determine a SGR for each year. Allowed spending is estimated by multiplying actual spending in 1997 by the SGRs for the years between then and the current year. Cumulative allowed spending (the sum of allowed spending from 1997 to the current year) is then compared with estimated cumulative actual spending to determine the update adjustment factor that will be applied for the forthcoming year. Finally, the actual update is calculated as the product of the projected change in the MEI and the

update adjustment factor.

This approach to update policy is attractive for two reasons. First, it sets some limits on the growth in program spending. Second, by restraining payment rates for services, it may create financial incentives for providers to consider the marginal benefits and costs of providing additional services.

This policy also poses some potential risks. If the update adjustment factors consistently lead to large increases or decreases in the base payment updates over a period of several years, Medicare's payment rates could diverge significantly from providers' costs. This risk is difficult to evaluate because changes in providers' costs are likely to be driven by a range of factors that are unrelated to Medicare's policies. At the same time, however, the potential for divergence under this policy may not be any greater than it would be under the alternative cost-based update approach. Thus, careful monitoring probably should be given a high priority under either update method.

Ensuring payment consistency across settings

In designing a new payment system for specific services or products, policymakers tend to focus their attention narrowly on developing system components that appear to provide the best fit given the nature of the services, patients, and providers in the particular setting. Making these decisions in isolation for each setting, however, may lead to unintended inconsistencies in payment rates across payment systems. These inconsistencies could create inappropriate financial incentives to select one site of care over another in situations where comparable products or services are paid at different rates in two or more settings. Similarly, where either the payment rate or the basis for calculating beneficiary coinsurance differs, beneficiaries could have strong incentives to favor one setting over another.²⁰

19 To prevent excessive annual volatility in the payment rates, the update adjustment factor for any year may not be greater than three percentage points or less than minus seven percentage points.

20 Note that this problem differs from the unbundling problem discussed earlier. Even if payment rates for similar services were the same across settings, providers facing a large payment unit would still have incentives to shift some component services to other sites and thereby reduce their costs.

Policymakers' concerns about the potential for inappropriate site selection have increased substantially in recent years. In the past, most facilities were paid on the basis of incurred costs, which obscured payment differentials across settings for individual services and products. But the adoption of prospective payment systems has been making payment differentials increasingly explicit and visible. In addition, as discussed earlier, physicians, hospitals, other facilities, and health plans now are much more likely to be financially interdependent than they were only a decade ago. These financial interrelationships may have increased the likelihood that payment inconsistencies across settings would sometimes lead to inappropriate shifts in the site of care.

Policymakers should be concerned about this problem for two reasons. First, decisions about the site of care should be driven by the patient's clinical needs rather than opportunities for financial gain. Second, when those clinical needs can be met equally in different settings, however, Medicare should not pay more for a service in one setting simply because the providers' costs historically have been higher.

Other factors being equal, Medicare thus should pay the same price for the same service regardless of the setting in which it is furnished. This principle has some implications for payment systems design in settings where providers produce common sets of services. But it also begs the question of when services that look the same might still be paid appropriately at different rates, such as when a service is delivered to patients with substantial differences in health status.

Ambulatory care services

Most ambulatory care services can be provided in a number of settings, such as a physician's office, OPD, or ASC. The Commission's analysis, however, suggests that most types of ambulatory services are provided almost entirely in

one setting. In part, this reflects Medicare coverage rules that limit the procedures that may be performed in an ASC. But it also may reflect clinical and economic factors that influence physicians' decisions about the appropriate site of care. Clinical factors may include patient frailty or comorbidities and other risk factors that raise the likelihood that backup services will be needed. Alternatively, many physicians' practices may lack sufficient volume to support ownership of needed equipment or employment of the specialized staff required to perform many imaging or invasive services in the office.

HCFA has not yet implemented its proposed PPS for hospital outpatient services or its revised payment system for ASC services. When these systems are implemented, the payment rates for many services in these settings likely will be higher than the analogous practice expense payments physicians would receive if they performed the same services in the office. These payment differentials might lead to inappropriate shifts in the site of care, away from physicians' offices and toward OPDs and ASCs. The physician's fee schedule payment, however, is largely the same regardless of where a service is provided.²¹ Consequently, physicians do not appear to have strong direct financial incentives to shift services among alternative sites of care.

Nevertheless, the potential for inappropriate shifts should not be ignored in designing the OPD and ASC payment systems. Policymakers should build in the capability to compare like services and monitor changes in care settings. This means, at minimum, that like services should be defined in the same way across ambulatory care settings.

Even if services do not shift among ambulatory settings when these payment systems are adopted, it may be appropriate to begin moving toward paying similar rates for the same services across these settings. Moving in this direction raises the question of the circumstances in which services that have

the same identifier might appropriately be paid at different rates. One likely possibility is that the same service may have different costs because of differences in patient condition. To explore this possibility, patient characteristics, such as health status differences, should be analyzed for patients who receive the same service within and across these settings. If providers' costs vary in response to differences in patient condition, then specific payment adjustments should be developed to account for such differences. These adjustments should be applied, if possible, at the patient level, rather than the facility level, so that providers are automatically paid appropriately for the mix of patients they actually treat. However, in the absence of the data necessary to identify patients with special needs, a facility-level adjustment may be necessary if such patients are concentrated in certain types of facilities.

Low volume providers in isolated rural communities also may have higher costs for comparable services. If these providers faced the same payment rates that would be appropriate for high volume providers, they might cease providing services, thereby forcing Medicare beneficiaries to travel elsewhere to obtain access to care. This possibility suggests the need to examine cost differences in OPDs and ASCs to see if those located in isolated areas exhibit higher costs. If they do, then it might be appropriate to develop a special payment adjustment, like that for sole community hospitals, which would protect beneficiaries' access to care.

Skilled nursing facilities and rehabilitation hospitals

The principle of payment consistency raises somewhat different issues in the development of a payment system for rehabilitation facilities. Both rehabilitation hospitals (and rehabilitation units of general hospitals) and some SNFs treat patients who need high intensity rehabilitation therapy. Most of these patients, who must be able to

21 The practice expense component is reduced for certain services when they are performed in a hospital or an ASC.

tolerate three hours of intensive therapy per day, are treated in hospital facilities. Some SNFs, however, have developed specialized rehabilitation units to which they admit such patients. Often, these units have been developed because local hospitals do not provide sufficient rehabilitation capacity.

Under the recently implemented SNF prospective payment system, SNFs treating these patients are paid a per diem rate for each day of care. HCFA argues that rehabilitation hospitals also should be paid per diem rates as the first step toward paying the same rate for the same rehabilitation services. Rehabilitation hospitals, however, have been paid under per discharge cost limits for more than 15 years. Moreover, intensive rehabilitation treatment protocols are well defined, and a suitable classification system has been developed for rehabilitation stays.

In choosing the unit of payment for rehabilitation hospitals, policymakers face unattractive trade-offs. The preconditions for payment consistency could be achieved by selecting a per diem unit of payment, matching the SNF payment unit. In a second option, HCFA could adopt the more appropriate per case payment unit. But selecting this option without also changing the recently implemented SNF payment system would sacrifice the potential for payment consistency. In a third option, HCFA could change the recently implemented SNF payment system to adopt the per case payment unit only for intensive rehabilitation patients. HCFA would have to continue using a per diem payment unit for other SNF patients because an effective per stay classification system for all SNF patients does not exist. Elsewhere in this report, the Commission is recommending that HCFA pursue the third option (see Chapter 5).

Considering implementation issues

Implementing new payment systems raises two additional issues that policymakers need to consider. One is

that applying a new system will frequently cause a substantial redistribution of payments among providers. To avoid potentially serious disruptions in access to care or quality of care, transition mechanisms often must be developed. These mechanisms are designed to cushion the immediate effects of the new system and allow providers time to adjust to the change in their circumstances.

The second issue concerns the administrative systems and other supporting mechanisms that are needed to operate and maintain a new system over time. The earlier discussion of design issues frequently identifies specific tools and information that are needed to establish the various payment system components. It also describes some of the companion rules and procedures necessary to operate a payment system once it is implemented. Finally, the discussion also highlights the crucial role for monitoring payment system performance, especially beneficiary access to care and the quality of care.

Transition mechanisms

In implementing a new payment system, policymakers must decide whether, and how, to manage the transition from the old payment method to the new one. A transition is more likely to be needed when the potential effects on individual providers' payments may be large, or when policymakers are highly uncertain about providers' responses to the new system. At the same time, program savings anticipated from the new payment system generally would be reduced by any transition method, although the loss of savings may be greater with some methods than it would be with others. Likewise, any improvement in providers' incentives generally would be weakened by any transition method.

Choices among transition methods often involve trade-offs between establishing absolute limits on the percentage change in any provider's

payments and the administrative burden for HCFA and providers. Alternative methods also may affect providers' payment incentives in somewhat different ways.

Several transition methods have been used in implementing new payment systems:

- hold-harmless and minimum increase methods, which ensure that each provider's payments under the new system would be at least equal to its base year payments or a specified percentage above those payments,
- corridor limits on the percentage change in payments, which ensure that a provider's payments would neither decrease nor increase by more than the specified percentage each year, and
- a blend approach, which mixes payment amounts under the old system with those under the new one in specified proportions that change each year.

Supporting administrative systems

All payment systems require a substantial supporting infrastructure. This administrative infrastructure performs a variety of functions, such as defining covered services, identifying which providers may furnish specific types of services, and ensuring the availability of data needed to establish and maintain the payment rates and related factors.

Coverage policies may play an especially important role in settings where the product is not well defined, consensus about the medical necessity of services is weak, physician oversight or involvement is limited, or there is a large potential for shifts in the site of care. One reason that home care episodes are difficult to define, for example, is that the related coverage policies are vague or ill-defined. Coverage policies limiting the procedures that may be performed in an ASC, however, may have prevented

some appropriate as well as inappropriate shifts in services from OPDs to ASCs.

Smoothly functioning data systems are essential because most components of a payment system are data driven. The payment amounts, relative values, and other payment adjustments often can be updated based on analyses of provider cost, claims, and spending data drawn from standard administrative files. But special studies based on other data sources also are needed periodically to provide information about specific payment or update components for some settings or services. For instance, information about staff time use for the relative

values in the SNF payment system must be collected in special surveys.

As a tool for achieving Medicare's overall goals, payment policy has limits. Payment policy alone cannot simultaneously ensure that the production and distribution of health care services is efficient and that beneficiaries have appropriate access to high quality care. Other administrative systems are needed to help reach these goals, such as access and quality monitoring systems. Although data and monitoring systems are reasonably well developed for hospital inpatient care, similar systems are much less fully developed for ambulatory and post-acute care services, where they are

arguably more essential.

The need for this supporting infrastructure inevitably raises issues about the appropriate level of funding for the many administrative activities carried out by HCFA and its private contractors. In addition, the number and complexity of decisions required to maintain and coordinate many payment systems in a rapidly changing environment suggests that HCFA needs a substantial amount of flexibility to fashion appropriate and timely changes in policy and meet its obligations to beneficiaries and taxpayers. MedPAC endorses the views recently expressed on these topics in an open letter published in the journal *Health Affairs*.

Open Letter to Congress & the Executive

Crisis Facing HCFA & Millions Of Americans The signatories to this statement believe that many of the difficulties that threaten to cripple the Health Care Financing Administration (HCFA) stem from an unwillingness of both Congress and the Clinton administration to provide the agency the resources and administrative flexibility necessary to carry out its mammoth assignment. This is not a partisan issue, because both Democrats and Republicans are culpable for the failure to equip HCFA with the human and financial resources it needs to address what threatens to become a management crisis for the agency and thus for millions of Americans who rely on it. This is also not an endorsement of the present or past administrative activities of the agency. Congress and the administration should insist on an agency that operates efficiently and in the public interest.

Over the past decade Congress has directed the agency to implement, administer, and regulate an increasing number of programs that derive from highly complex legislation. While vast new responsibilities have been added to its heavy workload, some of its most capable administrative talent has

departed or retired; other employees have been reassigned as a consequence of reductions in force. At the same time, neither Democratic nor Republican administrations have requested administrative budgets of a size that were in any way commensurate with HCFA's growing challenge.

The latest report of the Medicare trustees points out that HCFA's administrative expenses represented only 1 percent of the outlays of the Hospital Insurance trust fund and less than 2 percent of the Supplementary Medical Insurance trust fund. In part, these low percentages reflect the rapid growth of the denominator—Medicare expenditures. But, even accounting for Medicare's growth, no private health insurer, after subtracting its marketing costs and profit, would ever attempt to manage such large and complex insurance programs with so small an administrative budget. Without prompt attention to these issues, HCFA will fall further behind in its implementation of the many significant reforms mandated by the Balanced Budget Act (BBA) of 1997. In the future the agency also has to

cope with a demographic revolution that it is ill equipped to accommodate and with changes in medical technology that will increase fiscal pressures on the programs it administers.

As the Bipartisan Commission on the Future of Medicare grapples with the problem of reshaping the Medicare program for the next millennium, it would do well to consider two important reforms concerning HCFA's administration. First, the commission should recommend that Congress and the Clinton administration endow the agency with an administrative capacity that is similar to that found in the private sector. Second, the commission should consider ways in which the micromanagement of the agency by Congress and the Office of Management and Budget could be reduced. Congress and the public would be better served by measuring the agency's efficiency in terms of its administrative outcomes (such as accuracy and speed of reimbursement of various providers), rather than by tightly controlling its administrative processes. Only if HCFA has more

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Open Letter to Congress & the Executive

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administrative resources and greater management flexibility will it be able to cope with the challenges that lie ahead.

The mismatch between the agency's administrative capacity and its political mandate has grown enormously over the 1990s. As the number of beneficiaries, claims, and participating provider organizations; quality and utilization review; and oversight responsibilities have increased geometrically, HCFA has been downsized. When HCFA was created in 1977, Medicare spending totaled \$21.5 billion, the number of beneficiaries served was twenty-six million, and the agency had a staff of about 4,000 full-time-equivalent workers. By 1997 Medicare spending had increased almost tenfold to \$207 billion, the number of beneficiaries served had grown to thirty-nine million, but the agency's workforce was actually smaller than it had been two decades earlier. The sheer technical complexity of its new policy directives is mind-boggling and requires a new generation of employees with the requisite skills.

HCFA's ability to provide assistance to beneficiaries, monitor the quality of provider services, and

protect against fraud and abuse has been increasingly compromised by the failure to provide the agency with adequate administrative resources. Even with the addition of \$154 million to its administrative budget that Congress included in its latest budget bill, the likelihood that HCFA can effectively implement all of its varied assignments is remote. The Health Insurance Portability and Accountability Act of 1996 assigns many new regulatory responsibilities to HCFA, but a far larger task is implementing the BBA of 1997. The BBA has more than 300 provisions affecting HCFA programs, including the Medicare+Choice option, which will require complex institutional changes and ambitious efforts to educate beneficiaries.

Medicare spending accounts for more than 11 percent of the U.S. budget. Workable, effective administration has to be a primary consideration in any restructuring proposal. Whether Medicare reform centers on improving the current system, designing a system that relies on market forces to promote efficiency through competition, or moving toward an even more individualized approach to paying for health insurance,

Congress and the administration must reexamine the organization, funding, management, and oversight of the Medicare program. Doing anything less is short-changing the public and leaving HCFA in a state of disrepair.

Stuart M. Butler, Heritage Foundation
Patricia M. Danzon, University of Pennsylvania

Bill Gradison, Health Insurance Association of America

Robert Helms, American Enterprise Institute

Marilyn Moon, Urban Institute

Joseph P. Newhouse, Harvard University

Mark V. Pauly, University of Pennsylvania

Martha Phillips, Concord Coalition

Uwe E. Reinhardt, Princeton University

Robert D. Reischauer, Brookings Institution

William L. Roper, University of North Carolina at Chapel Hill

John Rother, AARP

Leonard D. Schaeffer, WellPoint Health Networks, Inc.

Gail R. Wilensky, Project HOPE

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Conclusions

The primary goal of Medicare's payment policies should be to help beneficiaries obtain medically necessary acute care of reasonable quality in the most appropriate clinical setting. At some level, this goal is the ultimate touchstone for all program policies. It is especially important for payment policies, however, because of their power to affect providers' willingness and ability to furnish good care. Therefore, when policymakers are designing or evaluating a payment system, they should repeatedly ask how it

will work for all beneficiaries and especially for those who are vulnerable because of their circumstances.

To avoid serious problems for beneficiaries or taxpayers and promote efficient production and distribution of acute care services, Medicare's payment rates must be consistent with providers' costs. But Medicare buys a wide range of health care products furnished in a variety of settings by different types of providers who must compete for scarce resources in local private markets. Consequently, Medicare's payment systems must appropriately account for:

- the types of products Medicare is buying,

- the clinical and economic factors, including differences among patients, that account for legitimate variation in costs among products, types of providers or settings for care, and local markets, and
- the factors that are likely to cause appropriate changes in costs over time.

Successfully setting and maintaining payment rates consistent with providers' costs in many provider-specific payment systems thus raises a host of practical and policy questions that must be answered to make decisions about units of payment,

product definitions and relative values, and other payment system components.

What is Medicare buying in a particular setting?

- What are the clinical components of the care provided?
- What are the clinical factors that distinguish among types of services, patients, or beneficiaries?
- What services are included in each type of product?

What factors account for predictable variation in the cost of producing these products?

- What does the provider's production process look like?
- What are the components of costs?
- What factors account for predictable cost variation among types of services, patients, or beneficiaries?
- What factors account for regional or local cost variation?
- What special circumstances should be taken into account to protect access to care?

How should we determine the level of payment?

- Providers' historical costs?
- Anticipated program spending?

How would we know if payment rates were too high or too low?

- Provider entry or exit?
- Rapid changes in volume?
- Widespread access or quality problems?
- Providers' financial condition?

What factors should be considered in adjusting the payment rates over time?

- Anticipated changes in factors that affect providers' unit costs?
- Growth in program spending compared with that of the overall economy?

Are similar services or products available in another setting?

- What is the extent of the overlap?
- Who chooses the site of care and what incentives do they face?

Under what circumstances should Medicare pay more for a service in one setting than in another?

- Differences in patient condition?
- Unusual market conditions?

Empirical analysis can illuminate many of these questions, depending on available data. All of the policy questions, however, inevitably involve making trade-offs between potentially desirable and undesirable outcomes. Moreover, balancing these trade-offs is often complicated by two factors. One is uncertainty about the extent of providers' opportunity and inclination to respond to payment incentives in undesirable ways. The other is the lack of tools and information needed to develop payment adjustments that would focus payment more appropriately on the patient and the service rather than the provider or setting in which it is furnished.

Nevertheless, trade-offs must be evaluated and design choices must be made in the short term. In this regard, the Commission's policy framework may prove especially useful in explicitly highlighting the gains and sacrifices associated with specific choices as well as alternatives that should be pursued in the future. ■

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C H A P T E R

2

**Medicare+Choice:
A Program in Transition**

R E C O M M E N D A T I O N S

2A It is too soon to tell whether recent departures from the Medicare managed care program stem from systematic problems with the level or distribution of payment. The Commission plans to monitor and analyze the characteristics of departing plans and the areas they leave and consider general patterns of organization participation, benefits offered, and enrollment. Accordingly, the Congress should not modify payment rates at this time.

.....

2B The Secretary should continue to work with organizations offering plans and other interested parties to identify specific regulations or other program policies for which changes, delays in implementation, or administrative flexibility might reduce the burden of compliance without compromising the objectives of the Medicare+Choice program.

.....

2C As quickly as feasible, the Secretary should develop the capability to use diagnosis data from all sites of care for risk adjustment.

.....

2D The Secretary's plan to phase in the interim risk adjustment system—with a method that uses a weighted blend of the payment amounts that would apply under the interim system and those that would apply under the current system—is sound. The weight on the interim payment amounts should be back-end loaded. That is, the weights should be relatively low in the first years so that most organizations will not experience extreme changes in their total payments.

.....

2E The Congress should move the deadline for the adjusted community rate proposal submission to later in the year to allow organizations to include more of their cost information and more details of Medicare payment methods in their projections.

.....

2F Medicare+Choice organizations should continue to have the flexibility to tailor their benefit packages within their service areas as long as Medicare payments vary by county within a service area. Without this flexibility, organizations may withdraw from counties with lower payments, reducing beneficiary access to new options.

Medicare+Choice: A Program in Transition

The first year of Medicare+Choice has highlighted the need for corrections to policies in statute and the Secretary's regulations. Even though the Congress intended that the new program would offer more private insurance choices for Medicare beneficiaries, changes in several major rules have made payment less attractive and more uncertain than in earlier years, while simultaneously increasing short-term costs. As a result, the first year has found few new options and revealed declines among the traditional offerings. The Medicare Payment Advisory Commission plans to monitor and analyze changes in organizations' participation as a result of the transition to Medicare+Choice. The Commission urges the Health Care Financing Administration to explore ways in which to reduce the burden of compliance without compromising the goals of the program.

In this chapter

- Changes in Medicare's rules for organizations
 - Organization responses and the impact on beneficiaries
 - Assessing the performance of the Medicare+Choice program.
-

When the Balanced Budget Act (BBA) was enacted in 1997, many hoped that the transition from Medicare's risk contracting program to the new Medicare+Choice program would be smooth. However, several developments during 1998 indicate that this may not be the case:

- In January the Secretary announced a relatively low projection of spending increase for the fee-for-service program. By law, this amount drives the Medicare+Choice payment rates. Because the increase was low, payment updates to most organizations were lower than in the past.
- Also early in the year, the Health Care Financing Administration (HCFA) issued a draft of its far-reaching plans for a quality improvement program for Medicare and Medicaid.
- In May, organizations participating under the old risk program and wishing to continue into Medicare+Choice had to submit their 1999 benefit packages and premiums. The May deadline for plans was more than six months earlier than had been the case under the former risk program.
- In June, HCFA published its regulation implementing Medicare+Choice. Although generally similar to the framework of the program set out in the BBA, some of the requirements included in the regulation involved far more extensive compliance efforts than under the earlier risk program. Moreover, this was the first opportunity for prospective entrants to the new program—such as provider-sponsored organizations, medical savings account plans, and preferred provider organizations—to evaluate in detail what participation would involve. For 1999, at least, many potential entrants decided to pass.
- In the beginning of September, health maintenance organizations (HMOs) participating in the risk program asked for permission to change the premiums or benefits they had filed for 1999 to reflect

more recent cost projections. HCFA did not allow any changes that would have decreased benefits or increased premiums or cost-sharing.

- A number of HMOs that had participated in the former risk program announced that they would not participate in Medicare+Choice or would participate only in some of the areas they had previously served.

The Medicare Payment Advisory Commission (MedPAC) has closely monitored these events, considering whether they require policy changes to keep the new Medicare+Choice program—representing about 15 percent of Medicare beneficiaries—on course. The Commission's comments on HCFA's Medicare+Choice regulation reflect its hope that the program can meet its legislative promise to improve Medicare by providing beneficiaries with a greater variety of plan choices. As demonstrated by revisions to the regulation and operational directives issued since publishing the Medicare+Choice rule, HCFA has begun to act on many of the changes suggested by the Commission and others.

MedPAC has two overarching recommendations on the Medicare+Choice program for 1999:

RECOMMENDATION 2 A

It is too soon to tell whether recent departures from the Medicare managed care program stem from systematic problems with the level or distribution of payment. The Commission plans to monitor and analyze the characteristics of departing plans and the areas they leave and consider general patterns of organization participation, benefits offered, and enrollment. Accordingly, the Congress should not modify payment rates at this time.

RECOMMENDATION 2 B

The Secretary should continue to work with organizations offering

plans and other interested parties to identify specific regulations or other program policies for which changes, delays in implementation, or administrative flexibility might reduce the burden of compliance without compromising the objectives of the Medicare+Choice program.

In addition, as detailed later in this chapter, the Commission recommends that: (1) a risk adjustment system using diagnosis information from all sites of care be implemented as soon as possible, (2) risk adjustment of payments be phased in using a blend approach, (3) the date for benefit package submission be moved to later in the year, and (4) the Secretary continue to allow Medicare+Choice organizations the flexibility to vary their benefit packages within their service areas.

It is not clear whether changes to the Medicare+Choice program will be sufficient to induce increased or even sustained program participation by organizations and beneficiaries, particularly in the short run. Important developments in commercial and other markets likely colored organizations' reactions to changes in Medicare. Industry analysts have described a year during which organizations were rethinking their earlier approach to pursuing market share over short-term profit. It may be that managed care organizations have realized any potential savings from efficiency gains and now will have to confront the drivers of health care costs—aging of the population and technology (Serb 1998). It also may be that the antimanaged care environment of the last several years has made it difficult for organizations to manage costs and use of medical services. Further, many organizations are devoting large shares of their budgets to ensuring that their data systems will function in the year 2000. Medicare is not alone in experiencing health plan departures this year. Both Medicaid and the Federal Employees Health Benefit Program have reported losses in health plan participation comparable to those in Medicare. These

trends may reflect an industry that is refocusing on core commercial business.

The year ahead also will bring new uncertainty to organizations as the new risk adjustment system is put in place, a development that MedPAC will monitor closely. HCFA's announcement of the new system in January, with details to follow in March, should allow organizations the opportunity to incorporate these important program changes into their expectations for payment and development of their benefit packages for 2000. HCFA's announcement of a five-year phase-in of the new system should soften the system's effect on organization payments. Nevertheless, MedPAC realizes that organizations that expect substantial decreases in payment may decide to withdraw, resulting in even more disruption to beneficiaries who must either change plans or return to the traditional fee-for-service program.

This chapter:

- describes the major changes to the Medicare managed care program rules that have affected managed care organizations; taken together they may have made payment less attractive than in earlier years and more uncertain, while at the same time increased organizations' costs of participating in the program—at least in the near term,
- reviews organization reactions to these and other market changes through 1998, and
- discusses the Congress's goals for the Medicare+Choice program and how best to evaluate whether the program is meeting these and other important policy goals.

Changes in Medicare's rules for organizations

Changes in Medicare's rules for Medicare+Choice organizations have had both intended and unintended consequences for organizations. Many of

the changes introduced under Medicare+Choice were designed to improve the program by increasing the fairness of both levels and distribution of payments, creating incentives to improve quality of care, or helping beneficiaries make more informed choices. But taken together from the organizations' perspective, they may make participation in Medicare less attractive. Many organizations expect that the minimum 2 percent increases to the base payment rate actually will be a maximum, with the potential for decreases from that base as risk adjustment is implemented. At the same time, they are expected to contribute to the beneficiary education campaign, renegotiate their contracts with providers to comply with data collection and other requirements, and expend additional resources to learn many new processes. Many of these changes create uncertainty among organizations as to how they will fare under the new program. Changes in five areas—payment rates; risk adjustment; premiums, benefits and service areas; beneficiary information; and quality standards—will have a particularly important impact on organizations' desire and ability to participate in Medicare+Choice.

Payment rates

In the BBA, the Congress made major changes to Medicare managed care by ending the existing programs and introducing the Medicare+Choice program. The Congress's major goals were to expand the private insurance product choices for Medicare beneficiaries and to obtain budget savings.

In response to widespread criticism of the payment system for managed care organizations, another objective was to reduce the disparity between high and low county payment rates. Medicare used to pay organizations based on the county level of per beneficiary spending in the traditional Medicare program (see Appendix A for detail on past and current payment specifications). The general sentiment was that organizations in high

payment counties were paid enough to allow them to provide generous extra benefits, such as drug coverage, to their enrollees, while organizations that chose to participate in low payment areas were not able to provide such generous extra benefits.

The Congress reduced the reliance on county historical spending when it set the new rates. While part of the base for future rates is the 1997 rate for each county, annual changes in fee-for-service spending at the county level will no longer determine payments. The BBA established a floor below which U.S. county rates cannot fall. The Act also established a minimum annual update of 2 percent for each county. In addition, the BBA established a long-term policy that rates will be based on a blend of historical spending in a county and national average costs adjusted for local price levels. These "blended rates" will be phased in over time. Organizations with enrollees in counties will be paid the highest of the county blended rate, the floor rate, and the county's previous year's rate increased by 2 percent. Through these changes, the Congress hoped to encourage growth in Medicare+Choice plans in rural counties that traditionally had payment rates thought to be too low to attract private organizations, while guaranteeing a minimum increase to counties with relatively high rates.

Other than creating a payment floor, the relative payment changes envisioned by the BBA have not yet been realized. Through the first two years under the new payment formula, counties' rates have been set either at the floor or at 2 percent above the previous year's rate. For two reasons—one related to the BBA and one related to overall spending in Medicare—there has been no reduction in the disparity between high and low rates above the floor.

First, the BBA protected high payment areas from decreases in payment rates. The minimum update is guaranteed even though overall rates are supposed to reflect the gradual removal of payments based on traditional Medicare's payment

for graduate medical education from Medicare+Choice rates. The funding for Medicare's additional costs from both the minimum update and the floor rates come from a budget neutrality adjustment in the calculation of the blended rates. The total spending resulting from the floor rates, the minimum updates, and the blended rates are intended to equal what spending would be in the absence of these three modifications to county rates.

Second, growth in spending per person in traditional Medicare determines the national growth in Medicare+Choice payment rates. Since enactment of the BBA, this growth—and HCFA's projections of future growth—has been very low. In March 1998—when the 1999 payment rates were set—HCFA projected growth at 2.7 percent in 1998 and 4.0 percent in 1999. Combined with the protection for high payment counties, this low growth has produced a situation where no counties have had payment rates based on the blend of local and national costs.

There would have been blend counties in 1999 if the difference between overall Medicare spending growth and the minimum update had been slightly larger.¹ An increase of just 0.2 percent more in Medicare per capita spending would have allowed some counties to receive blended rates (see Table 2-1). If Medicare spending had increased by an additional percentage point, more than 1,600 counties would have received blended payment rates that were higher than the floor or minimum update. These results reflect how close the overall effective update is to the 2 percent minimum update. Without a large enough difference between overall Medicare+Choice payment growth and the minimum update, there will not be enough savings from the high payment counties to fund the blended rates for the lower payment counties.

The difference between the 2 percent minimum update and overall

Medicare+Choice payment growth, however, is now projected to increase. In its 45-day notice released January 15, 1999, HCFA projected per capita Medicare cost growth of 5.8 percent for 2000 (HCFA 1999). This level of growth will produce blended rates for 2000. The HCFA Administrator stated that 60 percent of counties will have blended rates in 2000, based on preliminary estimates released January 15, 1999. The HCFA actuary will set the final Medicare+Choice payment rates in March using the latest demographic and cost trends available. Therefore, the rate disparity among counties will begin to be addressed for counties above the floor.

Risk adjustment

Medicare+Choice organizations are concerned about the effects of HCFA's new risk adjustment system on their future payments. Other things being equal, adoption of this new system on January 1, 2000, will change payments for individual organizations and reduce overall Medicare+Choice payments. The possibility of reduced payments may discourage some organizations from participating in Medicare+Choice or cause others to withdraw from the program. However, the full effects of the new system are somewhat uncertain because the data that HCFA will use to determine payments to organizations in 2000 will not be available until late in 1999.

The need for a new risk adjustment system

The BBA directed HCFA to develop a new risk adjustment system.² The Congress's rationale for mandating the new system was to make Medicare's payments to Medicare+Choice organizations more accurately reflect predictable differences in health spending by enrollees. This should improve Medicare+Choice by making payments more equitable across plans and making

TABLE 2-1
Number of blend counties in 1999 under different Medicare per capita growth rates

Increase in Medicare spending per capita for 1999 under alternate scenarios	Number of blend counties
4.0% ^a	0
4.2	144
5.0	1,647

Note: A blend county is a county whose blended payment rate is above the rates determined by the floor and the minimum update.

^aHCFA March 1998 projection.

Source: MedPAC simulations based on HCFA public data.

them reflect the generally better health of Medicare+Choice enrollees as compared to fee-for-service beneficiaries.

A common complaint about the current system is that there is significant risk selection (enrollment of relatively healthy beneficiaries), and this assertion is supported by empirical research using fee-for-service data (PPRC 1996). Some risk selection may be inevitable because organization recruitment methods might not reach people with poor health status, such as the institutionalized, or because healthy people may be more inclined to join a health plan that could require them to change physicians. Even if selection to organizations has been favorable in the aggregate, however, individual organizations, such as those who have participated in Medicare the longest, may not have favorable selection. Indeed, the Physician Payment Review Commission study shows that mortality and hospitalization rates rise as length of managed care enrollment increases, supporting the idea of "regression towards the mean," or new managed care enrollees becoming more like average fee-for-service beneficiaries over time.

Because organizations will be paid more appropriately for the risks they take

1 Even though the projected growth was 4.0 percent in 1999, the effective growth in per capita Medicare+Choice payments resulting from the update formula was around 2.0 percent. First, the BBA directed the update to be lowered by 0.5 percentage point in 1999. In addition, about 0.7 percent was removed by virtue of the gradual removal of graduate medical education costs. HCFA also lowered the update by 0.74 percent to account for an estimated over projection of growth in 1998.

2 HCFA has supported research to develop improved risk adjustment methods for more than a decade (for example, see Ellis et al. 1996). HCFA's proposed method is a culmination of this effort.

on, the new system is intended to encourage organizations to compete on the basis of how effectively they manage care and not to reward plans for attracting favorable risks. The current system, which is based on beneficiaries' demographic characteristics, rewards organizations that attract healthier enrollees because it does a very poor job of accounting for predictable differences in health spending (Ellis et al. 1996). Under this system, organizations are paid the same amount for two beneficiaries from the same county with identical demographic characteristics, even though differences in their health status would suggest that one will be much more costly than the other. In effect, organizations tend to be overpaid for relatively healthy enrollees and underpaid for those in poor health.

Also, the new system likely will reduce the extent to which HCFA overpays Medicare+Choice organizations in the aggregate. Recent studies show that Medicare risk plans have attracted beneficiaries with better than average health status, but current payments do not fully reflect the lower expected spending for these beneficiaries. For example, Riley and colleagues found that in 1994 the predicted costs of Medicare risk plan enrollees were 12 percent lower, on average, than the predicted costs of fee-for-service enrollees with the same demographic characteristics. Because payments currently are adjusted only for demographic differences, even setting rates at 95 percent of the amount Medicare expected to spend for a beneficiary in the fee-for-service program resulted in overpayments of as much as 7 percent (Riley et al. 1996, Hill et al. 1992).

Risk adjustment requirements in the Balanced Budget Act

The BBA required the new risk adjustment system to use enrollees' health status and demographic characteristics to account for variations in their expected spending. HCFA must implement this system by January 1, 2000, under a very tight time schedule. The agency must:

- publish a preliminary notice by January 15, 1999, describing the

changes in methods and assumptions it will use to determine payment rates for 2000, compared with those for 1999 (HCFA 1999),

- publish a final notice by March 1, 1999, on the payment rates for 2000 and the risk and other factors it will use to adjust those payment rates, and
- submit a report to the Congress that describes the risk adjustment method it will implement with the new payment rates, also by March 1, 1999.

To implement the new system, HCFA must measure health status for beneficiaries in the fee-for-service program and for those enrolled in Medicare+Choice plans. Health status measures for fee-for-service beneficiaries are needed for two reasons. First, HCFA must estimate risk scores that measure relative levels of expected spending for beneficiaries with different combinations of health conditions and demographic characteristics. These scores require beneficiary-specific data on health conditions, demographic characteristics, and annual Medicare spending for covered services that are currently available only for beneficiaries in the traditional fee-for-service program. Second, once the new risk scores are developed, HCFA must adjust the per capita monthly payment rate for each county in the county rate book to reflect its expected level of per capita spending for a beneficiary with national average health and demographic characteristics. The Medicare+Choice data are needed both to determine the monthly payments to organizations for each enrollee starting in 2000 and to inform Medicare+Choice organizations about the anticipated effects of the new risk adjustment system.

To facilitate these tasks, the BBA permitted HCFA to collect encounter (similar to claims) data on hospital inpatient stays from Medicare+Choice organizations, but not before January 1, 1998. Starting July 1, 1998, HCFA could collect encounter data from other providers of care such as physician offices, hospital outpatient departments,

skilled nursing facilities, and home health agencies. HCFA will be able to use the diagnoses reported in the encounter data to develop indicators of beneficiary health status.

HCFA has indicated it has been meeting the time requirements of the BBA and has collected almost complete hospital inpatient encounter data records from nearly all organizations. HCFA also has indicated that, due to various problems, it has not been able to collect complete data from a small number of organizations, but the agency is working with them to get complete data. Some organizations are less confident and believe the data generally are not complete due to systems problems. However, the actual risk scores will be based on the next round of data collection, which should afford an opportunity to work out existing problems.

HCFA's proposed risk adjustment system

The timing of the BBA requirements restricts HCFA to adopt, at least initially, an interim system in which health status is measured using only hospital inpatient diagnoses. Before the Congress passed the BBA, HCFA argued that it needed data as soon as possible to implement improved risk adjustment. However, HCFA and the Congress recognized that Medicare+Choice organizations could not establish systems for reporting data from sites of care other than hospital inpatient departments in time for implementation by January 1, 2000. Therefore, HCFA indicated to the Congress it needed inpatient data by a particular date and left the Congress to determine the remaining time frame.

In its January 15, 1999, 45-day risk adjustment notice, HCFA indicated it intends to replace the interim system on January 1, 2004, with a comprehensive system based on diagnoses from beneficiaries' encounters with all major types of providers. To make that possible, HCFA will require organizations to augment their hospital inpatient data with information from enrollees' encounters in physicians' offices, hospital outpatient

departments, skilled nursing facilities, and home health agencies. However, this requirement will not be implemented before October 1, 1999.

In the interim system, HCFA will determine payments to Medicare+Choice organizations according to the following process. First, HCFA will characterize each beneficiary based on:

- age and sex,
- diagnoses associated with any inpatient hospital stays during the previous year,³
- eligibility for Medicaid benefits at any time in the previous year, and
- previous eligibility of aged beneficiary (one who is 65 or older) for Medicare on the basis of a disability.

Next, HCFA will determine a prospective risk score for each Medicare+Choice enrollee (see Appendix B for more detail). The risk score is intended to measure an enrollee's expected spending in the forthcoming payment year relative to that of the average fee-for-service Medicare beneficiary. HCFA will estimate each enrollee's expected spending in the payment year as the sum of the amounts that each enrollee's demographic or health status factor is expected to add to the enrollee's costliness. As in the current risk adjustment system, spending patterns in the traditional fee-for-service program will be treated as the baseline, so the additional costliness associated with each demographic or health status factor will be estimated using fee-for-service data.⁴ Then, HCFA will determine the risk score as the ratio of the enrollee's expected spending to the overall average expected spending for fee-for-service beneficiaries.

In the last step, HCFA will calculate the payment for each enrollee as the product of three factors:

- the payment amount for 2000 for the enrollee's county of residence from the county rate book,
- a factor that will adjust the county payment rate to reflect the change in risk measurement methods, and
- the enrollee's risk score based on the interim system.

The county adjustment factors are needed to change the county payment amounts so they are consistent with the new system. Under the current system, each county payment rate is based on the 1997 payment rate standardized to reflect the expected fee-for-service spending per capita in the county for a beneficiary with the national average demographic profile. The standardization removes local demographic characteristics from the spending amounts. Because the new risk adjustment system captures risk differences among beneficiaries more precisely than does the current system, HCFA needs to restandardize the county amounts using the new adjusters. This method will ensure that the county payment rates reflect the 1997 expected fee-for-service spending per capita in the county for a national average beneficiary, as measured by the new system.

Interim system intended to improve payment equity

The interim risk adjustment system should be an improvement over the current system because payments to organizations will more accurately reflect the predictable differences in health spending by their enrollees. If the interim system works as intended, organizations will be paid more for enrollees with serious conditions who were hospitalized during the previous year and less for enrollees who were relatively healthy.

This system is consistent with the BBA's objectives for risk adjustment because:

- the interim system likely will encourage organizations to compete on factors other than risk selection because the profits from favorable selection are lower,
- organizations may have more resources for developing specialized care management programs for enrollees with serious conditions, which may lead to improvements in efficiency and in the quality of care enrollees receive, and
- in aggregate, overpayments to Medicare+Choice organizations that result from healthier Medicare beneficiaries leaving the traditional fee-for-service program may be reduced.

Potential problems under the interim system

Despite the improvement over the current system, the interim system's dependence on hospital inpatient diagnoses raises at least three potential problems that policymakers should monitor closely. One is that payments to Medicare+Choice organizations will not fully account for predictable differences in spending among their enrollees because there is diagnosis and health status information not reflected in the demographic and hospital diagnosis data used in the interim system. As a result, organizations that attract seriously ill enrollees within diagnostic groups still will be underpaid, while those that attract healthy ones will continue to be overpaid.

A second problem is that using hospital inpatient diagnoses to measure health status may create incentives for Medicare+Choice organizations to hospitalize enrollees inappropriately because organizations will receive the highest payments for hospitalized enrollees.

3 Inpatient diagnoses are based on encounter data submitted by organizations for current enrollees and on Medicare fee-for-service claims for new enrollees who were previously in the traditional program. Risk scores for beneficiaries who are newly eligible for Medicare and who enroll in a Medicare+Choice plan will be based solely on their demographic characteristics. This is necessary because HCFA lacks a claims history for these beneficiaries.

4 In principle, expected spending could (perhaps should) be estimated using Medicare+Choice spending patterns, but data on annual spending for covered services, which are needed to estimate expected spending given enrollees' diagnoses and demographic characteristics, are not available now for Medicare+Choice enrollees.

Several factors may combine, however, to reduce substantially the incentive for unnecessary hospitalizations or dampen organizations' responses:

- First, the payment adjustment is based on the enrollee's expected spending in the year following the hospital stay, so the incremental payment may be lower in many cases than the hospitalization cost the organization incurred.
- Second, an organization will not receive an increased payment until the calendar year after a hospitalization, and then only if the hospitalized beneficiary remains enrolled in the same organization.
- Finally, an organization would have to influence physicians to hospitalize more patients. This response would require it to overcome years of encouraging physicians to use alternatives to hospitalization.

To further counteract any incentive to hospitalize, HCFA has proposed treating enrollees with one-day inpatient stays and those with diagnoses for which hospitalization is discretionary the same as enrollees who were not hospitalized.⁵

A third potential problem is that risk scores based on fee-for-service hospitalization patterns may understate the health risk of certain Medicare+Choice enrollees. This understatement will occur if Medicare+Choice organizations tend to substitute other sites of care in place of hospitalizations more frequently than do providers in traditional fee-for-service Medicare. In this case, Medicare+Choice enrollees with serious conditions would be hospitalized less often and would receive lower risk scores, on average, than fee-for-service beneficiaries with comparable conditions and demographic characteristics. However, Hill and colleagues (1992) found that Medicare managed care organizations did not

reduce the hospitalization rate relative to fee-for-service Medicare.

But, Medicare+Choice organizations also have argued that they hospitalize comparable patients for shorter stays than do fee-for-service providers in traditional Medicare, and results from Hill and others support this argument. To the extent organizations shorten hospital stays, HCFA's proposed policy on one-day stays—treating enrollees with one-day stays the same as enrollees without inpatient stays—will compound any understatement caused by calibrating risk scores based on fee-for-service data.

RECOMMENDATION 2C

As quickly as feasible, the Secretary should develop the capability to use diagnosis data from all sites of care for risk adjustment.

All of these problems can be mitigated by replacing the interim system with a permanent one in which health status is based on diagnoses assigned during both inpatient hospital and other types of health care encounters. The quality of available diagnosis data should be evaluated before they are used.

Use of a phase-in to cushion the interim system's effects

A final issue is that implementing any improvements in risk adjustment will probably change payments substantially for some organizations while reducing aggregate Medicare+Choice payments. Under the interim system, these changes could affect some Medicare+Choice organizations' decisions to participate in the program or the market areas they serve and disrupt Medicare+Choice coverage for some beneficiaries.

RECOMMENDATION 2D

The Secretary's plan to phase in the interim risk adjustment

system—with a method that uses a weighted blend of the payment amounts that would apply under the interim system and those that would apply under the current system—is sound. The weight on the interim payment amounts should be back-end loaded. That is, the weights should be relatively low in the first years so that most organizations will not experience extreme changes in their total payments.

HCFA indicated in its January 15, 1999, 45-day risk adjustment notice that it will phase in the interim system. The phase-in should reduce the number of organizations that withdraw from the Medicare+Choice program, but it also will slow the benefits of adopting the interim risk adjustment system. In addition, the phase-in will raise Medicare spending because the reduction in payments that otherwise would occur under the interim system will not be fully realized.

The phase-in will last five years, 2000 through 2004, and the fifth year will start with the full implementation of a comprehensive risk adjustment system that uses data from all sites of care. The phase-in method will be a blend approach, meaning an organization's payment each year reflects a changing weighted combination of the payment amounts that would have applied under the current system and those that will apply under the interim system. The blending will apply the new person-level factors to the restandardized county payment rates and the old demographic factors to the old county rates. Table 2-2 displays the weights that will be used in each year of the phase-in. HCFA intentionally "back-end loaded" the phase-in—made the first year's changes small—so that organizations would have time to adjust.

⁵ HCFA considers a hospitalization to be discretionary if the principal diagnosis represents only a minor or transitory disease or disorder, is rarely the main cause of an inpatient stay, or is vague or ambiguous.

**T A B L E
2 - 2**

HCFA's proposed risk adjustment phase-in schedule

Year	Weight	
	Interim system	Current system
2000	0.10	0.90
2001	0.30	0.70
2002	0.55	0.45
2003	0.80	0.20
2004	1.00	0.00

Note: On January 1, 2004, HCFA intends to implement a comprehensive risk adjustment system using encounter data from all sites of care, so the 2004 interim system weight will be applied to the comprehensive system.

Source: HCFA, January 15, 1999, 45-day notice on risk adjustment.

As an example of how the blend will work, suppose in 2000 an organization would receive a \$470 monthly payment for an enrollee under the interim system and \$500 under the current system. In 2000, the blended monthly payment would be: $(.10) \times (\$470) + (.90) \times (\$500) = \$497$.

Premiums, benefits, and service areas

Medicare's rules on how organizations can set their premiums, benefits, and service areas are changing as a result of the BBA and new regulations, and the Commission recommends that two of these rules—the deadline for the benefit submission and organizations' flexibility to define benefit packages within their service areas—be changed.

Statutory changes to premiums and benefit packages

Under the old risk contracting and the new Medicare+Choice programs, organizations return to beneficiaries as extra benefits any difference between the payments from Medicare and the organizations' costs of providing Medicare benefits. Extra benefits—such as prescription drugs, eyeglasses, and physical exams as well as coverage of Medicare cost-sharing—have attracted growing numbers of beneficiaries into managed care.

The BBA made several changes to the way organizations submit their

benefit packages for the Secretary's approval. These changes will require participating organizations to learn the new process and invest in the data systems to support it. Most types of Medicare+Choice organizations must prepare an adjusted community rate proposal (ACRP) to show that the benefit packages they plan to market neither exceed cost-sharing for traditional Medicare benefits nor unfairly charge enrollees for additional benefits.

The BBA also moved up the deadline for the ACRP submission. Organizations must submit their proposals by May 1 of the year before the benefit packages are in effect. This is much earlier than the November 15 deadline for the risk contracting program. Moving the ACRP submission date from November 15 to May 1 of the previous year has appeared to create hardships for Medicare+Choice organizations.

RECOMMENDATION 2 E

The Congress should move the deadline for the adjusted community rate proposal submission to later in the year to allow organizations to include more of their cost information and more details of Medicare payment methods in their projections.

This earlier deadline means that Medicare+Choice organizations must now project future payments and costs six months further out. Actuaries find it more difficult to project expenditures for a year with only one quarter of financial data from the previous year, in part because spending for that quarter may be affected by seasonal patterns that might mask important trends, or unexpected seasonal events, such as an influenza epidemic. Because the spending data from the second and third quarters of 1998 produced different expectations for 1999 spending than the projections using only the first quarter of data, many organizations asked HCFA to let them adjust the amount of benefits in their 1999 ACRPs.

Organizations also stated that because the Medicare+Choice regulation was published after the May ACRP filing date, they were unable to include unanticipated costs for complying with the regulation in their proposals. HCFA denied the request, citing program difficulties in processing the revised ACRPs and concern about increased beneficiary cost-sharing or reduced benefits compared with the May ACRP submissions. As a result, some organizations that might have otherwise opted to raise their premiums or reduce their benefit packages, instead decided not to participate in Medicare.

One reason for the earlier ACRP submission deadline is to make sure HCFA has time to review and approve submissions and then compile benefit information for beneficiaries. The BBA specified that information about plan choices, including premiums and benefit structures, be mailed two weeks before the beginning of each annual open season to all 39 million Medicare beneficiaries. The open season allows changes in enrollment choices in November. If the ACRP deadline is moved to later in the year, other BBA deadlines may require corresponding adjustment to enable HCFA compliance.

Another statutory change to the ACRP is that the Secretary must audit one-third of organizations' ACRPs every year. In the earlier program, HCFA did audit ACRPs, but the statutory mandate likely will result in more audits than in the past. This implies a shift from the solely actuarial projection used previously to one with a cost-accounting base because the cost base is what auditors can verify. So, for future audits, organizations must retain Medicare+Choice cost-accounting information that supports their ACRPs.

Regulatory and administrative changes to premiums and benefit packages

HCFA is changing the ACRP process not only to be consistent with the BBA, but also to reflect the findings from the agency's earlier study (Logistics

Management Institute 1997) and internal work group discussions. These changes fall into three categories: clarify instructions and calculations where operational guidelines diverged from policy; simplify the calculations (although the resulting submission is longer than the old one); reduce the need for backup paperwork; and satisfy requirements that organizations be accountable for their financial data. Examples of the first category are:

- Report profit projections separately from administrative costs, which will allow auditors to match more easily the administrative cost amounts to organizations' financial records and make the organizations' profit expectations more visible; previously, administration and profit amounts were combined.
- Develop the initial rate—the starting place for calculating a Medicare benefit package—using all non-Medicare (including Medicaid) lines of business for a comparable type of product; previously, organizations used only commercial business for developing the initial rate.

Examples of simplifying the calculations are:

- Use Excel® software for the proposal; previously, HCFA used a noncommercial program.
- Multiply organizations' initial rates for non-Medicare lines of business by relative cost factors—the ratio of Medicare to non-Medicare costs; previously, organizations had to break out volume and complexity factors (variables that were rarely supported by organization data).

The final type of change to the ACRP will require Medicare+Choice organizations' chief executives, financial officers, and actuaries to attest to the proposal's accuracy to the best of their knowledge (DeParle 1998a). This is a more moderate requirement than the one in the Medicare+Choice regulation, which organizations believed required attestation to 100 percent accuracy of data (Thomas 1998).

Uniform benefits and plan service area policy

Medicare payment rates vary considerably, even between counties within a single metropolitan area. Medicare+Choice organizations have tended to locate plans in areas with the highest payment rates. Competition is the strongest in these areas, and plans tend to have the most generous benefit packages. Over time, organizations have expanded their service areas to adjacent counties. Because the payments are lower and there is less competition, benefit packages in these parts of the service areas are typically less generous. Medicare program operational instructions, as well as the Medicare+Choice interim final regulations, suggest that organizations will have less flexibility to vary their benefit packages within their service areas in the future as the BBA requirement for uniform packages across plan service areas is implemented.

RECOMMENDATION 2 F

Medicare+Choice organizations should continue to have the flexibility to tailor their benefit packages within their service areas as long as Medicare payments vary by county within a service area. Without this flexibility, organizations may withdraw from counties with lower payments, reducing beneficiary access to new options.

In the risk program prior to the BBA, managed care organizations could vary benefit packages by county under what was termed the “flexible benefits” policy. A risk contractor was required to comply with the statutory ACRP requirement under which any surplus in the Medicare capitation payment had to be returned to all beneficiaries enrolled in the plan's entire service area, on an equal basis, in the form of additional benefits or reduced cost-sharing. However, organizations were free to use

non-Medicare money to finance the cost of additional benefits provided in selected counties of their service area. Generally, counties in which there was more competition among plans were the ones where plans offered more generous packages.

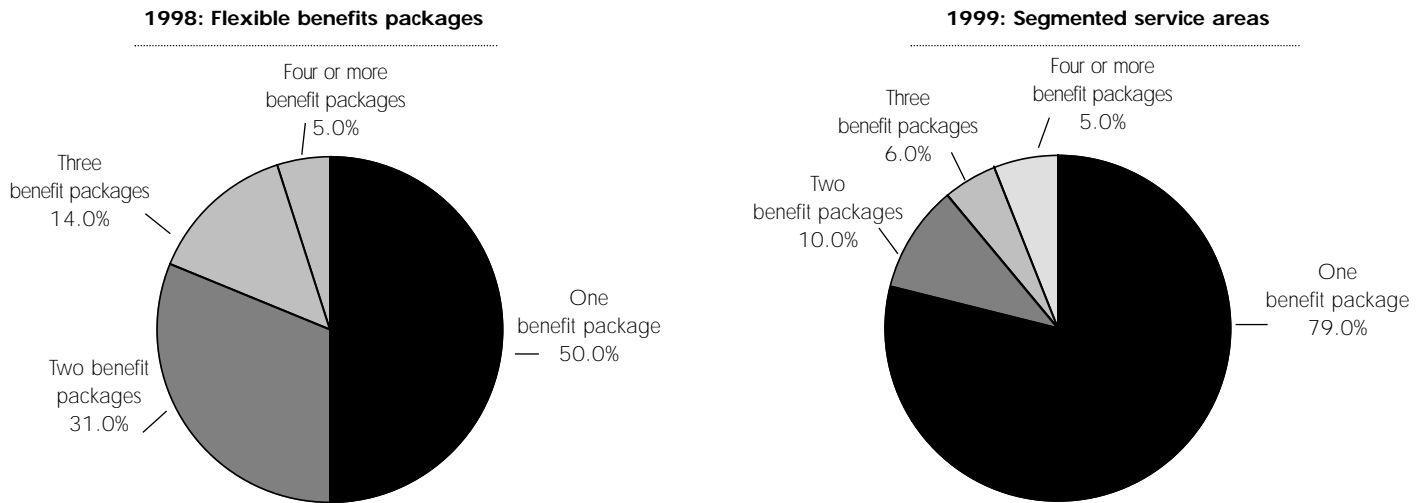
The BBA requires that Medicare+Choice organizations provide uniform benefits at a uniform price to all enrollees throughout their entire service areas, leading the agency to end the flexible benefits policy. Organizations may offer multiple plans (for example, both a basic and a high-option plan) as long as they are the same for everyone.

For 1999, though, as a transitional policy, organizations may provide different minimum packages in different segments of their service area—so long as the packages do not vary within the segments—but must file a separate ACRP for each plan offered in each segment (HCFA 1998b). An organization defines a single service area, which has to meet HCFA's criteria for nondiscrimination against beneficiaries and availability of services throughout. But the segments—defined as groups of counties—do not have to stand alone as meeting service area criteria; they are intended to allow organizations to continue to market more generous benefits to beneficiaries in areas with higher payments. Fewer organizations are taking advantage of the segmented service area policy than used the earlier flexible benefits policy, perhaps because of the additional burden of filing multiple ACRPs or HCFA discouraging organizations from taking advantage of the policy by labeling it transitional (see Figure 2-1).

Organizations' ability to segment service areas for plans appears to make coverage available to beneficiaries in more counties because organizations are more likely to include a county with a lower payment rate in their service area if they can offer a less generous package there (see Table 2-3). In examining this issue, the Commission looked at multicounty metropolitan statistical areas (MSAs) where there was at least one plan in at least one county. Each of these MSAs was then classified by two

**FIGURE
2-1**

Number of benefit packages offered within a plan's service area



Source: HCFA, Medicare Managed Care Report, October 1998, and Medicare Compare database, November 10, 1998.

variables: intra-MSA variation in payment rates and multiple segments within the MSA. The lower the ratio of the highest county payment rate to the lowest rate, the more likely that the entire MSA would have plans available. Also, the entire MSA is more likely to be served if plans in the MSA have taken advantage of segmenting their service areas within the MSA.

In future years, HCFA may discontinue this transitional policy and allow organizations to define only smaller service areas within which they meet both nondiscrimination and accessibility

criteria. This change could lead to organizations having difficulty providing uniform benefits across multicounty service areas because organizations with large service areas that include lower paying counties will be unable to provide the same level of benefits as organizations that serve only high-paying counties. Organizations with the larger service areas, then, would probably lose market share in the more profitable areas. In fact, some Medicare risk organizations have already pared back their service areas in rural and exurban counties. Organizations might even abandon lower paying counties in metropolitan areas.

The Commission recognizes that varying benefit packages within service areas may lead to confusion among beneficiaries who will see richer packages in some parts of a metropolitan area than in others. The potential for confusion, however, is outweighed by the potential for organizations to leave lower-paid counties altogether, resulting in no Medicare+Choice options at all.

Beneficiary information

Collecting and disseminating information on the health plans available to Medicare beneficiaries is both important and potentially expensive. The success of the Medicare+Choice program will hinge largely on how well beneficiaries can understand their new options and make informed decisions among them. But because participating organizations, providers, and ultimately beneficiaries bear the costs associated with making such information available, it is critical that care be taken in developing reporting requirements and dissemination strategies to maximize the value of those efforts. In its comments on HCFA's Medicare+Choice rule, MedPAC advised HCFA to weigh the expected benefits from any new information requirements against the costs associated with reporting each item (MedPAC 1998b).

**TABLE
2-3**

Medicare+Choice plan availability across multicounty metropolitan statistical areas, 1999

Of multicounty MSAs with plans, the percent that have plans in all counties

Variation between highest and lowest county payment rate	All MSAs	MSAs with segmented plans	MSAs without segmented plans
None	100%	N.A.	100%
Less than 10 percent	85	100%	83
10 to 20 percent	70	92	59
Above 20 percent	57	63	56

Note: For purposes of this analysis, segmented plans subdivide their service areas within an MSA. Variation is the highest county payment rate divided by the lowest county payment rate minus 100. Segmented service areas are where plans have broken up their service areas along county lines. MSA (metropolitan statistical area).

Source: HCFA, Medicare Compare Database, November 10, 1998.

New information reporting and disclosure requirements

The consumer information provisions of the BBA and HCFA's implementing rule were designed to ensure the availability of comparative information needed to promote value-based competition in Medicare. Such information can help Medicare beneficiaries make informed choices between traditional Medicare and private health plans and to choose among available plans. Before the Medicare+Choice program, no single source for comparative information existed to serve all beneficiaries. Instead, beneficiaries relied on health plans' individual marketing materials, current or former employers, and consumer assistance groups where available.⁶ Under Medicare+Choice, comprehensive comparative information will be compiled by HCFA and disseminated to all beneficiaries.

Collecting information, measuring performance, reporting data, and responding to beneficiary requests for information disclosure likely will increase the net costs to organizations of participating in Medicare. Medicare+Choice organizations are required to provide HCFA with information on their plans' benefits, premiums, costs, performance (as measured using specified quality indicators), and enrollees' out-of-pocket costs. They also must make available more detailed information to beneficiaries upon their request. HCFA proposed additional disclosure requirements in its interim final Medicare+Choice implementation rule, which requires organizations to attempt to notify the patients of physicians who stop participating with the organizations.

User fees to finance HCFA's information campaign

In addition to the costs of complying with new consumer information requirements, organizations participating in Medicare also face a new user fee, established by the BBA to defray the cost of HCFA's consumer information efforts.⁷ The total annual amount authorized for HCFA's collection is split among participating organizations according to a formula that assesses fees in direct proportion to the amount of money organizations receive from Medicare.⁸ Because the total amount is fixed in advance, a decrease in the total number of organizations participating in Medicare means that each organization will pay a higher share of the total amount than it otherwise would have. At the same time, increases in total beneficiary enrollment in Medicare+Choice plans will reduce the percentage of organization revenues attributable to the user fee.

Concerns persist regarding both the mechanisms for funding beneficiary information efforts and the levels of funding that have been made available. HCFA expected to spend \$114 million on beneficiary education in fiscal year (FY) 1998, a year in which the information program was conducted on a limited basis for evaluation purposes, and estimated that it would require \$173 million to conduct an effective nationwide education campaign in FY 1999 (DeParle 1998b). The Congress authorized \$95 million for HCFA's collection through user fees in both FY 1998 and FY 1999, an amount significantly less than the full \$200 million (FY 1998) and \$150 million (FY 1999) maximum specified in the BBA.

Funding and time constraints, along with uncertainty as to the best approaches

and techniques for informing beneficiaries, likely influenced HCFA's decision to undertake a test of its beneficiary education campaign in the first year, rather than begin with a nationwide initiative. The first-year demonstration and evaluation involves beneficiaries in five states: Arizona, Florida, Ohio, Oregon, and Washington. Beneficiaries residing in these states received comprehensive Medicare+Choice handbooks, including comparative information on their health plan options, and have access to a toll-free information hotline. HCFA plans to assess beneficiaries' use of these materials and services and to identify areas that need to be refined or revamped before the first coordinated annual enrollment period (and nationwide information campaign) begins in November 1999 (DeParle 1998b).

Quality standards

Extensive new quality assurance and improvement requirements may result in better health care for beneficiaries, greater accountability for performance, and increased information about differences in care across health plans, but they also entail significant new burdens on organizations participating in Medicare. In its comments on the Medicare+Choice rule, MedPAC advised HCFA to take several steps to minimize administrative burdens and maximize the opportunity to meet quality improvement objectives. First, MedPAC urged HCFA to undertake a careful and incremental implementation of the new quality requirements. The Commission also advised the agency to consult closely with other public and private sector purchasers who have instituted similar types of requirements for their own contractors. Finally, MedPAC called for

6 At least one HCFA regional office prepared comparative information on health plans for beneficiaries prior to the enactment of Medicare+Choice.

7 These efforts include mailing informational materials annually, operating a consumer assistance hotline, and maintaining an Internet site. MedPAC's June 1999 report to the Congress will include an analysis of HCFA's consumer information strategies and activities.

8 In an interim final rule published December 2, 1997 (Medicare+Choice Program: Collection of User Fees from Medicare+Choice Plan and Risk-Sharing Contractors, 42 CFR §417.470/417.472), HCFA described the method it would use to determine the user fee to be paid by participating organizations to support the beneficiary information campaign. Under the formula, HCFA divides the total amount authorized for collection (\$95 million in FY 1998) by the total projected revenues for the first nine months of the contracting year (\$22.181 billion in FY 1998) and arrives at a percentage (0.428 in FY 1998) to be deducted from the monthly capitation payments to contracting organizations. Monthly deductions continue until the total annual authorization is reached. The Congress also authorized \$95 million for collection in FY 1999, which HCFA determined would represent a deduction of 0.355 percent of payments.

HCFA to set up mechanisms to evaluate the effects of its performance standards on Medicare program participation and beneficiary access and satisfaction.

Important changes in quality assurance requirements

Although the quality-related requirements set forth in the BBA largely mirror those established for the Medicare risk program, HCFA introduced several important changes in the standards for organizations participating in Medicare through the Medicare+Choice regulatory framework and guidelines for compliance that HCFA issued separately.

At least two of the changes in the quality requirements represent important changes in participating organizations' relationships with Medicare as a health care purchaser. First, coordinated care plans are required not only to report on performance but also to meet performance standards that HCFA will establish.⁹ Second, coordinated care plans must not only maintain and operate a quality improvement program but also demonstrate that those programs have been successful by meeting improvement goals to be defined by HCFA.

The changes to Medicare's quality requirements reflect HCFA's decision to implement the Quality Improvement System for Managed Care (QISMC), a framework for quality assurance and improvement that it has been developing for several years. QISMC was conceived as a way to make quality requirements for Medicare and Medicaid managed care programs more comparable and bring both up to current best practices by large employers and other health care purchasers. Compliance with the system involves collecting and reporting information on performance and undertaking focused quality improvement projects.

MedPAC generally supports HCFA's harnessing Medicare purchasing power in

an effort to improve the quality of care received by beneficiaries. Establishing and enforcing minimum performance and improvement standards in Medicare+Choice could have positive implications for beneficiaries. If carefully designed and implemented, such standards may help to protect beneficiaries from substandard care and promote improvement in care. They also could offer beneficiaries assurance that participating plans had reached an established floor level of quality, leaving them free to choose an appropriate plan based on the most personally relevant differentiating factors.

However, managed care organizations and their industry representatives expressed considerable concerns about the new quality requirements (AAHP 1998). Many of the concerns were about the detailed requirements provided in HCFA's proposed QISMC standards, not the basic framework for quality improvement and accountability outlined in the Medicare+Choice regulation. Managed care organizations objected to the stringency of some of the proposed requirements and to the immediacy of the implementation timetable. They also expressed concerns that certain requirements deviated unnecessarily from current industry standards established by private sector accrediting bodies.

Because many of the new quality requirements reflected HCFA's discretionary choices, the agency has been able to scale them back or delay their implementation without awaiting legislative changes. HCFA has worked with managed care organizations to identify overly burdensome requirements and has taken steps to respond to these concerns. For example, in an operational policy letter issued on September 30, 1998, HCFA announced that it would modify the QISMC requirements in a number of respects. Among other changes, HCFA said it would:

- institute a phase-in period of three years before new contractors would be required to demonstrate performance improvement,
- reduce the number of annual performance improvement projects from as many as 13 to two (three for organizations with both Medicare and Medicaid contracts), and
- delay enforcement of minimum performance levels until 2001.

Such changes have as yet proved inadequate to fully stem plans' concerns, however, and discourse on the nature and scope of Medicare's quality requirements continues between the agency and health plan representatives (Ignagni 1998).

Common quality standards for coordinated care plans

Plans characterized by looser networks and fewer care management tools, such as preferred provider organizations (PPOs), will find compliance with Medicare+Choice quality requirements more challenging than will tightly organized and managed plans. Unless HCFA shows sensitivity to differences in health plan capacity in administering these requirements, certain types of plans may find Medicare participation too burdensome, resulting in less variety in the plans available to beneficiaries. The agency has testified that it intends to take needed steps to ensure that less structured plans can meet its quality requirements (Hash 1998). At the same time, administration officials have maintained that the agency is acting reasonably as a prudent purchaser by requiring plans to be accountable for the quality of care beneficiaries obtain and that coordinated care plans must be structured in such a way as to be able to provide that accountability.¹⁰

In the BBA, the Congress recognized that uniform quality standards would not

9 The BBA does not define coordinated care plans but designates health maintenance organizations (with and without point-of-service options), preferred provider organizations, and plans offered by provider-sponsored organizations in this category.

10 This position raises the question of accountability for quality under traditional fee-for-service Medicare, which MedPAC plans to address in its June 1999 report to the Congress.

be possible in a Medicare program that permitted more variation among health plans than was allowed under the risk-contracting program. The BBA provided that the quality requirements for coordinated care plans, private fee-for-service plans, and medical savings account plans would, in some cases, differ. For example, only coordinated care plans were required to “take action to improve quality and assess the effectiveness of such action through systematic follow up.” In general, the BBA required more in terms of quality assurance and improvement initiatives from plans structured around a defined network of providers.

In developing the Medicare+Choice regulations, HCFA made distinctions in quality requirements that reflected the plan categories set forth in the BBA but did not go as far as some felt necessary in accounting for structural differences among various types of coordinated care plans. PPOs, in particular, argued that they would not be able to offer the same types of accountability and quality improvement mechanisms offered by more tightly organized health maintenance organizations (BCBSA 1998). They asserted that the loose contractual arrangements with providers that allowed them to maintain large networks and offer beneficiaries choice lacked, by design, the care management tools needed to provide organizational responsibility for quality improvement. PPOs also noted that quality measurement by organizations that do not require members to obtain referrals from their designated gatekeepers is more costly and less reliable because such plans generally do not maintain a single comprehensive medical record for each member at the site of his or her usual source of care.

While data for objectively assessing differences in plan capacity are sparse, at least one study has called into question the premise that HCFA exceeded private sector norms in developing quality

requirements for PPOs. A 1998 report by the U.S. General Accounting Office noted that some of the largest health care purchasers in the country either collect or plan to collect performance data from all of the plans with which they contract, including PPOs. The agency also reported that industry accreditation organizations were updating PPO standards to include certain quality assurance and improvement activities.

Enforcement of quality improvement and performance standards

Organizations that do not meet quality requirements may be subject to new penalties under Medicare+Choice. The implementing rule specifies that HCFA may elect not to renew the contracts of organizations that fail to meet new program standards for quality improvement. In the past, the agency has been criticized for failing to take sufficient action against contractors that failed to fulfill the terms of their contracts, even when faced with evidence of continued problems (GAO 1995, GAO 1991, GAO 1988).

At least one recent development supports the notion that HCFA might need to have powerful sanctions available to promote compliance with some of the Medicare+Choice quality requirements. Of those health plans that in 1997 voluntarily provided quality and performance data for public disclosure through Quality Compass, a proprietary database developed by the National Committee for Quality Assurance (NCQA), nearly half chose not to participate in 1998. NCQA further reported that those plans that authorized public release of their performance data in 1998 outperformed those not willing to have their results publicly disclosed across every measure of performance (NCQA 1998). Although the dropouts were nearly offset by plans participating in Quality Compass for the first time in 1998, this development suggests that

demand for such data is presently insufficient to ensure voluntary disclosure by all plans that have the capacity to measure and report on their performance.¹¹

MedPAC, in its comments on HCFA's implementing rule, advised the agency to be cautious in enforcing new performance standards based on quality measurement results and called upon the agency to look for opportunities to institute performance incentives. The Commission advised HCFA to refrain from acting on organizations' quality reports until a reasonable degree of confidence in the accuracy, validity, and meaningfulness of the reported information has been attained. Once technical concerns have been resolved, HCFA should look into developing a system that features rewards for exceptional performance in addition to penalties for substandard performance.

Deemed status option for accredited plans

One change under Medicare+Choice offers the potential to reduce organizations' burdens associated with demonstrating compliance with Medicare participation requirements. The BBA gave HCFA the authority to allow health plans that have been accredited by certain private sector organizations to be deemed compliant with certain Medicare participation requirements, bypassing the need to undergo duplicative reviews and oversight procedures.

HCFA plans to set up a process for evaluating private sector accreditation standards and compliance procedures similar to those that already have been established for determining the Medicare equivalency of accreditation mechanisms for hospitals and other health care facilities. The agency will review relevant accreditation standards of organizations that apply for approval to determine their equivalence to Medicare standards and will determine whether the procedures used to determine compliance are at least

11 Several of the health plans that chose not to participate in the 1998 Quality Compass cited concerns about the validity of unaudited, self-reported data and the potential for making unfounded comparisons in cases where reported data were inaccurate. Unlike earlier performance data, those produced for the 1999 version of Quality Compass will be subject to an independent, external audit.

as stringent as Medicare's. It will periodically reassess the accreditation organization's review process and may conduct an onsite inspection of the organization's operations and offices under certain circumstances.

In its implementing rule, HCFA stated that eligible accreditation organizations would need to operate nationwide and be free from control by the organizations they accredit. The latter requirement may present problems for at least one accrediting body that has health plan representation on its board of directors (O'Kane 1998). This requirement appears inconsistent with similar regulations on deeming compliance with Medicare's conditions of participation for hospitals and other facilities.¹²

Further implementation challenges ahead

Many of the decisions HCFA faces as it moves forward in implementing QISMC are likely to have important implications for health care quality and the level of health plan participation in Medicare. Yet to be addressed are issues such as:

- how to set standards that assure minimum levels of safety, technical competence, and operational performance without unduly discouraging health plan participation,
- whether quality measures can be identified that provide comparable and meaningful information across different types of plans and traditional fee-for-service Medicare, and
- how to minimize the incentives for risk selection that might be instilled by comparative quality measurement, by adjusting for important differences in enrolled populations or by other means.

The success of the new approach will be significantly affected by how well these difficult issues are resolved.

Organization responses and the impact on beneficiaries

Organizations that had participated in the risk contracting program and were contemplating continuing in Medicare+Choice had several possible actions they could take to deal immediately with the relatively low growth in revenues from Medicare and the increased costs from complying with new program requirements:

- leave Medicare,
- reduce the benefits offered or charge more for them, or
- reduce costs.

While organizations pursuing the first of these options received widespread publicity, all three were likely pursued to some degree. In each case, an organization's actions probably reflected its market circumstances—its competitors, other purchasers, and providers—as well as state and local regulatory requirements. Notably, even with all the new types of organizations and products allowed to participate in the new program, only one new organization—a provider sponsored organization—joined eight HMOs to offer new plans in early 1999.

Departures from selected geographic areas

HMOs holding nearly 100 risk contracts (about one-quarter of all contracts) announced they were departing from Medicare or reducing their service areas for 1999. These organizations cited a number of reasons for their departures, including Medicare's payment rates, regulatory burdens, and changes in costs to provide certain benefits. Another contributing factor may have been that rules about barriers to organization reentry were not in force during the

transition between the risk contracting and Medicare+Choice programs.

These withdrawals and service area reductions were expected to affect 409,000 enrollees in Medicare risk contracts, representing approximately 6.5 percent of the more than 6 million risk contract enrollees (HCFA 1998a). Around 50,000 of these enrollees will not have access to another managed care plan in their areas.

All of the departures will affect the beneficiaries enrolled in plans offered by the organizations, but the effect will vary. At a minimum, beneficiaries will have to change health organizations, which in some cases may mean disrupting existing relationships with providers. Some beneficiaries also will stand to lose benefits, such as prescription drug coverage, that they now obtain through their departing risk plan. Finally, beneficiaries who live in areas without other Medicare+Choice options will have to return to the traditional fee-for-service program and buy individual supplemental (Medigap) policies if they want to maintain comparable protection from out-of-pocket expenses alone, much less coverage for additional services. Further, the beneficiaries who decide to return to fee-for-service Medicare face a complicated and confusing set of rules about their eligibility and premiums for Medigap policies.

Unless a sizable number of new plans enter during 1999, availability of plans in 1999 will be less than in 1998 (see Table 2-4). According to HCFA data as of November 1998, 29 percent of Medicare beneficiaries will not have access to a Medicare+Choice plan in 1999. In 1998, only 26 percent of beneficiaries lived in a county without a risk plan. Access is still greater than it was when the BBA was enacted in 1997, though. At that point, about 33 percent of beneficiaries lived in a county without a risk plan.

Access varies geographically: While 86 percent of Medicare beneficiaries

12 Hospitals accredited by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), for example, are deemed to have met Medicare's standards, although JCAHO's board of directors includes representation by the American Hospital Association.

**T A B L E
2-4**

Counties and beneficiaries with and without risk plans

	1997		1998		1999	
	Number of counties	Percent	Number of counties	Percent	Number of counties	Percent
Counties with risk plans	740	24%	987	32%	896	29%
Counties without risk plans	2,387	76	2,140	68	2,231	71
Medicare beneficiaries (In millions)						
in counties with risk plans	26.2	67	28.6	74	27.7	71
in counties without risk plans	12.7	33	10.2	26	11.2	29

Notes: Puerto Rico is excluded from the analysis. Eligible beneficiary information is from September 1998 HCFA database.

Source: MedPAC computations based on HCFA public data.

living in metropolitan areas have access to plans, about 74 percent of beneficiaries living outside metropolitan areas do not (see Table 2-5). The availability of plans also varies with the Medicare+Choice payment rate level. Virtually all beneficiaries residing in counties with rates above \$550 a month have access to a Medicare+Choice plan, compared with only 23 percent of beneficiaries living in floor counties having plans available.

Reductions in enrollee benefit packages

Organizations can reduce their anticipated outlays by lowering the amount of

coverage in their benefit packages, or they can increase their revenues by charging beneficiaries higher premiums for the same packages. Under the risk contracting program, many organizations offered plans that included non-Medicare benefits, such as prescription drugs, health assessments, hearing aids, and eyeglasses, often at no additional premium. Generally, risk contract benefit packages were more generous in areas with higher payment rates (McBride 1998, ProPAC 1997). If managed care organizations' costs rise faster than payments, the prevalence and generosity of these benefits likely will decline.

One popular benefit for which costs are rising rapidly is prescription drugs. Between 1996 and 1997, drug costs per member for all managed care enrollees increased 13.7 percent, with about one-half of the increase because of higher use and the other half because of higher prices (Drug Trend Report 1998). In Medicare HMOs, a recent study found that prescription drug use rose 5 percent between 1997 and 1998 (Milliman and Robertson 1998).

Organizations likely will respond to these price and volume increases by reducing the amount of drug coverage. Possible changes include:

- increasing copayments,
- imposing dollar limits on coverage,
- limiting formularies to lower-cost options for certain conditions,
- counseling physicians to prescribe

fewer and less expensive drugs when medically appropriate,

- providing financial incentives for patients to use generic drugs instead of brand name drugs, and
- increasing premiums for the benefit.

Few organizations have dropped drug coverage altogether, perhaps because they could not change the benefit packages they submitted in May. Between December 1997 and July 1998, 4 percent of risk contract enrollees were in contracts that dropped prescription drug coverage altogether; this gap was only partially made up by 2.6 percent of enrollees in plans that added such coverage (McBride 1998). Another study found that the share of Medicare+Choice plans offering prescription drug benefits will decline from 72 percent in 1998 to 69 percent in 1999, with some plans including new limits on coverage and different cost-sharing requirements (Watson Wyatt 1998). If organizations had been able to change their packages, though, changes might have been more sizable.

More Medicare HMOs have dropped coverage of some other benefits, however. An early analysis of the change in benefit packages found that 14 percent of enrollees lost dental coverage, while 11 percent gained it; 21 percent lost coverage of eye lenses, while no recipients gained it; and 12 percent lost coverage of hearing aids, while no recipients gained it (McBride 1998).

Most plans continue to provide

**T A B L E
2-5**

Percent of counties and beneficiaries with Medicare+Choice plans in 1999

	Medicare+Choice plans available in 1999	
	Percent of counties	Percent of beneficiaries
All counties	29%	71%
Metro area	65	86
Non-metro	15	24
Monthly payment rate		
Over \$550	62	97
\$450-\$550	51	86
\$379.85-\$450	27	55
\$379.84	12	23

Note: Puerto Rico is excluded from the analysis. Eligible beneficiary and enrollee information is from November 1998 HCFA database.

Source: MedPAC computations based on HCFA public data.

cheaper, more comprehensive, coverage than is available under traditional Medicare combined with an individually purchased Medicare supplemental (or Medigap) package. In Miami, Florida, for example, Medigap Plan C (which covers only the Part A and B deductibles, the skilled nursing facility coinsurance, and 80 percent of emergency care in a foreign country) costs from \$124 to \$169 per month in 1998. This package was less generous and more expensive than Medicare HMOs in the same area, which typically charged no premium for comprehensive coverage.

If organizations offer less generous benefit packages as a group, beneficiaries may find managed care options somewhat less attractive, and enrollment rates may slow. But price increases for non-Medicare benefits in other sectors—like Medigap and employer plans—may lead to comparable changes in benefit structures, so Medicare HMO coverage may still be a relatively good deal.

Despite these continuing price differences for coverage, enrollment growth has slowed appreciably. Enrollment in Medicare risk plans grew by about 900,000 members, from 5.2 million in December 1997 to 6.1 million one year later. That growth was lower than the 1.1 million enrollee growth during the previous year. The growth by month during 1998 slowed steadily, reaching a low of 38,000 in December. It is unclear whether this may be a response to withdrawals, benefit changes, decreased marketing efforts by organizations, or other factors, including negative publicity about managed care.

Other steps to respond to Medicare changes

Organizations might use other tools to lower their costs—managing care more tightly or lowering payments to providers—but their ability to use these tools is limited by constraints in their market and regulatory environments. For example, a focus of state legislation has been allowing providers to have more influence over utilization review and coverage denials, which may end up weakening these tools (AAHP 1998,

AAHCC 1999). State legislators also have passed laws against limits on site of care and length of stay. Some organizations have developed programs to provide targeted services to high-risk populations. These programs are resource intensive to develop, however, and take some time to pay off. But disease management programs for such common diseases as diabetes and heart disease may become adopted by managed care plans if these programs reduce their costs.

Another strategy organizations could pursue is passing on any lower Medicare revenues or higher Medicare costs (including the programs to comply with new regulations) to providers. This could take place either as lower increases in fees or shifting more of the insurance risk to providers. Some large Medicare contractors pass on risk to provider groups that are paid a percentage of the Medicare+Choice payment, and relatively lower payment levels then will result in smaller revenue growth for the provider groups or can result in the need to renegotiate the financial arrangements in the contract. Organizations' success in shifting costs back to providers will depend on the bargaining power of the two parties at the negotiating table. If providers are unwilling to lower their prices or take on more insurance risk, organizations may no longer be able to offer Medicare enrollees access to a sufficient provider network and may decide to withdraw from Medicare.

Assessing the performance of the Medicare+Choice program

In the BBA, the Congress made MedPAC responsible for evaluating and recommending changes to Medicare+Choice. MedPAC's recommendations in this chapter reflect its views of corrections to policies needed at this early stage of Medicare+Choice implementation. While the Commission

has been considering improvements to the program, we also have recognized that more information is needed to understand the reasons for and patterns behind organizations' and beneficiaries' participation decisions. Also, because the new program is not yet fully implemented, it is too soon to reach firm conclusions about the roles specific policies may have played—or may yet play—in influencing these decisions. Moreover, neither Medicare+Choice organizations nor beneficiaries make decisions in a vacuum. Consequently, program developments may be partly or wholly due to changes outside of the Medicare program, rather than to features of Medicare+Choice.

Assessing the performance of the Medicare+Choice program raises three issues. One is how to select measures that correspond to the program's goals because problems are indicated when those goals are not met. To develop useful performance measures, therefore, first requires identifying the program's major goals and important potential threats to their achievement. A closely related, but more difficult, issue is how to identify performance measures that can be linked to individual program policies. Attributing program performance to specific policies will often be difficult because some policies support more than one intermediate objective. A third issue is how to assess the extent to which the program's policies balance inherent conflicts between objectives.

Program goals and objectives

The Congress identified two primary goals in adopting the Medicare+Choice program:

- to "...allow beneficiaries to have access to a wide array of private health plan choices in addition to traditional fee-for-service Medicare," and
- to "...enable the Medicare program to utilize innovations that have helped the private market contain costs and expand health care delivery options" (U.S. Congress 1997).

Many in the Congress anticipated that realizing these goals would benefit Medicare beneficiaries, the program, and its supporting taxpayers. Allowing a wider array of plan types to participate in the program would help foster competition among organizations and provide beneficiaries with more choices among private health insurance arrangements. Product design innovations could include coverage or benefits not available under traditional Medicare or open access to a broad range of health service providers. New reporting and disclosure requirements and other program changes to support informed beneficiary choice would promote competition among these new organizations on the basis of product design and performance. Organization performance would be captured through a variety of measures, including indicators of quality and access to care. Expanded choices would enable beneficiaries to tailor the program to reflect their individual preferences and circumstances. In addition, the policies and infrastructure implemented to secure these benefits would be compatible with a range of potential market-oriented reforms that might be adopted in the future.

To secure these benefits, the Congress enacted the wide-ranging policies described earlier in this chapter and others. Alone and in concert, these policies were designed to expand beneficiaries' choices by increasing the number and variety of available health plans, especially in areas that were previously unserved or underserved; reduce geographic variation in payment to allow organizations to offer similar benefits; and promote competition among organizations on the basis of benefits and performance. The legislation included other policies that reflected a variety of other intentions and goals that fall beyond the scope of this chapter.

Developing performance measures to evaluate policies

Medicare+Choice policies support each intermediate objective. These policies, in turn, can be evaluated using specific performance indicators. Examples of

these performance measures include the following:

- The goal of expanding beneficiary choices is supported by policies to expand the types of plans able to participate and to permit the Secretary to vary program standards to reflect plan types. Performance indicators include the prevalence of a variety of plans in the nation and within market areas.
- The goal of reducing variation in benefits is supported by policies to set a payment floor, blend local and national payment amounts, and remove graduate medical education payments. Performance indicators include the convergence of benefits and premiums across areas where rate disparities are reduced.
- The goal of promoting competition on the basis of value (cost and performance) is supported by the policies to improve risk adjustment and to distribute comparative information on plans to beneficiaries. Performance indicators include beneficiary understanding measured through surveys or focus groups and changes in enrollment and disenrollment.

These and other indicators will be monitored by HCFA, MedPAC, and policymakers. Not all are equally important to monitor in the short run, however. Some objectives are initially more critical than others, and some policies go into effect sooner than others. It is hard to imagine, for example, how the program could meet the Congress's objective of increases in choices without increases in geographic access to Medicare+Choice options and a greater variety of plans. Policies that have longer implementation time frames include improvements in risk adjustment, full information disclosure to beneficiaries, and blending of national and local payment rates. Because of the implementation schedule, initial monitoring probably should focus on changes in organizations' behavior, especially changes in the frequency and location of participation, service area

definitions, and plan benefits, copays, and premiums.

Changes in performance rarely will be attributable to a single policy. First, a number of Medicare+Choice policies contribute to more than one intermediate objective and often may have conflicting effects. For example, implementing improvements to risk adjustment is intended to allow organizations to compete on benefits and performance. But the change will make payment rates less attractive for organizations that attracted more healthy enrollees on average; those organizations may decide to leave the program if the rates are too low to support the benefit packages offered in the past. Providing beneficiaries with more information about options is intended to promote enrollment and competition among organizations, but providing the information is costly to organizations and, therefore, makes participation less profitable; organization decisions to leave the program could result in fewer options for beneficiaries.

Attributing changes in Medicare+Choice performance to specific policies is also difficult because both organizations and beneficiaries will be influenced by their individual characteristics and market circumstances. Organizations' decisions may be affected by anticipated financial pressure from their commercial and other government clients, the scale and geographic diversity of their operations, the stability of their relationships with health care providers, Medicare's relative importance in their overall business, and other anticipated claims on their resources in the near term (such as major investments in automated information systems). Organizations' willingness to offer a plan in a particular market area probably will be influenced by the size of the potential market (number of beneficiaries living in the area); the overall longevity and penetration of managed care; health service use patterns; the market power of competitors; and the mix and capacity of local health care providers. Similarly, beneficiaries will evaluate their Medicare+Choice options based on their preferences, financial circumstances,

retiree health insurance policies, and the cost of Medigap options.

The potential power of these individual and market factors to influence the Medicare+Choice program suggests that policy analysts and other observers should exercise great caution in attributing changes in organizations' and beneficiaries' behavior to specific policies or their initial implementation. It also highlights the importance of examining a wide array of performance measures and explicitly taking into account differences in circumstances across market areas.

Monitoring system for Medicare+Choice

An important tool that MedPAC will use to assess the performance of the Medicare+Choice program is a monitoring system. MedPAC will develop the system and update most data annually, with January 1998 as the baseline. This system will identify program changes and provide policy makers with up-to-date information about current trends. The monitoring system has four goals:

- track beneficiary access to plans,
- analyze characteristics of counties affected by changes in plan participation,
- monitor enrollment, and
- monitor plan characteristics and benefit packages.

The system described here focuses on performance indicators based on these goals. It represents a first iteration of a model that will evolve over time. Monitoring system changes may be necessary for two main reasons. First, as more data become available and provide better information, the system will expand to include them. Second, changes in statutory or regulatory policies could require collecting new data to assess the impacts of these policies.

Track beneficiary access to plans

MedPAC will develop a database on beneficiary access to Medicare+Choice

plans by county. This database will show the number of plans available by county, the type of plans, and their benefit packages. For illustrative purposes, MedPAC will develop a series of maps that show changes in beneficiary access to plans by county. For example, these maps will show counties where organizations have stopped offering plans.

Analyze characteristics of affected counties

The maps will highlight important issues that MedPAC will consider when analyzing data on the characteristics of affected counties. For example, how are counties with net withdrawals different from those with no organization pullouts? Are payment rates different? For each county, the monitoring system will measure changes in the number of plans per county. The monitoring system also will analyze the relationship between organization participation and such factors as the payment rate, the characteristics of organizations' commercial market, the percent of Medicare beneficiaries enrolled in the county, the number and type of health care providers in the county, and the type of county (urban versus rural).

Monitor enrollment

Because enrollment can change during the year, MedPAC also will monitor county enrollment data on a quarterly basis. These data will include changes in the number of enrollees, the percent of Medicare beneficiaries enrolled in Medicare+Choice in the market, the payment rate, and the type of county. Each year, the Commission will track what happens to beneficiaries who lose access to their HMO; that is, whether these beneficiaries join another HMO or return to traditional Medicare.

Monitor plan characteristics and benefit packages

MedPAC also will monitor the characteristics and benefit packages of plans participating in the Medicare program. For all plans, the Commission

will measure such characteristics as plan premiums, plan type (for example, those with point-of-service option, type of sponsorship), market share, and age of contract, and analyze relationships between these characteristics and organization participation.

Many seniors opt for HMOs because these plans offer lower premiums and more benefits than Medigap plans. As health care costs increase, however, organizations may begin to adjust their benefit packages. The monitoring system will track how benefit packages change over time within the Medicare+Choice program. MedPAC will analyze whether organizations pulling out of Medicare offer similar benefit packages to plans remaining in the program. If most organizations are pulling out because of increased drug costs, then one would expect that the plans remaining in the program might offer less generous drug coverage (for example, higher copays). However, if not all organizations stop participating in Medicare+Choice in a particular market, the organizations that remain there might be able to enroll a greater number of Medicare beneficiaries. If this shift in enrollment occurred, the remaining organizations might be able to take advantage of economies of scale to reduce their costs and offer more benefits.

Monitoring the effects of risk adjustment

MedPAC also will evaluate the effects of the new risk adjustment system on organization payments. Based on the effects of the new system, MedPAC will consider recommending changes to the risk adjustment system. It is important that all changes to the system improve upon the current system by lessening the undesirable incentive for organizations to attract low-risk beneficiaries and by making payments more closely match the predictable differences in health spending by beneficiaries. At the same time, MedPAC recognizes that if organizations face dramatic payment decreases, they might leave Medicare, resulting in decreased access to the managed care option. ■

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C H A P T E R

3

**Updating and Reforming Prospective
Payment for Hospital Inpatient Care**

R E C O M M E N D A T I O N S

For the annual update to hospital inpatient payments under Medicare's prospective payment system:

- 3A** The operating update of market basket minus 1.8 percentage points set in law for fiscal year 2000 will provide reasonable payment rates. An update of that level, which will be 0.7 percent if the current market basket estimate holds, is within the range the Commission believes is appropriate.
- 3B** The Secretary should increase the capital payment rates for fiscal year 2000 by between market basket minus 3.0 percentage points and market basket minus 0.1 percentage point. With the current estimate of the market basket, this corresponds to an update of -1.1 percent to 1.8 percent.

For Medicare's disproportionate share payments:

- 3C** The Congress should require that disproportionate share payments be distributed according to each hospital's share of low-income patient costs, defined broadly to include all care to the poor. The measure of low-income costs should reflect:
- Medicare patients eligible for Supplemental Security Income, Medicaid patients, patients sponsored by other indigent care programs, and uninsured and underinsured patients as represented by uncompensated care (both charity care and bad debts).
 - Services provided in both inpatient and outpatient settings.
- As under current policy, disproportionate share payment should be made in the form of an adjustment to the per-case payment rate. In this way, the total payment each hospital receives will reflect its volume of Medicare patients.
- 3D** Through a minimum threshold for low-income share, the formula for distributing disproportionate share payments should concentrate payments among hospitals with the highest shares of poor patients. A reasonable range for this threshold would be levels that make between 50 percent and 60 percent of hospitals eligible for a payment. The size of the payment adjustment, however, should increase gradually from zero at the threshold. The same distribution formula should apply to all hospitals covered by prospective payment.
- 3E** The Secretary should collect the data necessary to revise the disproportionate share payment system from all hospitals covered by prospective payment.

Updating and Reforming Prospective Payment for Hospital Inpatient Care

Medicare pays for most hospital inpatient care using per discharge rates developed under a prospective payment system. These rates must be updated annually. Although future updates are set in law, the Medicare Payment Advisory Commission provides guidance to the Congress on an appropriate range for the payment update each year. This chapter includes our recommendations for fiscal year 2000. For more than a decade, the prospective payment system has included a special payment adjustment for hospitals that treat a disproportionate share of low-income patients. For some time, however, policymakers have been concerned about the accuracy of the underlying measure of care to the poor and the policies for targeting these payments to specific hospitals. This prompted us last year to endorse a series of recommendations for reforming the disproportionate share adjustment. In this chapter, we repeat those recommendations, with additional discussion of the current policy context.

In this chapter

- Overview of the payment system and Balanced Budget Act provisions
 - Trends in payments, costs, and margins
 - Updating operating payments
 - Updating capital payments
 - Reforming disproportionate share payments
-

The chapter begins by describing the major components of hospital payments under Medicare's prospective payment system (PPS) and the key provisions affecting these payments in the Balanced Budget Act of 1997 (BBA). Following is a discussion of the trends in hospital payments and costs, for Medicare and across all payers, which is important in establishing a context for our recommendations. The next two sections comprise separate recommendations for updating operating and capital payment rates under PPS. Appendixes C and D contain analyses of two key factors we considered in developing these recommendations—scientific and technological advances, and hospital productivity and product change. Lastly, we present three recommendations for modifying how disproportionate share (DSH) payments are made, addressing criteria for identifying eligible hospitals, the method of distributing the payments, and required data collection.

Overview of the payment system and Balanced Budget Act provisions

Under PPS, a hospital receives prospectively determined operating and capital payments for each Medicare discharge.¹ Operating payments, which totaled \$69 billion in fiscal year 1998, are intended to cover all costs hospitals incur in furnishing acute inpatient services, except those for capital, graduate medical education programs for physicians, and other approved training programs (CBO 1998). Capital payments, which accounted for another \$6 billion, cover building and equipment costs (primarily depreciation and interest) allocated to inpatient services. Hospitals with approved resident training programs receive separate per resident payments, and those operating approved programs

for nurses or allied health professionals are reimbursed separately based on Medicare's share of their incurred costs.

Components of operating and capital payments

Hospitals' operating and capital payments for inpatient discharges under PPS are determined in similar ways. Each payment consists of three main components:

- the base per-case payment rate,
- the case weight, and
- special adjustments.

The base payment rate reflects the average costliness of Medicare cases nationwide, adjusted for the relative level of input prices in the hospital's local area. The labor-related portion of the base operating payment rate is adjusted by a wage index that reflects the relative level of wages and salaries for hospital workers in each metropolitan area or statewide rural area.² A similar index, called a geographic adjustment factor, is used to adjust the base capital payment rate.

Medicare capital PPS is being phased in over a 10-year transition, which began in 1992. In 2001, all hospitals will be paid fully on the basis of national prospective rates. Until then, most hospitals have a blended base payment rate—a weighted average of the hospital's own historical capital cost and the national average cost. In fiscal year 2000, the weights for the hospital-specific and national portions of the blended payment will be 10 percent and 90 percent, respectively.

The second component of PPS payment is a weight that accounts for the relative costliness of a specific case compared with the national Medicare average. A separate weight is defined for each of 499 diagnosis related groups (DRGs), and the same DRG definitions and weights are used for both operating and capital payments. The product of the

hospital's base payment rate and the relative weight for the DRG to which the patient is assigned is the provider's DRG payment rate for the case. Consequently, a facility's DRG operating and capital payments under PPS automatically reflect its mix of Medicare patients among DRGs, as represented by the case-mix index (CMI).

The third PPS payment component is additional amounts that may be paid for unusual cases or to hospitals with certain characteristics. These factors were included in the payment system to account for differences in the cost of treating patients that are beyond hospitals' control or to accomplish broader policy objectives. Extremely costly cases can qualify for an outlier payment, which is added to the DRG payment rate. An indirect medical education (IME) adjustment accounts for the higher patient care costs of teaching facilities, and hospitals that serve a disproportionate share of low-income patients receive the DSH adjustment. Finally, special payment provisions apply to rural hospitals that are designated as sole community providers, referral centers, or small Medicare-dependent hospitals.

Changes mandated by the Balanced Budget Act

Several provisions of the BBA affect PPS hospital payments, with five-year savings estimated at the time as \$32 billion (CBO 1997). Those that bear on the updates for operating and capital payments and the disproportionate share adjustment are summarized below.

Under previous law, the update to PPS operating payments for fiscal year 1998 and beyond was equal to the forecasted increase in the PPS hospital market basket. The BBA set these updates below market basket through 2002, but then returned them to the full market basket level beginning in 2003 (see Table 3-1). The update for capital

1 When Medicare beneficiaries are enrolled in Medicare+Choice, services covered by the hospital inpatient PPS usually will be paid for under terms negotiated between the hospital and health plan.

2 Hospitals in Alaska and Hawaii also receive a cost-of-living adjustment for the nonlabor portion of the base operating rate.

**T A B L E
3 - 1**

**Legislated updates
for hospital
operating payments**

Fiscal year	Update amount
1998	0%
1999	MB - 1.9
2000	MB - 1.8
2001	MB - 1.1
2002	MB - 1.1
2003 and beyond	MB

Note: MB (market basket index). Legislated update based on HCFA's forecast of the market basket. Applies only to services covered by Medicare's inpatient prospective payment system.

Source: Balanced Budget Act of 1997.

payments is established by the Secretary of Health and Human Services through regulation before the beginning of each fiscal year, rather than being set in law.

The BBA sharply cut PPS capital payments for fiscal year 1998 so that these payments would better reflect Medicare-allowable capital costs. The Health Care Financing Administration (HCFA) overestimated the increase in capital costs for several years in developing the prospective payment system, but budget neutrality initially prevented the overestimates from affecting capital payment rates. That policy, which had been in effect since 1992, required that the capital rates be set so that aggregate payments would equal 90 percent of anticipated Medicare capital costs, regardless of the base payment rate HCFA set. Budget neutrality expired in fiscal year 1996, however, resulting in a 22.6 percent jump in the federal capital payment rate. The BBA largely reversed this jump, and the reduction will affect the rates to which the update is applied in future years.

Effective in fiscal year 1999, the BBA defines cases in ten DRGs as transfers if they are discharged to PPS-excluded hospitals or units, skilled nursing facilities or, in some circumstances, home health care. Hospitals transferring patients are paid an

average per diem amount for the days before transfer (twice the per diem rate for the first day) up to the full DRG rate. The Secretary identified the applicable DRGs based on high volume and above average use of post-acute care, and estimated that the provision would reduce PPS payments by 0.6 percent.

The BBA cuts DSH payments determined by the previous formulas by 5 percent, with the reductions implemented in one percentage point increments between fiscal years 1998 and 2002. In addition, the Congress signaled its conclusion that the DSH adjustment needs to be overhauled in the short term by requiring HCFA to recommend a new payment formula by August 1998. The BBA requires that any new payment formula treat all hospitals equally and that the low-income share measure continue to reflect both Medicaid patients and Medicare patients eligible for Supplemental Security Income (SSI). The Secretary also was authorized to collect any data needed to implement a new formula.

**Trends in payments,
costs, and margins**

In developing our recommendations on the annual updates for the PPS operating and capital payment rates, the Medicare Payment Advisory Commission (MedPAC) takes into account the adequacy of payments for ensuring sufficient access to appropriate care. An important indicator of the adequacy of these payment rates is the PPS inpatient margin, which compares the payments hospitals receive from Medicare for inpatient services with their Medicare-allowable costs for these services.³ A major indicator of hospitals' overall financial status (and therefore their ability to continue serving Medicare beneficiaries and other patients) is the total revenue margin, which compares aggregate revenues and expenses from inpatient and outpatient care and all other hospital activities.⁴

The data on hospital margins portray an industry that is quickly adapting to a more competitive environment by reducing costs and, at least up to the enactment of the BBA, improving financial performance. By reducing the growth of Medicare payments for the services hospitals provide, the BBA has added to the pressures facing the hospital industry; nonetheless, the most recent data indicate that the industry has managed to maintain the balance of revenues and expenses in the face of strong pressure from payers. Moreover, these data are consistent with MedPAC's previous finding that the PPS provisions in the BBA do not negate Medicare's ability to more than cover the costs of inpatient hospital services.

Payments and costs

In fiscal years 1998 and 1999, the first two years under the BBA, the updates to the PPS operating payment rates were the lowest since prospective payment began (0 percent and 0.5 percent, respectively). Focusing on the nominal value of the update, however, may be misleading. The update for each year generally is set in terms of the forecast increase in the PPS hospital market basket, which measures the prices of the goods and services hospitals purchase. This reflects the notion that, as the cost of providing inpatient care rises more slowly or more rapidly, the payment rate updates should be adjusted correspondingly.

Viewed in relation to the forecast market basket increase in each year, the trend in the PPS operating updates has been fairly consistent. The low updates in fiscal years 1998 and 1999 followed an unusually high update of market basket minus 0.5 in fiscal year 1997. Overall, the PPS operating updates for fiscal years 1997 through 1999 averaged 1.8 percentage points below the forecast increases in the market basket for those years, compared with 2.0 percentage points below market basket in the three previous years. The update currently set

3 The PPS inpatient margin is calculated (in percentage terms) as the difference between PPS payments and Medicare-allowable costs (as reported on the cost report each hospital submits to HCFA), divided by PPS payments.

4 The total revenue margin is calculated (in percentage terms) as the difference between total revenues and expenses (also as reported on the Medicare Cost Report), divided by total revenues.

in law for fiscal year 2000 is 1.8 percentage points below market basket.

In fact, the increase in PPS operating payments per case has far exceeded the updates since prospective payment began (see Figure 3-1). Based on Medicare Cost Report data for the first 13 years of PPS and part of the 14th year, payments per case have increased by a cumulative 131 percent, while the payment rates have been updated by only 42 percent. Most of this difference reflects a rise in the Medicare case-mix index (CMI), which measures the resource requirements of hospital patients. As discussed more fully below, an increase in the CMI automatically raises payments by the same proportion. In addition, specific policy changes enacted by the Congress have increased PPS payments in the aggregate. Also, the use of unaudited Medicare Cost Report data to set the initial payment rates contributed to the large rise in payments in the first two years.

Nonetheless, from 1985 through 1991, the increase in PPS operating costs exceeded the increase in payments in

every year, with the cumulative increase in costs per case surpassing that in payments per case by 1990. More recently, that trend has reversed. While payments per case are rising somewhat more slowly than before, the growth in costs per case slowed sharply in 1993, fell below that of payments in 1994, and has been consistently negative since then.

Preliminary data for 1997 indicate that it will be the fourth consecutive year in which PPS operating costs per case have declined. In fact, after six years of increases averaging 9.5 percent (1985 through 1990) and a transitional period during which costs per case began to slow, the average annual growth in PPS operating costs per case over the most recent five years (1993 through 1997) has dropped to -0.5 percent. That is 3.1 percentage points below the average rate of increase in the PPS hospital market basket over the same period.

Medicare margins

The trend in the Medicare inpatient PPS margin reflects the pattern in cost growth over time (see Figure 3-2). In the early

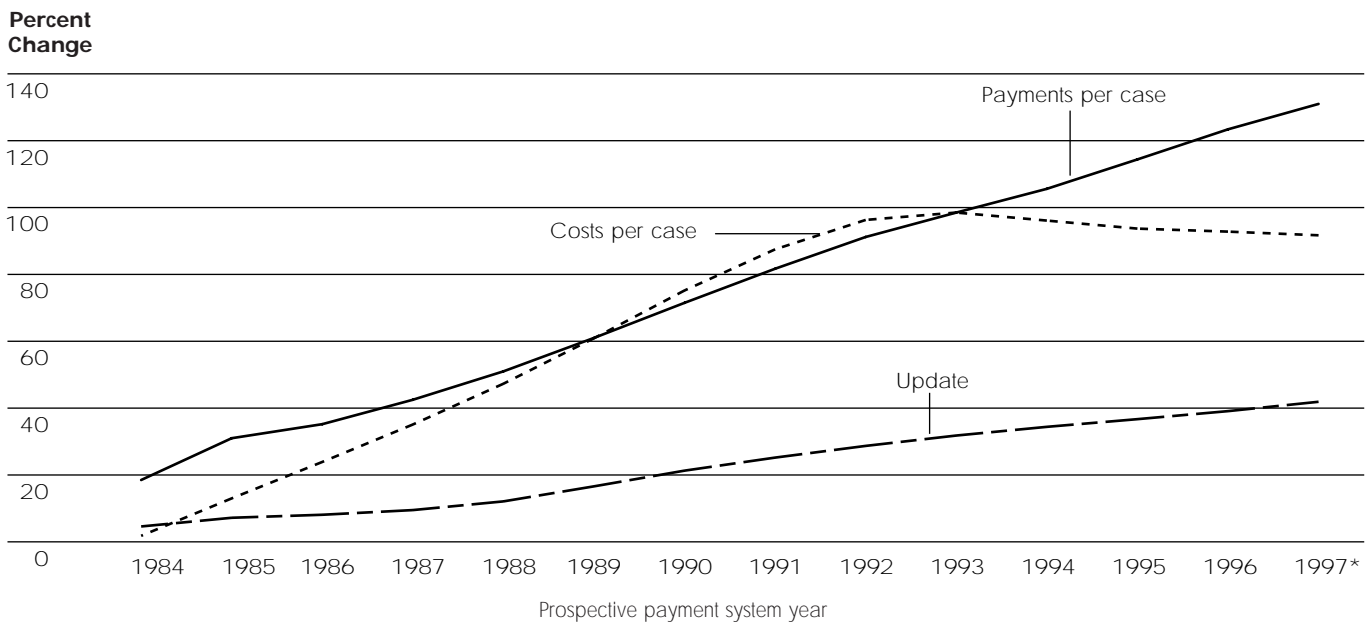
years of PPS, the margin was in double figures, due to large payment increases in the first two years and a temporary reduction in cost growth in the first year. As costs rose at their historical rate throughout the remainder of the 1980s, the PPS margin steadily fell, dropping below zero in 1990 and to -2.4 percent in 1991.

With the decline in cost growth since the early 1990s, the PPS inpatient margin has risen sharply, becoming positive again in 1993 and jumping to 15.3 percent in 1996. Preliminary data for 1997 indicate that the margin rose further, to 16.1 percent. MedPAC estimates that, given recent changes in PPS payment rates (including the effects of the BBA) and more current data on hospital cost growth, the PPS margin will decline slightly to 15.7 percent in 1999.

With the sharp increase in the aggregate PPS inpatient margin, there has been a drop in the number of hospitals with negative margins (see Figure 3-3). In 1996, 24.9 percent of all PPS hospitals had negative PPS margins—the fifth consecutive decline in this statistic and a

FIGURE 3-1

Cumulative changes in Medicare hospital inpatient operating payments and costs per case and operating update, 1984-1997



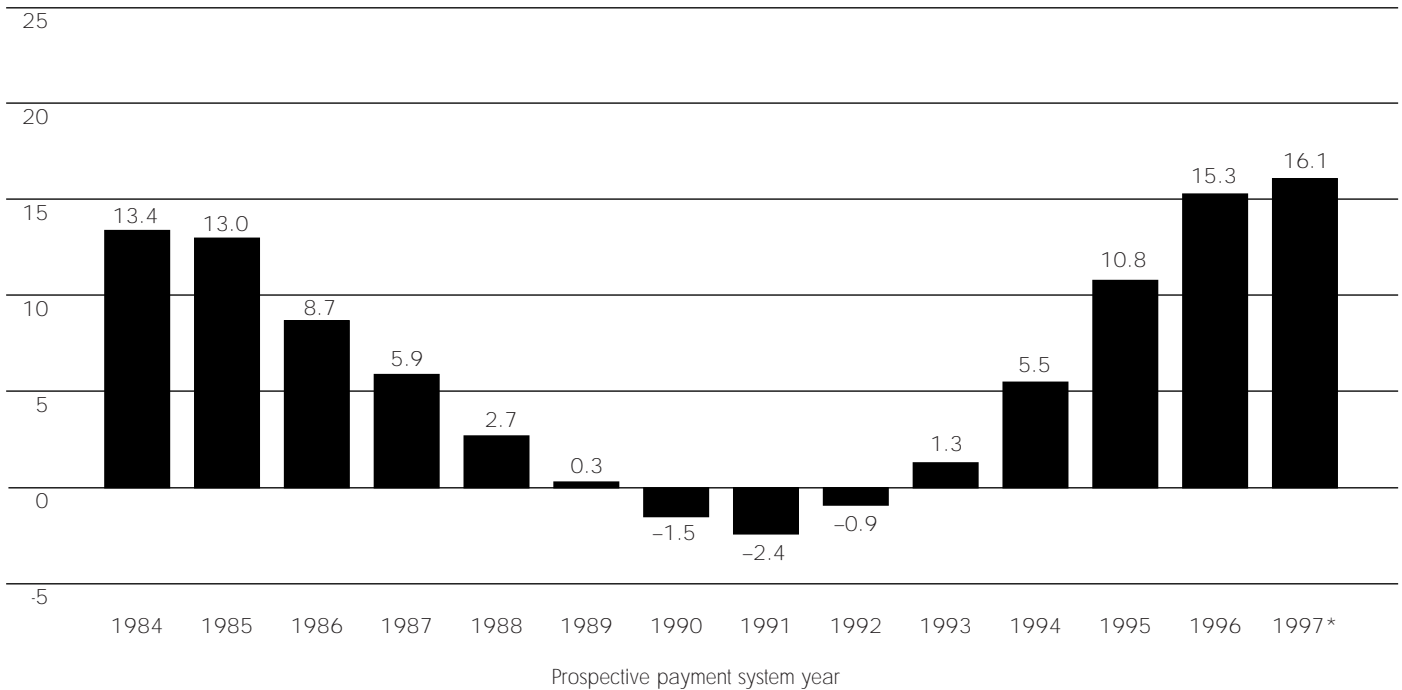
*Data for 1997 are preliminary, based on about one-half of all hospitals covered by prospective payment.

Source: MedPAC analysis of Medicare Cost Report data.

**FIGURE
3-2**

Medicare hospital inpatient margin, 1984-1997

Margin (in percent)



*Data for 1997 are preliminary, based on about one-half of all hospitals covered by prospective payment.
Source: MedPAC analysis of Medicare Cost Report data.

dramatic decrease from a peak of 61.2 percent in 1991. The percentage of hospitals with negative PPS margins in 1996 was the lowest since 1985, and preliminary data for 1997 indicate that this percentage will be even lower for that year when complete data are available.

In assessing the adequacy of Medicare payments to hospitals, it is important to remember that payments for services other than those covered by Medicare’s inpatient hospital PPS make up about one-third of hospitals’ total Medicare revenue. These include inpatient services in hospitals and units excluded from PPS (psychiatric, rehabilitation, long-term care, cancer, and childrens), outpatient services (including ancillary procedures paid at least partly on a fee schedule), hospital-

based skilled nursing care, and hospital-based home health care. Payments for each of these services cover a lower percentage of hospitals’ Medicare-allowable costs than do payments for inpatient care under PPS. For example, payments for hospital outpatient services were about 90 percent of costs in 1996, and BBA provisions will lower this payment level in the future.

While a margin based on Medicare Cost Report data that encompass all Medicare payments to hospitals has not been developed, we have calculated an all-inclusive payment-to-cost ratio using data from the American Hospital Association. This measure reflects all costs attributable to Medicare patients instead of Medicare-allowable costs.⁵ The ratio in 1996 was 102.4 percent, which is equivalent to a 2.3 percent

aggregate Medicare margin. The 1996 ratio was the highest ever and about 6 percentage points above the level before PPS, when Medicare’s policy was to reimburse allowable costs (MedPAC 1998c).

Total margins

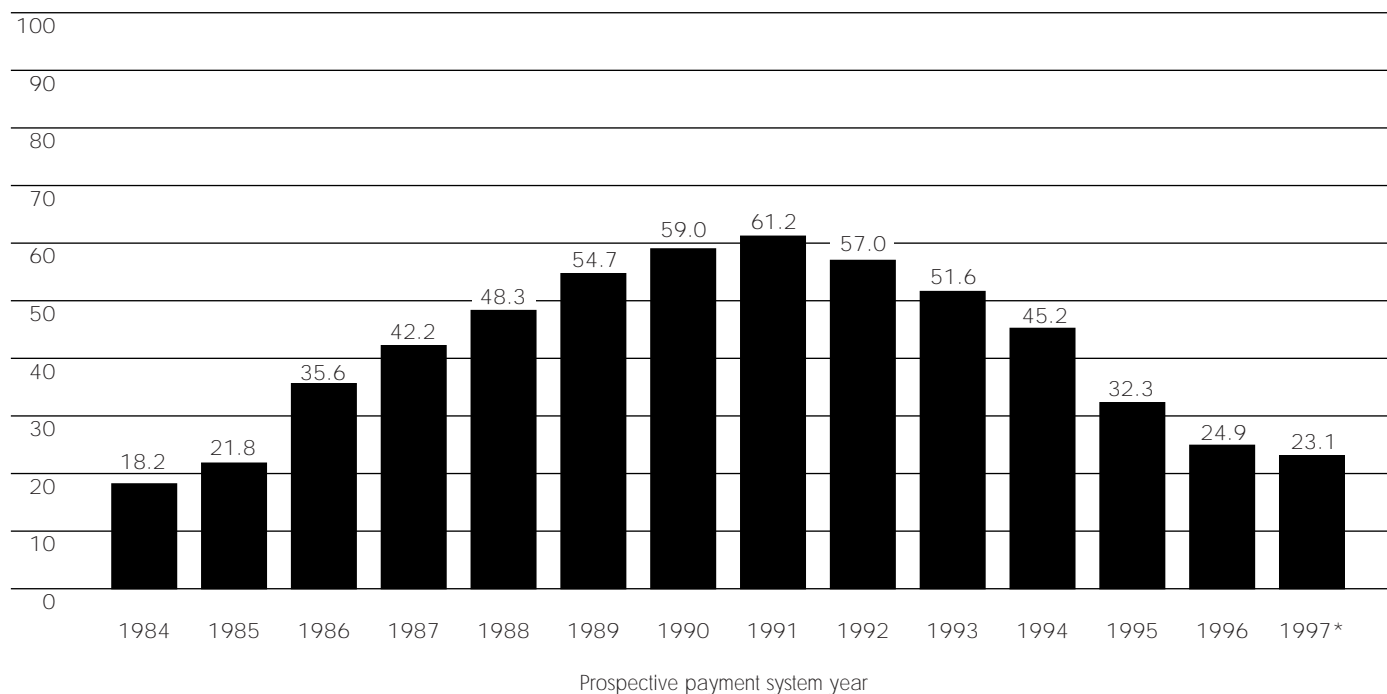
The trends in hospital total revenues and expenses have tended to move together. Through most of the 1980s and into the early 1990s, both revenues and expenses per adjusted admission rose at an annual rate of about 9 percent.⁶ In 1993, there was a sharp deceleration in revenues per adjusted admission, and expenses per adjusted admission followed suit. This lower rate of growth in both revenues and expenses per adjusted admission has continued in recent years.

5 Examples of cost elements that Medicare does not pay for are patient telephones, direct advertising, political or charitable donations, and interest expense to the extent that it is offset by interest income or capital gains from investments.
6 Adjusted admissions are a measure of hospitals’ combined inpatient and outpatient service volume.

**FIGURE
3-3**

Percent of hospitals with negative Medicare inpatient margin, 1984-1997

Percent



*Data for 1997 are preliminary, based on about one-half of all hospitals covered by prospective payment.
Source: MedPAC analysis of Medicare Cost Report data.

Despite slower revenue growth, hospitals' aggregate total margin has increased (see Figure 3-4). It rose in 1996 to 6.1 percent, compared with 4.5 percent in 1993 and 3.5 percent in 1988. These margins compare favorably with data from as far back as the early 1970s, when Medicare payment was based on reimbursement of costs.

Preliminary Medicare Cost Report data for 1997 indicate that the total margin continued to increase in that year, and more current data show that hospitals have succeeded in controlling the growth in their expenses into mid-1998, implying that the total margin still is at or close to that level.

As would be expected, the financial status of individual hospitals varies widely. About one in five hospitals (21.6 percent) had negative total margins in 1996 (see Figure 3-5). This was slightly higher than in 1995 (20.7 percent), but the

lowest since PPS began, down from a peak of 35.1 percent in 1987. Preliminary data for 1997 indicate that the percentage of hospitals with negative total margins held steady for the fourth consecutive year.

Updating operating payments

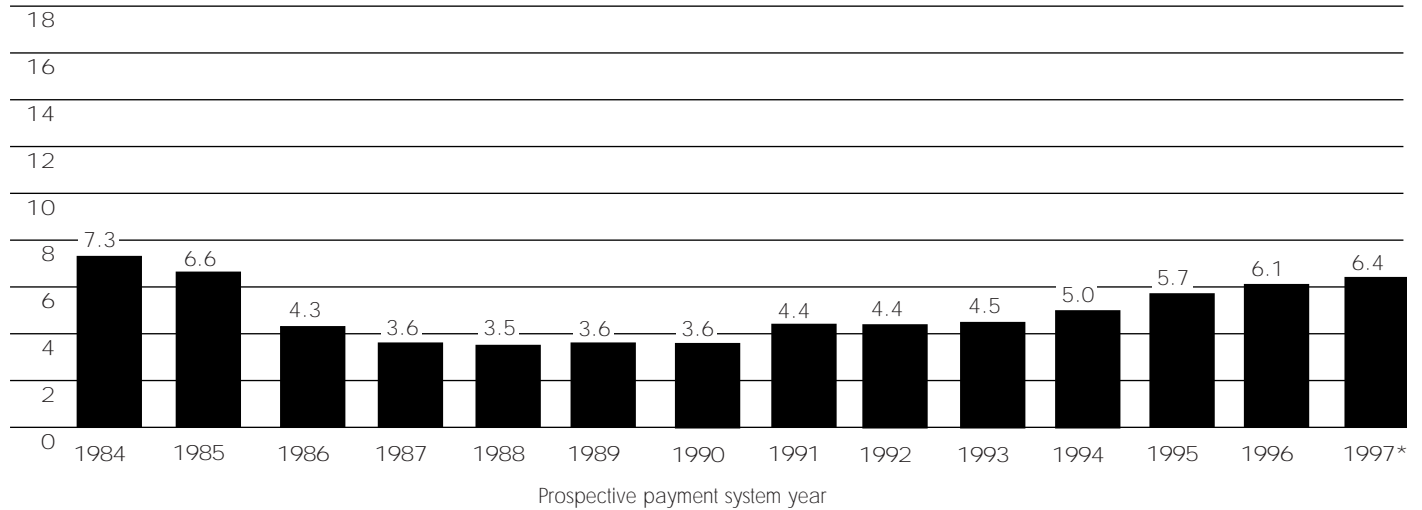
Although the PPS operating update is set in law, policymakers need to know whether the statutory updates are consistent with an analytically informed judgment about how much these rates should increase from one year to the next. For fiscal year 2000, the update currently is set at market basket minus 1.8 percentage points, which would result in a 0.7 percent increase in rates if the current market basket forecast holds.

Our recommendation on an appropriate operating payment update is based on an analytical framework that provides for explicit consideration of the factors that contribute to increases in costs for an efficient hospital industry (see Table 3-2). These include hospital input price inflation, scientific and technological advances, productivity improvement, site-of-care substitution, and case-mix change. We evaluate the results of this analysis in light of the potential effect on access to and the quality of patient care. We also examine the current payment rates in the context of the latest financial information, including data on PPS and total margins as discussed above. However, while we carefully evaluate the potential effect on hospital financial performance, this is not the primary determinant of MedPAC's update recommendation.

**FIGURE
3-4**

Hospital total revenue margin, 1984-1997

Margin (in percent)



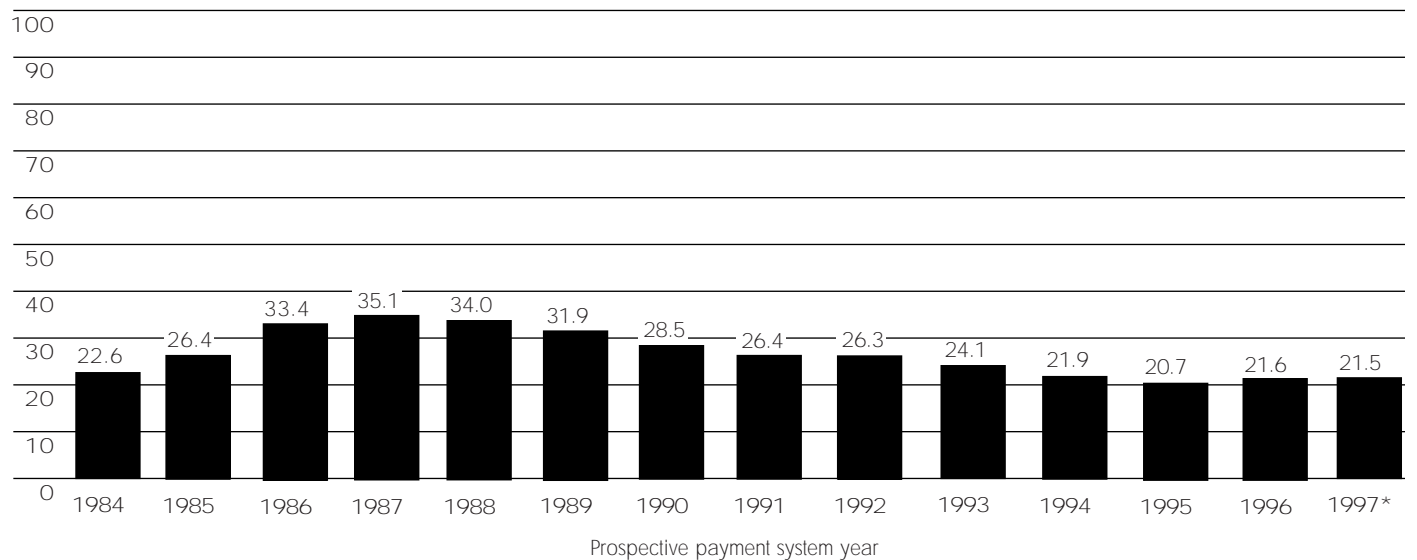
*Data for 1997 are preliminary, based on about one-half of all hospitals covered by prospective payment.

Source: MedPAC analysis of Medicare Cost Report data.

**FIGURE
3-5**

Percent of hospitals with negative total revenue margin, 1984-1997

Percent



*Data for 1997 are preliminary, based on about one-half of all hospitals covered by prospective payment.

Source: MedPAC analysis of Medicare Cost Report data.

T A B L E
3 - 2

Update framework for hospital operating payments, fiscal year 2000

Component	Percent
Fiscal year 2000 MedPAC market basket forecast	2.5
Adjustment for difference between HCFA and MedPAC market baskets	-0.2
Correction for fiscal year 1998 market basket forecast error	NA
Allowance for scientific and technological advances	0.5 to 1.0
Adjustment for productivity improvement	-1.0 to 0.0
Adjustment for site-of-care substitution	-1.8 to -0.9
Adjustments for case-mix change:	
DRG coding change	0.0
Within-DRG case-complexity change	0.0 to 0.2
Sum of components	0.0 to 2.6 (MB -2.5 to MB + 0.1)

Note: MB (market basket index), DRG (diagnosis related group). Legislated update based on HCFA's forecast of the market basket. Applies only to services covered by Medicare's inpatient prospective payment system.

Source: Balanced Budget Act of 1997.

RECOMMENDATION 3 A

The operating update of market basket minus 1.8 percentage points set in law for fiscal year 2000 will provide reasonable payment rates. An update of that level, which will be 0.7 percent if the current market basket estimate holds, is within the range the Commission believes is appropriate.

A key component of our recommendation is an adjustment to account for the cost of care shifted from acute inpatient stays to other Medicare-covered services. The volume of care received by patients in the acute inpatient setting has decreased considerably over the last several years, and the Commission believes that a significant portion of this decline is attributable to site-of-care substitution. The updates for fiscal years 1998 through 2000 account for some, but not all, of the substitution that has occurred. In developing our future update

recommendations, therefore, we will consider the need to make further adjustments to assure that Medicare payments match the services provided in each setting.

The components of MedPAC's operating update framework, and the value or range we recommend for each in fiscal year 2000, are discussed below.

Input prices

The input price component of the PPS operating update is based on HCFA's forecast increase in the market basket index for PPS hospitals. The market basket forecast indicates how much inpatient operating costs would be expected to rise, assuming no change in the resources hospitals use to provide care or in the types of patients hospitals treat. The current forecast for fiscal year 2000 is 2.5 percent.⁷

The Commission's update framework traditionally incorporates two adjustments related to input prices. The first adjustment reflects a difference

between MedPAC's and HCFA's construction of the market basket index. We weight expected growth in employee compensation in the hospital industry and the general economy equally, while HCFA gives less weight to the hospital industry projections. Because wage growth in the hospital industry has trailed that of the broader economy in recent years, MedPAC's market basket is forecast to increase more slowly than HCFA's. Correspondingly, we are making a -0.2 percentage point adjustment.

The second input price adjustment addresses errors in previous market basket forecasts. Because the annual updates are based on the forecasts available prior to the beginning of the payment year, they are subject to errors that can result in inappropriately high or low payment rates. MedPAC corrects these errors when actual data become available, two years after they are applied to payments. Because the update in fiscal year 1998 was zero and not based on the market basket forecast, however, any error in the forecast did not affect the payment rates in that year. Therefore, we are making no adjustment for market basket forecast error for fiscal year 2000.

Scientific and technological advances

MedPAC's review of hospital technology suggests there will be no significant changes in the overall rate at which hospitals adopt quality-enhancing but cost-increasing technologies in fiscal year 2000, with the exception of the need to address year 2000 computer problems. (See Appendix C for a more detailed description of the technologies considered in this analysis.) We believe that hospitals will incur significant operating and capital costs in becoming year 2000 compliant and that these improvements will be completed during fiscal years 2000 and 2001.

The improvements to hospital systems and medical devices to fix year 2000 problems differ from the other technologies included in the allowance for scientific and technological advances

⁷ This forecast will be revised before the update is put into effect, and the update may change correspondingly.

in that they are not new advances or new applications of existing technologies (one of the criteria used to identify technologies for the allowance). Rather, the year 2000 improvements will maintain the current operation of information systems and medical devices, resulting in limited changes in their functions and capabilities. Nonetheless, we believe these improvements to hospital systems and devices fall under the rubric of our allowance for scientific and technological advances.

Therefore, we are explicitly increasing the allowance for scientific and technological advances by 0.5 percent from that used in our recommendation for fiscal year 1999 to account for year 2000 computer improvements. However, this increase is not considered a permanent part of the allowance, and we will reconsider the level of this adjustment in subsequent fiscal year analyses. For fiscal year 2000, MedPAC recommends an allowance for scientific and technological advances of 0.5 percent to 1.0 percent.

Productivity improvement

We make a downward adjustment in the framework to reflect expected improvements in hospital productivity. This adjustment is a policy target, reflecting our position that Medicare should require hospitals to reduce their inputs relative to output by at least a modest amount each year. Hospitals that can surpass this target will be able to keep the additional gains they achieve in the next year.

Our analysis of factors related to hospital productivity suggests that annual improvements of about 3 percent in inputs used per discharge, exclusive of the impact of site-of-care substitution, have been achieved in 1997 and 1998.⁸ Although gains have been registered each year from 1992, those in the last two years appear to have been by far the largest.

However, the change in real costs per discharge in these years was well

below the rate of inflation in the goods and services hospitals use in producing inpatient care, despite smaller length of stay declines than in previous years. We doubt that this rate of improvement is sustainable. Moreover, our productivity adjustment is intended to represent the level of improvement that can be achieved without adversely affecting quality, and yet it is not possible to adjust for changes in quality when measuring the productivity trend. We are concerned that requiring efficiency gains of the level measured in recent years might pose a serious threat to maintaining quality. Therefore, we set a range of -1.0 to 0.0 percent for the productivity improvement adjustment in fiscal year 2000.

Site-of-care substitution

The average length of Medicare inpatient stays declined 5.4 percent a year between 1991 and 1996, and we estimate that this led to per discharge cost savings of 2.4 percent a year. We believe that some of these savings reflect a shift of costs to other settings, as care in those settings was substituted for the latter days of inpatient stays. A variety of substitute forms of care can be involved, including skilled nursing, inpatient and outpatient rehabilitation, physicians' services in an office or hospital setting, and home health care. Because Medicare automatically pays for the care in the new settings, the site-of-care substitution adjustment is designed to shift funding along with the associated costs.

When care in an ambulatory or post-acute setting replaces acute inpatient days, there may be a systemwide reduction in costs. If a skilled nursing day substitutes for an acute care day, for example, the hospital's variable costs (like daily food, housekeeping service, and nursing care) may be reduced by more than the amount of newly incurred costs in the skilled nursing facility. Assuming no change in clinical outcome, we would consider this net savings a productivity gain, which should count

toward the target set by the adjustment for productivity improvement. However, the additional skilled nursing costs in this example have simply been shifted from the hospital, and payments need to be realigned accordingly.

The systemwide savings implied by this example may not materialize if multiple units of post-acute care replace a day of acute care. There may even be a systemwide increase in costs. In such situations, the entire savings to the hospital from cutting length of stay should be attributed to site-of-care substitution.

In cumulative terms, the average length of stay of all hospital patients nationally has fallen by 18 percent since 1989. The effect of length of stay reductions on per-case costs is less than proportionate, however, because some costs (particularly those associated with surgery) are fixed. Taking this into account, we estimate that the 18 percent cut in length of stay resulted in about a 13 percent drop in aggregate costs per discharge.⁹ Four percentage points of this total have already been accounted for by previous Commission update recommendations. In developing this year's recommendation, the most difficult task we faced was estimating how much of the remaining 9 percentage points should be attributed to site-of-care substitution.

The evidence that site-of-care substitution has occurred on a large scale among Medicare patients is indirect. Perhaps the most compelling finding is that Medicare length of stay has fallen 31 percent since 1989, compared to the 18 percent decline cited above for all patients. One of the key reasons for this difference could be that hospitals covered by PPS have a strong financial incentive to discharge Medicare patients to a post-acute setting as soon after an acute stay as possible. Because their per-case payments are not affected, they keep all of the savings resulting from the shorter stays. Hospitals frequently do not

8 Because of lags in the availability of Medicare Cost Report data, our 1997 and 1998 estimates are based on relationships from earlier cost report measurements applied to more recent data available from the American Hospital Association. The estimate cited is the inflation-adjusted change in costs per discharge (adjusted for real changes in case mix), exclusive of the net cost impact of length of stay reductions. This estimate may be conservative because only a portion of the net effect of the drop in length of stay may be attributable to site-of-care substitution. See Appendix D for additional information.

9 Appendix D shows the trend in length of stay and cost per discharge, for all patients and Medicare patients alone. It also details MedPAC's analysis of the net cost impact of length of stay reductions.

have the same financial incentive for privately insured patients, because HMOs and other insurers often pay either a per diem amount or a percentage of the patient's billed charges for acute stays.

Three other trends that MedPAC or its predecessor commissions have documented also support the conclusion that a substantial amount of site-of-care substitution has occurred among Medicare patients:

- Large increases in the volume of various types of post-acute care coincided with the large reduction in hospital length of stay.
- The decline in length of stay has been the greatest for DRGs in which the use of post-acute care is most prevalent.
- Hospitals that operate hospital-based post-acute care services have experienced a larger drop in length of stay than those that do not.

At the same time, however, site-of-care substitution may not be responsible for the entire decline in length of stay. Some of the increase in post-acute care volume occurred before length of stay began declining, in response to reinterpretation of the home health and skilled nursing care benefits. In addition, some patients are able to be discharged earlier without an increased need for follow-up care due to endoscopic surgery and other technological advances. Length of stay also has fallen, although not as steeply, for DRGs in which patients rarely use post-acute care immediately after an acute care stay.

These factors led us to conclude that cost reductions of from 3 to 6 percentage points, out of the total of 9 points cited above, could be attributed to site-of-care substitution and adjusted for in the update framework. Phasing in this adjustment over the course of three years would result in a single-year adjustment of -2.0

to -1.0 percent.

One more issue must be considered, however, in quantifying an adjustment for site-of-care substitution—Medicare's newly implemented (BBA mandated) policy on payment for transfer cases. As discussed earlier, this policy limits payments within certain DRGs for patients who are discharged from a PPS hospital to one of several post-acute care settings. HCFA estimates that aggregate PPS payments will fall by 0.6 percent as a result. Because the policy is designed to limit hospitals' gains from site-of-care substitution, we will subtract its estimated impact from the 3 to 6 percentage points of such substitution that we believe should be reflected in future updates. Phasing in the remaining amount over three years then results in an adjustment of -1.8 to -0.9 percent for fiscal year 2000. Subject to refinements in our measurement as more recent data become available, or additional declines in lengths of stay occur, we anticipate making similar adjustments for fiscal years 2001 and 2002.

Case-mix change

The case-mix adjustment is intended to adjust payments so they reflect the real resource requirements of patients. The complexity of cases treated in hospitals generally goes up from year to year. Under Medicare, case complexity is measured by the CMI. The CMI is the average DRG weight for all cases paid under PPS and reflects the distribution of patients among DRGs. Increases in the CMI automatically result in a proportionate rise in PPS operating and capital payments.

An increase in payments is appropriate as long as the CMI growth reflects real changes in patient resource requirements. Changes in coding practices, however, can raise the CMI without a corresponding change in resource use. At the same time, an increase in the complexity of cases within DRGs can affect resource needs without a

commensurate rise in payments. When these changes occur, payments should be adjusted to account for their effects. Our case-mix adjustment modifies the next year's payment rates to account for the effects of this year's changes in coding practices and within-DRG case complexity. In this way, the effects of discrepancies between the CMI and actual patient resource requirements are removed from the payment rates for future years.

Past Commission analyses have found a relationship between hospital coding of cases and CMI growth. In 1988 and 1991, Medicare made major changes in the DRG system, and these changes were followed by increases in CMI growth. There have been no major changes in the DRGs since 1991, however, and CMI growth now appears to be much lower.¹⁰ In light of this low growth, we believe that hospital coding behavior is not contributing to increases in the CMI. Thus, an adjustment to the update to reflect DRG coding is not necessary.

Cases classified to a single DRG will differ in severity of illness and the complexity of the care received. Changes in the distribution of cases within DRGs can thus increase or decrease patient resource needs without changes in the measured CMI or in the payments hospitals receive under PPS. As the DRG system has improved, the payment system has increased its ability to reflect real changes in case complexity. Complexity change is now reflected more in shifts in the distribution of cases among DRGs and less within DRGs. The Commission estimates that within-DRG case-complexity change will be 0 to 0.2 percent.

The combination of no adjustment to reflect hospital coding and 0 to 0.2 percent within-DRG case-complexity change suggests a total adjustment for case-mix change of 0 to 0.2 percent for the update in fiscal year 2000.

¹⁰ The Office of the Inspector General of the Department of Health and Human Services estimates that incorrectly coded PPS inpatient hospital claims accounted for almost \$2 billion in Medicare overpayments in fiscal years 1996 and 1997 (OIG 1998). This finding, and the related attempts to recover payments, may in fact have contributed to a backlash to the "DRG creep" that occurred in recent years. Preliminary data indicate that the case-mix index did not increase and may even have decreased in 1998 (Savord 1998).

Implications

The Commission believes the current legislated update will provide a suitable increase in payments for fiscal year 2000. This conclusion is based on our consideration of the factors that would be expected to affect cost growth, as well as the need to adjust future payment rates for past shifts of care from acute care stays to other Medicare-covered services.

The data on hospital performance corroborate that conclusion. Hospital occupancy rates remain low in the aggregate, after increasing only slightly in recent years, indicating continued system overcapacity and opportunities for hospital productivity improvements. Hospitals also generally appear to be in good financial shape overall, with PPS margins likely to remain relatively high even after accounting for the reduced updates and other changes enacted through the BBA. And equally important, the proportion of hospitals with negative PPS and total margins is at the lowest level since PPS was implemented.

Updating capital payments

In fiscal year 1992, Medicare began paying hospitals for capital costs based on prospectively determined per case rates. Capital costs include depreciation, interest, rent, taxes, insurance, and similar expenses for plant and fixed equipment and for movable equipment.

Our recommendation for updating PPS capital payments is based on a framework similar to the one we use for the PPS operating rates (see Table 3-3). It includes factors for capital asset price changes (the capital market basket index), forecast error correction, scientific and technological advances, productivity, site-of-care substitution, and case-mix change. Some of these components have different values when applied to capital. MedPAC's framework also includes a discretionary financing policy adjustment for use during extended periods of unusually high or low real interest rates.

**TABLE
3-3**

Update framework for hospital capital payments, fiscal year 2000

Component	Percent
Fiscal year 2000 MedPAC market basket forecast	1.9
Correction for fiscal year 1998 market basket forecast error	-0.4
Financing policy adjustment	-0.3 to 0.0
Allowance for scientific and technological advances	0.5 to 1.0
Adjustment for productivity improvement	-1.0 to 0.0
Adjustment for site-of-care substitution	-1.8 to -0.9
Adjustments for case-mix change:	
DRG coding change	0.0
Within-DRG case-complexity change	0.0 to 0.2
Sum of components	-1.1 to 1.8 (MB -3.0 to MB -0.1)

Note: MB (market basket index). DRG (diagnosis related group). Legislated update based on HCFA's forecast of the market basket. Applies only to services covered by Medicare's inpatient prospective payment system.

Source: Balanced Budget Act of 1997.

RECOMMENDATION 3B

The Secretary should increase the capital payment rates for fiscal year 2000 by between market basket minus 3.0 percentage points and market basket minus 0.1 percentage point. With the current estimate of the market basket, this corresponds to an update of -1.1 percent to 1.8 percent.

Although operating and capital payment rates under PPS are determined separately, they correspond to costs generated by providing the same inpatient hospital services to the same Medicare patients. The distinction between them in the context of payment is arbitrary and does not foster efficient overall decision making about the allocation of resources.

The 10-year transition to a single capital rate, which was implemented to allow hospitals time to adjust to the new payment system, makes it impossible to combine the operating and capital payment systems now. However, both payments are made on the basis of cases

defined by DRGs and share many other characteristics. We believe that the annual updates to capital and operating payments should not differ substantially. Consequently, other than in the adjustments for price change and interest rates, we use the same components in our capital and operating update frameworks.

Input prices

The capital update should reflect the expected change in the cost of capital purchases in the coming year. This change is measured by the projected increase in a market basket index that reflects increases in the prices of capital assets that hospitals purchase. The market basket index is analogous to the one we use in updating operating payment rates but differs from the one used by HCFA in updating capital payment rates.

The Commission's capital market basket index includes three components: building and fixed equipment, movable equipment, and other capital-related costs. Price changes for these components are measured using forecasts of specific price proxies. Our capital market basket index

measures the one-year change in the price of a fixed mix of capital goods. It is intended to allow hospitals to accumulate, over time, adequate resources for future capital purchases. By contrast, HCFA's market basket measures anticipated increases in annual accounting expenses associated with the existing capital stock. Much of this stock was purchased at a time when Medicare reimbursed hospitals for their own capital costs.

The Commission believes it is inappropriate to set updates to future capital payment rates based on the annual expenses associated with historical capital spending. Updates should reflect the purchase price of new capital.

As of January 1999, the projected increase in MedPAC's market basket index for fiscal year 2000 is 1.9 percent. Unforeseen economic developments may cause substantial discrepancies between the projected and actual increases in the market basket index, leading to potentially significant underpayment or overpayment of hospitals. The update framework includes a correction for past forecast errors in the HCFA market basket index because that was the index used to set payment rates. Because actual market basket increases are not known until two years after they are used in the update, the forecast error correction in the 2000 update framework reflects the discrepancy between the forecast and actual increases in the market basket for 1998. The forecasted increase for that year was 1.1 percent, while the actual increase was approximately 0.7 percent, 0.4 percentage points lower. As a result, our fiscal year 2000 recommendation includes a forecast error correction of -0.4 percent.

Interest rates

Unlike HCFA, MedPAC addresses changes in real interest rates in a separate component of our update framework. This component adjusts the PPS capital update when available data indicate that current interest rates differ markedly from their long-run average. During extended periods of unusually high rates,

hospitals may have to choose between postponing needed renovation projects or incurring indebtedness beyond what Medicare's payments support. At times of low interest rates, hospitals can borrow at low cost for current projects and refinance existing debt to reduce interest expense due to past capital investment. Capital payments should be adjusted upward to account for the extra expense of unusually high interest rates and downward in the opposite circumstances.

Since the effects of changes in prices are measured by the capital market basket index, our adjustment reflects changes in the real interest rate. The specific measure is the long-term interest rate on hospital borrowing, as calculated by HCFA, minus expected change in the gross domestic product implicit price deflator as forecast by the Congressional Budget Office. Since we are concerned with adjusting the update for lasting rather than transitory deviations in real rates, we compare a 5-year moving average of real interest rates to a 15-year average. This measure, weighted by the share of financing costs in total annual capital costs, is the adjustment to the update for interest changes.

Based on this analysis, we recommend an adjustment for interest rate change of -0.3 to 0 percentage points for fiscal year 2000.

Other factors

Like MedPAC's operating update framework, the capital update framework includes components to account for the effects of scientific and technological advances, productivity, site-of-care substitution, and case-mix change on hospital costs. The Commission uses values for these factors in both update frameworks that reflect their combined effects on operating and capital payments and costs.

Implications

MedPAC's recommended update to the PPS capital payment rates for fiscal year 2000 is between market basket minus 3.0 percentage points and market basket minus 0.1 percentage point. The current estimate for this range is -1.1 percent to 1.8 percent. Because the distinction between operating and capital payments is arbitrary, under normal circumstances the updates applied to both should be similar. As with the operating update, we believe that an update within the recommended range will provide a suitable increase in payments for hospitals for the coming year.

When the transition to fully prospective capital payment has been completed, a single PPS payment rate should be developed for hospital inpatient services to Medicare beneficiaries. This would make Medicare payment consistent with the way that hospitals purchase the vast majority of goods and services, with a single price to reflect the costs of production, rather than separate components to represent operating and capital costs.

Reforming disproportionate share payments

Medicare's special payments to hospitals that treat a disproportionate share of low-income payments could be made more equitable by using a better measure of care to the poor and a distribution formula that more consistently links each hospital's DSH payment to its low-income patient share. We have three recommendations that would accomplish this.

MedPAC made these same recommendations last year (MedPAC 1998a), in advance of HCFA's Congressionally mandated report on how DSH payments should be distributed. HCFA has not yet published its report, which was due in August of 1998. We believe that our recommendations

provide a complete template for the Congress to legislate needed changes in the DSH adjustment, and that they should be implemented as soon as possible. Nonetheless, we will consider HCFA's recommendations carefully when their report is delivered.

This section describes the current DSH payment system, why it needs reform, and the three recommendations. Volume II of our report to the Congress on payment issues last year (MedPAC 1998b) includes an analysis of the payment changes that would result from several distribution formulas that might be considered, and we use these data to further explain the rationale for our recommendations.

Background

The Medicare DSH adjustment was implemented in May 1986, in the third year after prospective payment began. The original justification for the adjustment was that poor patients are more costly to treat, at least in urban areas, so that hospitals with substantial low-income patient loads would likely have higher costs allocated to Medicare patients than would otherwise similar institutions. Over the past decade, however, the adjustment has increasingly been viewed as serving the broader purpose of protecting access to care for Medicare and low-income populations by assisting the hospitals they use. In addition to facing above-average costs in some cases, these hospitals tend to face large uncompensated care burdens and difficulty in attracting privately insured patients.

Medicare DSH payments have grown rapidly since fiscal year 1989, rising more than fourfold to \$4.5 billion in 1998 (CBO 1998).¹¹ Through 1995, DSH spending grew much faster than overall PPS operating payments, expanding from just over 2 percent of payments to about 6 percent. This was largely due to legislative changes that raised the DSH payment rate for some hospitals. Since the last of these changes was implemented in 1995, the share of total inpatient payments

devoted to the DSH adjustment has held steady.

Because DSH payments are distributed through a percentage add-on to the basic DRG payment rate, a hospital's DSH payments are tied to its volume and mix of PPS cases. The add-on for each case is determined by a complex formula and the hospital's percentage, or share, of low-income patients. That percentage is the sum of two ratios—Medicaid patient days as a share of total patient days and patient days for Medicare beneficiaries who are eligible for SSI as a percentage of total Medicare patient days.

The DSH distribution formula includes a threshold, or minimum value, for the low-income patient share a hospital needs to qualify for a payment. This criterion limits eligibility to about 40 percent of PPS hospitals. In addition, the formula in most cases is progressive; above the threshold, the adjustment rate rises as the hospital's low-income patient share increases.

Problems with the current system

A major problem with the current low-income share measure is that it does not include all care to the poor, most notably omitting uncompensated care. The distribution formula uses the proportion of care provided to Medicaid recipients to represent the relative amount for the entire poor population under the age of 65. However, states have always had different eligibility requirements for Medicaid, and changes implemented under waivers in recent years (particularly in Tennessee and Oregon) have created even more inconsistency. As a result, state Medicaid programs cover vastly differing proportions of the population below the federal poverty level. Moreover, previous analysis has established that, even within states, the hospitals with the largest uncompensated care burdens often do not have the largest Medicaid patient loads, and vice versa.

Because the Medicaid and Medicare SSI ratios are simply added together to form the low-income share, the current system

gives more than proportionate weight to the amount of care provided to poor Medicare patients. Patients eligible for SSI account for only about 4 percent of total days, compared with 14 percent for Medicaid. But 8 percent of Medicare days are accounted for by SSI eligibles, and this larger ratio is used in calculating the low-income shares.

Due to concerns about specific groups of hospitals, the Congress has enacted nine different DSH formulas. That has resulted in a highly complex program along with questionable equity of payments; hospitals with the same share of low-income patients can have substantially different payment adjustments. In particular, current policy favors hospitals located in urban areas; almost half of urban hospitals receive DSH payments compared with only about a fifth of rural facilities. In addition, urban hospitals with at least 100 beds benefit from steeply graduated payment adjustments, while rural and small hospitals receive lower, fixed adjustments. Consequently, more than 95 percent of all DSH payments go to urban hospitals. Among rural facilities, the payment add-on is higher for those that have qualified for special Medicare payments as sole community hospitals or rural referral centers.

In addition, public hospitals that receive at least 30 percent of their net revenue from indigent care funds provided by state or local governments (with Medicaid payments not counted as such funds) qualify for a special DSH payment rate. Public hospitals may also qualify under the normal criteria. This provision, known as the "Pickle provision" for the Congressman who initially proposed it, is currently used to determine DSH payments for only eight hospitals. However, two recent court cases have found that HCFA's interpretation of Congressional intent is incorrect. Rather than requiring that state and local subsidies account for 30 percent of total patient care revenue, the courts' interpretation is that such subsidies need only comprise 30 percent of patient revenue *other than Medicare and Medicaid payments*. If upheld on appeal,

11 This discussion is confined to the DSH adjustment made on operating payments under PPS. There is also a DSH adjustment to capital payments, which is based on the same underlying measure of low-income share but has a different distribution formula and involves a much smaller amount of money.

this ruling could substantially increase the number of hospitals that qualify for DSH payment under the Pickle provision, which would create even more inconsistency in the payments received by hospitals treating similar shares of low-income patients.

All of the current DSH formulas have a large payment “notch,” or substantial jump in payments when a hospital’s low-income share crosses the threshold. This also produces inequities. For example, an urban hospital with at least 100 beds receives a 2.5 percent add-on to its PPS payments if its low-income patient share is 15 percent (the threshold for that group), but gets nothing if its share is 14.9 percent. Most rural facilities receive a 4 percent adjustment if they can meet the much higher threshold of 30 percent low-income share, but again will get nothing with a share that is just slightly lower.

The primary impetus for our decision to recommend changes in the DSH adjustment is the problem with the underlying measure of low-income share. As discussed earlier, the Medicaid component of the low-income share measure has never been considered an accurate indicator of a hospital’s overall care to the nonelderly poor, and it appears that the problem can only get worse in the future. In addition, we question the policy of favoring urban over rural hospitals in the distribution of DSH payments in light of the broader purpose now attributed to the adjustment.

Recommendations

Our recommendations are based on the general understanding about the purpose of DSH payments that has evolved over time—that the DSH adjustment is meant to protect access to care for Medicare beneficiaries by providing additional funds to hospitals whose viability might be threatened by their providing care to the poor. The first two recommendations deal with the basic structure of the adjustment and the formulas governing how payments are distributed. Table 3-4 compares some of the key provisions of these recommendations with features of the current system. The last recommendation addresses the data that

will be needed to implement the system we envision.

Structure of the disproportionate share adjustment

The first recommendation addresses the basic structure of the DSH adjustment, including the underlying measure of care to the poor on which it is based.

RECOMMENDATION 3C

The Congress should require that disproportionate share payments be distributed according to each hospital’s share of low-income patient costs, defined broadly to include all care to the poor. The measure of low-income costs should reflect:

- **Medicare patients eligible for Supplemental Security Income, Medicaid patients, patients sponsored by other indigent care programs, and uninsured and underinsured patients as represented by uncompensated care (both charity care and bad debts).**
- **Services provided in both inpatient and outpatient settings.**

As under current policy, disproportionate share payment should be made in the form of an adjustment to the per-case payment rate. In this way, the total payment each hospital receives will reflect its volume of Medicare patients.

The policy of linking the DSH payment a hospital receives to both its low-income share and volume of Medicare patients helps to target payments toward the hospitals in most need while protecting Medicare patients’ access to care at the facilities they use.

The measure of low-income patient share should include poor Medicare patients and patients covered by any

indigent care program, as well as those who receive uncompensated care. Low-income Medicare patients would continue to be identified by their eligibility for SSI payments. Indigent care programs would include Medicaid and other programs sponsored by city, county, or state governments. All other low-income patients would be represented by uncompensated care, reflecting the unpaid bills of uninsured patients as well as deductibles and copayments that privately insured individuals fail to pay.

Because program eligibility criteria vary among states and localities, the relative sizes of these four groups of patients also vary. In particular, hospitals’ uncompensated care burdens tend to be greater when Medicaid eligibility and coverage are limited. Thus, the omission of uncompensated care from the current measure has kept some of the most financially stressed hospitals from receiving the most help from the DSH adjustment. Local indigent care programs provide insurance for a substantial number of poor people in some areas, but payments often cover only a fraction of the costs of care. Omitting patients covered by these programs from the low-income share measure may also shortchange some of the neediest hospitals. For these reasons, the low-income share measure needs to encompass the entire low-income patient population.

The current DSH payment system contains two features designed to compensate for the current low-income share measure not accounting for uncompensated care or local indigent care programs other than Medicaid. One is the Pickle provision, which as noted earlier provides certain public hospitals with an alternative method of qualifying for DSH payments, and the other is a progressive payment formula that increases payments more than proportionally as low-income share rises. With uncompensated care and local indigent care programs accounted for directly in the measure of low-income share, our analysis suggests that these special provisions will no longer be needed.

A measure of provider costs is the best way to determine the amount of care

**TABLE
3-4**

Comparison of methods for distributing disproportionate share payments: current policy and MedPAC recommendations

Feature	Current policy	MedPAC policy recommendations
Form of payment	Percentage add-on to the per-case payment rate	No change
Patient groups reflected in the low-income share measure	Medicare patients eligible for Supplemental Security Income and Medicaid patients	Current groups, plus patients covered by other indigent care programs and patients receiving uncompensated care
Type of care included in the low-income share measure	Inpatient	Inpatient and outpatient—to reflect the broader role of hospitals in protecting access to care
Unit of measure for low-income care	Patient days	Costs—to reflect more accurately the resources hospitals devote to caring for the poor
Formulas for distributing payments	Nine widely differing formulas for groups by urban/rural location, bed size, and eligibility as a sole community hospital or rural referral center	One formula—so that all hospitals with a given low-income share receive the same payment add-on
Special treatment for public hospitals	Alternative eligibility criterion provided, to make up for low-income shares omitting uncompensated care (the Pickle provision)	None needed—the measure of care to the poor includes uncompensated care
Treatment of hospitals with low-income share just above the minimum threshold	Large payment adjustment at the threshold, nothing just below it, creating a “notch effect”	Small payment adjustment at the threshold, with a smooth progression toward higher payments as low-income share rises

furnished to low-income patients. The costs associated with each of the four groups representing low-income patients (defined earlier) could simply be summed to arrive at an approximation of the total costs of treating the poor, with each group automatically weighted appropriately. Those costs as a percent of the hospital’s total patient care expenses would then reflect the share of resources the hospital devotes to caring for the poor. The current approach of measuring patient days may distort the measure of care to the poor and is not appropriate for uncompensated care (because hospitals can waive payment on a portion of a patient’s bill) or for outpatient care.

While it clearly seems appropriate to use some measure of uncompensated care

to represent low-income patient care in the private sector, whether the measure should be limited to charity care (meaning the patient was deemed unable to pay) or should also include bad debts (meaning the patient was considered able to pay but did not do so) is a difficult question. Ideally, amounts that patients can reasonably be expected to pay should be excluded in calculating a hospital’s low-income share. But because the income and asset criteria hospitals apply in determining eligibility for charity care vary widely, patients who are expected to pay in some hospitals might be eligible for charity care in others. Some facilities reportedly attempt to collect from nearly all patients to avoid them having the stigma of being labeled as eligible for charity. Moreover, many

patients have incomes only marginally above the poverty standards used and realistically cannot afford the costs of major medical episodes.

An equally important consideration in answering this question is the difficulty of developing separate measurements of charity care and bad debts. The uniform definitions, record keeping requirements, and auditing procedures required to obtain consistently reported charity care values separate from bad debts would be a substantial burden for hospitals and HCFA alike. Many facilities already report the amount of charity care they provide using state-established criteria that differ from those they use for internal reporting and financial management. MedPAC’s approach would avoid

requiring them to develop yet a third estimate of charity care defined by Medicare’s criteria. Considering the practical problems involved—both definitional and measurement—we believe that it is necessary to include both charity care and bad debts in the measure of care to the poor.

In our proposed measure, the costs hospitals incur in treating indigent patients would not be offset by the payments they receive. The full value of services to the poor would be used to determine each hospital’s low-income patient share and the per-case payment add-on it receives. We recognize that some jurisdictions provide more funding than others to hospitals that care for the poor. But this approach would avoid creating an incentive for state and local governments to reduce their funding for Medicaid payments, local indigent care programs, charity care pools, or operating subsidies for public hospitals. It also would avoid the need to collect data on funding sources that differ widely from area to area.

Although DSH payments would continue to be made only for Medicare inpatient cases, the measure of low-income patient costs should encompass both inpatient and outpatient services.¹² This would help hospitals that provide a substantial amount of outpatient care that is uncompensated or covered by Medicaid, and thus more accurately identify the institutions that are most vulnerable due to treating the poor. It also would recognize that many hospitals are unable to separate their inpatient and outpatient costs accurately, particularly for uncompensated care.

Distribution of disproportionate share payments

The next recommendation addresses the principles that should govern how DSH payments are targeted to specific hospitals, given each hospital’s low-income share value.

RECOMMENDATION 3 D

Through a minimum threshold for low-income share, the formula for distributing disproportionate share payments should concentrate payments among hospitals with the highest shares of poor patients. A reasonable range for this threshold would be levels that make between 50 percent and 60 percent of hospitals eligible for a payment. The size of the payment adjustment, however, should increase gradually from zero at the threshold. The same distribution formula should apply to all hospitals covered by prospective payment.

The Commission believes the objective of protecting Medicare patients’ access to hospital services is best met by concentrating DSH payments on Medicare cases in the hospitals with the largest low-income patient shares. This can be done by establishing a minimum value, or threshold, for the low-income share that a hospital must have before payment is made. Our analysis shows that using a threshold in conjunction with the expanded measure of low-income patient costs helps to direct the payments to hospitals that are currently under the most financial stress (MedPAC 1998b).

At the same time, it is best to avoid creating a payment “notch” at the threshold, as found in each formula under current policy. This not only produces inequitable results, but creates an incentive for hospitals with shares just below the threshold to pursue strategies aimed at increasing their values slightly. A notch effect can be avoided by making the per case adjustment proportional to the difference between the hospital’s low-income share and the threshold.¹³ In this way, a hospital falling just above the threshold would receive only a minimal

increment above its base payment, with the percentage add-on rising in smooth progression as low-income share increases from that point.

About 50 percent of urban hospitals currently receive some DSH payment. However, this degree of concentration reflects the notch effect—any hospital eligible for a DSH payment receives at least a 2.5 percent payment add-on. With some hospitals receiving a smaller add-on under our approach, a greater proportion of hospitals would have to be eligible for those with the largest low-income shares to receive a proportion of the DSH funds similar to what they currently receive. This is one consideration in recommending a threshold that would make between 50 percent and 60 percent of PPS hospitals eligible for DSH. MedPAC’s analysis shows that a threshold in this range would concentrate payments among the hospitals with the greatest proportion of care to the poor while minimizing the disruption caused by a massive redistribution of payments.

Using a threshold in the recommended range would modestly increase the proportion of DSH payments going to the urban public facilities that form the backbone of the nation’s safety net. At the same time, a system allowing between 50 and 60 percent of hospitals to receive a DSH adjustment would support those with mid-level low-income shares to a greater degree than a more restrictive system. These mostly voluntary hospitals play an important role collectively in the safety net without having access to public funds to offset their uncompensated care costs.

Applying the same formula in distributing DSH payments to all hospitals would help protect access to care for all Medicare beneficiaries, regardless of the size or location of the hospitals they use. As mentioned previously, some of the formula differences in the current system resulted

12 While the recommendations discussed here apply only to inpatient payments, the same low-income patient share measure and method for distributing DSH payments could be adopted for use with a Medicare prospective payment system for outpatient services.

13 For example, if the threshold were 20 percent, a hospital with a low-income share of 30 percent (10 points above the threshold) would receive a percentage add-on to its base PPS payment twice that of a hospital with a low-income share of 25 percent (5 percentage points above the threshold).

from attempts to make up for deficiencies in the low-income share measure, which should not be necessary under MedPAC's proposal. Further, the much higher minimum thresholds that rural hospitals must meet in the current system would not be appropriate under a policy based on ensuring access to care. Access is a critically important consideration in all geographic areas, and the average cost share devoted to treating low-income patients is roughly equal in urban and rural areas.

Data collection to support disproportionate share reform

To implement the proposed low-income share measure, HCFA would have to collect low-income patient cost data from each PPS hospital. Accurate and consistent data are not available from existing secondary sources.

RECOMMENDATION 3 E

The Secretary should collect the data necessary to revise the disproportionate share payment system from all hospitals covered by prospective payment.

The required low-income patient cost data could be obtained by straightforward means, without using a complex cost allocation process like that in the Medicare Cost Report. Each hospital's low-income share could be estimated by dividing charges for care to the groups of patients representing the poor (Medicare SSI, Medicaid, other indigent care programs, and uncompensated care) by total patient charges. Because Medicare requires that hospitals use the same price schedule for all patients in preparing their cost reports, regardless of the amount of payment received or its source, this approach should produce consistent estimates of the share of resources devoted to treating the poor across all hospitals.¹⁴

The only data needed would be

charges for each relevant patient group along with total patient care charges. Charges for low-income Medicare patients would be estimated by multiplying each hospital's total Medicare charges by its ratio of SSI patient days to total Medicare days. A system is already in place to compute these hospital-specific SSI ratios for the current DSH payment system.

Initially, data would be needed from all PPS hospitals to evaluate, and possibly to recalibrate, the payment formula. On an ongoing basis, however, it would be necessary only to require reports from hospitals that expect to receive a DSH payment, which would minimize the resources hospitals and HCFA need to devote to data development.

The Secretary would need to develop uniform definitions and reporting instructions to govern hospitals' reporting of charge data. Several key definitional guidelines would include:

- All charges incurred by a patient must be assigned to a single primary payer (meaning, for example, that the charges associated with days of care beyond the number of days a Medicaid program will pay for are still assigned to Medicaid).
- The contractual discounts of Medicare, Medicaid, and local indigent care programs cannot be included in uncompensated care.
- Courtesy discounts (such as those given to employees or clergy) cannot be included as uncompensated care.

In addition, the Secretary would have to decide whether hospitals can include the unreimbursed portion of Medicare bad debts. Medicare has historically reimbursed all of the bad debts resulting from beneficiaries failing to pay their coinsurance, but the BBA reduces this compensation to 55 percent of the uncollected amount by fiscal year 2000.

A sample of hospital reports would need to be audited each year. However, several aspects of the Commission's

proposal should increase the likelihood that hospitals would be able to comply with the reporting requirements, thereby reducing the scope and intensity of the auditing effort. By far the most important is including total uncompensated care—bad debts along with charity care—in the low-income share measure. This approach eliminates the need for HCFA to develop and enforce uniform income and asset criteria for defining charity care, and for hospitals to apply the criteria and meet attendant recordkeeping requirements. Hospitals would need only to report their total uncollected charges, something they already do routinely. Extending the low-income share measure to include outpatient care would also minimize reporting problems because many hospitals have difficulty separating their inpatient and outpatient uncompensated care charges.

One of the most commonly cited problems in the reporting of charges or costs by payer is changes in patients' principal source of payment. Standard accounting procedure calls for assigning charges to whatever primary payer the patient identifies on admission. That source often changes, however, and not all data systems can reassign charges accordingly. The broad low-income share measure we are recommending should help to minimize the effect of this potential problem because the majority of payer assignment problems involve changes among low-income patient groups.

The most common problem of changing primary payer occurs when uninsured patients are initially authorized to receive charity care but later are determined eligible for Medicaid. A hospital's failure to reassign charges in this situation would not cause a problem because only the sum of charges across low-income patient categories is needed. Ensuring that uncompensated care charges are offset by any payments received later from a private insurer, a routine part of the collections process, would be the most important concern.

¹⁴ Hospitals would have an incentive to raise their charges for services used more frequently by poor patients. The effects of this incentive could be largely offset, however, by implementing our recommendations on a budget neutral basis. This would require a conversion factor, which could be recalibrated periodically based on the systemwide total of DSH payments.

HCFA has expressed the concern that including bad debts in the measure of low-income patient costs would encourage some hospitals to relax their collection efforts, thereby increasing Medicare's DSH payments. But we believe that including bad debts would not materially weaken the incentive to attempt collection. For the majority of hospitals, the amount of additional DSH payment that might be received by forgoing collection efforts would be dwarfed by the amount they stand to gain from the patient. These institutions, therefore, can be expected to continue their collection attempts. The few

hospitals with very large low-income shares, on the other hand, rarely serve the type of patients for whom aggressive collection would be worthwhile. Whether labeled bad debt or charity care, these hospitals' unpaid bills generally emanate from medically indigent patients who are appropriately reflected in any measure of low-income share.

A final data collection issue is that hospitals would need to capture the costs of Medicare and Medicaid managed-care patients, which means that they must determine these patients' sponsorship at

the time of admission. Hospitals already need to identify Medicaid managed-care patients to avoid being shortchanged on their DSH payments, and our proposal would extend this requirement to Medicare managed-care enrollees.¹⁵ It would not be appropriate to rely on patients to report their own coverage status; the health plan must provide the information necessary for the hospital to count these patients. A relatively simple way to do this is to include a sponsorship code in each patient's insurance identification number. ■

15 Teaching hospitals already need to identify Medicare managed care patients if they want to receive direct or indirect medical education payments for these admissions. Thus, only nonteaching hospitals would have a new data collection task for care provided to managed care enrollees as a result of our DSH recommendations.

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C H A P T E R

4

Providers Exempt from the Acute Care Prospective Payment System

R E C O M M E N D A T I O N S

To update and improve payments to providers exempt from the acute care prospective payment system, the Secretary should:

- 4A** Increase the market basket amount in the target amount update formula by 0.4 percentage points for fiscal year 2000.
- 4C** Encourage additional research in case-mix classification for psychiatric patients, with an eye toward developing a prospective payment system for them in the future.

.....
The Congress should:

- 4B** Adjust the wage-related portion of the target amount caps on exempt providers to account for geographic differences in labor costs.

Providers Exempt from the Acute Care Prospective Payment System

Hospitals and units of hospitals exempt from the acute care prospective payment system are a diverse group of facilities that share a common Medicare payment method established by the Tax Equity and Fiscal Responsibility Act of 1982.

Exempt facilities include rehabilitation, long-term, psychiatric, children's, and cancer hospitals, and rehabilitation and psychiatric units in acute care hospitals. In this chapter, the Commission makes recommendations concerning the annual update to facilities' target amounts under the current system, the national cap on target amounts, and case-mix classification research to further the development of a prospective payment system for patients in psychiatric facilities.

In this chapter

- History and changes in payment policy
 - Provider characteristics and trends
 - Updates to target amounts
 - Cap on target amounts
 - Improvements to psychiatric facility payment
-

History and changes in payment policy

Historically, all Medicare-certified hospitals were paid their full allowable costs, until the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) was implemented in fiscal year 1983. Intended as a temporary measure to control Medicare spending until prospective systems could be implemented, TEFRA established facility-specific limits for inpatient operating costs for all hospitals. When the acute care prospective payment system (PPS) was implemented in fiscal year 1984, certain types of hospitals and units remained under TEFRA rules mainly because the diagnosis-related groups (DRGs) classification system used in the PPS was thought to be a poor predictor of resource use for patients in specialty facilities. In addition, payments based on average costs, as they are under the acute care PPS, were not considered appropriate for providers that have a low volume of Medicare patients, such as children's hospitals.

The TEFRA system has remained in effect longer than expected partly because of difficulties in accounting for the variation in resource use across patients in exempted facilities. The unintended consequences of sustaining that system have included a steady growth in the number of PPS-exempt facilities and a substantial payment inequity between older and newer facilities. In particular, the payment system encouraged new exempt facilities to maximize their costs in their base year to establish high cost limits. Once subject to its relatively high limit, a recent entrant could reduce its costs below its limit, resulting in reimbursement of its full costs plus bonus payments. Further, the limits were based on average costs per discharge and new entrants typically have fewer discharges compared with established facilities. Because average costs drop as the number of discharges rises, TEFRA limits were high relative to average costs of established facilities. By contrast, facilities that existed before they became subject to

TEFRA could not influence their cost limits. Given the relatively low limits of older facilities, they are more likely to incur costs above their limits and thus receive payments less than their costs.

The Balanced Budget Act of 1997 (BBA) made several changes to reduce inequities in the TEFRA system, including imposition of national cost limits. PPS-exempt inpatient operating payments for fiscal year 1998 and beyond are based on a facility's costs per discharge, subject to facility-specific limits established by TEFRA and to national limits established by the BBA.¹ The facility-specific limit (or target amount) is a provider's Medicare-allowable inpatient costs per discharge in a designated base year, inflated to the current year by an annual update factor. The national limit (or target amount cap) applies to the three largest PPS-exempt classes—rehabilitation, long-term, and psychiatric facilities. Each class's cap is set at the 75th percentile target amount for that class in fiscal year 1996, inflated to the current year. Each facility's limit is the lesser of its target and cap amount.

Providers also generally receive either bonus or relief payments. A facility with costs over 110 percent of its limit is eligible for relief payments. The relief payment is equal to half the amount by which a facility's costs exceed 110 percent of its limit, up to 10 percent of the facility's limit.

A facility is rewarded with a bonus payment for keeping its costs under its limit. Under the BBA, the bonus system consists of two possible payments that can total up to 3 percent of a facility's limit. The first of the two possible bonus payments is made if a facility's costs are at or below its limit. The facility receives 15 percent of the amount by which its limit exceeds its costs, up to 2 percent of its limit. A second payment (called a continuous improvement payment) is paid to qualifying facilities. This payment is equal to half the amount by which a facility's current costs are less than its expected costs (that is, its prior year costs adjusted for inflation), up to 1 percent

of its limit. A facility qualifies for the second bonus payment if it has been a PPS-exempt provider for three or more years, and its costs are less than its limit, expected costs, and trended costs (that is, its base year costs adjusted for inflation). The goal of the two-part system is to reward facilities whose costs consistently are less than their limits.

Under certain criteria, facilities may retrospectively apply for exceptions payments. The most common criterion under which facilities apply is when their current costs are substantially higher than base year costs because of changes in patient or service mix (HCFA 1998).

In addition to enacting national limits for the three largest classes of exempt providers, the BBA also altered the payment method for new providers in those classes. With regard to payment, new hospitals are defined as those operating in their first two full cost-reporting years; distinct-part units are paid under new provider rules during only their first full reporting year. Previously, new facilities were paid their full Medicare-allowable costs, during which time their targets were determined. Effective in fiscal year 1998, payments to new providers are subject to limits derived from the targets of established exempt providers.² New providers' limits equal 110 percent of the median target amount of established facilities in each provider class in fiscal year 1996. These limits are wage-adjusted and inflated to the fiscal year in which the new provider first receives payment under TEFRA. Fiscal year 1999 limits are \$8,686 for new psychiatric hospitals and units; \$17,077 for new rehabilitation hospitals and units; and \$22,010 for new long-term hospitals (Federal Register 1998).

Provider characteristics and trends

To be exempt from the acute care PPS, specialty facilities must meet criteria

1 Medicare-allowable capital costs are reimbursed on a facility-specific basis. As of fiscal year 1998, psychiatric, rehabilitation, and long-term providers are subject to a 15 percent capital payment reduction. Cancer and children's hospital capital costs are reimbursed fully.

2 New children's facilities will continue to be paid their full Medicare-allowable costs.

mainly related to patient diagnosis and facility staffing. For exempt rehabilitation hospitals and units, for example, at least 75 percent of the inpatient population must require intensive rehabilitation for 1 or more of 10 specified neurological conditions, musculoskeletal conditions, or burn injuries. In addition, their Medicare patients have a medical need for and ability to undergo three or more hours of therapy daily. The facility also must have a multidisciplinary staff and procedures for precertification screening and ongoing patient evaluations.

Exempt psychiatric hospitals and units must treat patients with a psychiatric principal diagnosis and have a multidisciplinary team that includes a board-certified or board-eligible psychiatrist and a director of psychiatric nursing services. In addition, these facilities must provide psychological, social, and therapeutic services commensurate with patient needs and have procedures for ongoing patient assessment and treatment plan evaluation.

A hospital may be exempt and classified as a long-term hospital if its

average length of stay is longer than 25 days and it is not otherwise classified as a rehabilitation or psychiatric hospital. Long-term hospitals are a diverse group furnishing services such as comprehensive rehabilitation, respiratory therapy, cancer and trauma treatment, and pain and wound management. Medicare does not recognize long-term units of acute care hospitals as exempt providers.³

Children's hospitals are exempt if most of their inpatients are under age 18. The majority of Medicare beneficiaries in these hospitals are eligible due to end-stage renal disease. Beneficiaries represent a small fraction of children's hospital patients. In 1996, they accounted for about 2,400 children's hospital discharges, or less than 1 percent of total discharges from these facilities.

Cancer hospitals were not exempt from the acute care PPS in the original legislation in 1983, although the Health Care Financing Administration (HCFA) allowed certain cancer hospitals to receive operating payments under TEFRA rules. Under the Omnibus Budget Reconciliation Act of 1989, the

Congress specifically exempted certain cancer hospitals from the acute care PPS. Those hospitals must have been recognized by the National Cancer Institute as a comprehensive cancer center or clinical cancer research center as of April 1983. The facility must be organized primarily for cancer research or treatment, and at least 50 percent of total discharges must have a principal diagnosis of neoplastic disease. Cancer hospitals not exempt before 1991 can become so only through legislative action. The BBA designated an additional facility, bringing to 10 the number of exempted cancer hospitals.

Almost 3,500 Medicare-certified hospitals and hospital units were exempt from the acute care PPS by the end of 1996 (see Table 4-1). Between 1990 and 1996, there was a steady growth in the number of rehabilitation, psychiatric, and long-term facilities. These classes account for over 90 percent of all exempt facilities. Medicare volume has increased slightly faster than total patient volume. In 1996, Medicare beneficiaries accounted for about 70 percent of rehabilitation and long-term hospital

**TABLE
4-1**

Selected Medicare characteristics of facilities exempt from the acute care prospective payment system, 1996

Type of Facility	Characteristics						
	Aggregate operating payments (billions)	Number of facilities*	Average facility size (beds)	Medicare share of total patient volume	Average length of stay (days)	Average costs per discharge	Average costs per day
Rehabilitation	\$4.6	1,097	32	70%	16.0	\$10,793	\$710
Long-term	1.7	207	84	68	32.9	22,766	734
Psychiatric	4.0	2,119	58	42	14.8	6,858	556
Children's	N/A	71	103	1	8.8	11,147	1,600
Cancer	N/A	10	232	25	5.5	19,508	1,925

*Number of facilities as of December 1998. All other data are fiscal year 1996. N/A (breakdown not available).

Source: MedPAC analysis of Medicare actuarial and cost report data from HCFA.

3 Medicare does not recognize long-term units of acute care hospitals as exempt providers because acute hospital PPS payments are derived from average Medicare costs, including those of their long-stay patients. If a hospital were allowed to transfer its long-stay patients onto long-term units and receive separate payments for them, the hospital could inappropriately lower its average cost of patients paid under PPS. Nonetheless, in recent years, several facilities have been identified that are located in the same building or on the campus of acute care hospitals and have average stays longer than 25 days. Concerned that these providers may function as long-term units of acute care hospitals, HCFA implemented additional qualifying criteria for them effective October 1, 1994. Later, the BBA released from HCFA's additional criteria all so-called long-term hospitals-within-hospitals that were PPS-exempt before October 1, 1995.

volume. Medicare patients accounted for 42 percent of patient volume in psychiatric facilities.

Aggregate Medicare inpatient payments to PPS-exempt facilities rose about 17 percent annually in the 1990s, to almost \$11 billion in 1996. That increase was due primarily to growth in the number of exempt facilities and Medicare patient volume, rather than rising payments per discharge.

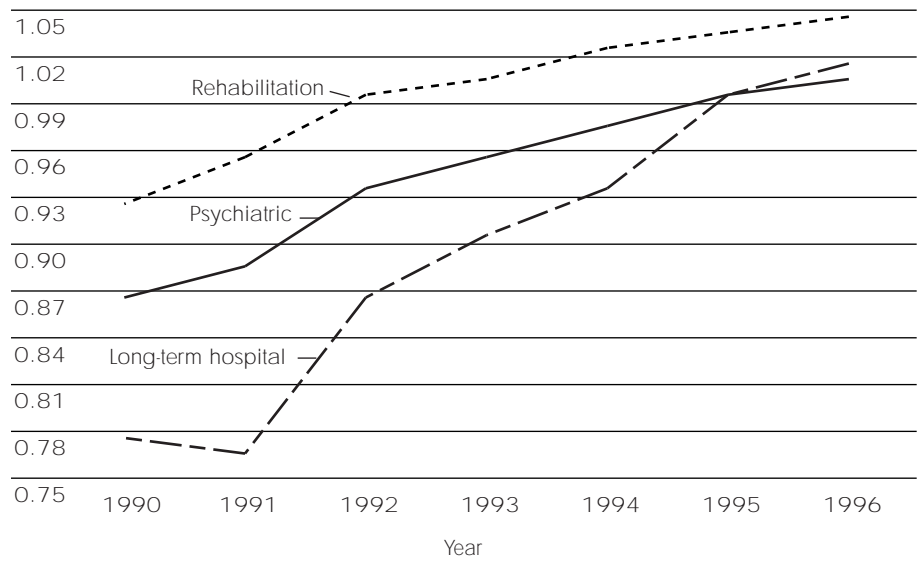
Across the three largest exempt classes, both the average Medicare length of stay and inflation-adjusted costs per discharge have declined since 1990. In 1996, stays in rehabilitation and psychiatric facilities averaged about 16 days, and stays in long-term hospitals averaged 33 days. At almost \$23,000, reported costs per discharge in long-term hospitals were double those in rehabilitation facilities (about \$11,000). Psychiatric facility costs per discharge neared \$7,000. Those facilities have experienced concomitant increases in costs per day in the 1990s. In 1996, costs per day averaged over \$700 in rehabilitation and long-term facilities and about \$550 in psychiatric facilities.

The trends of declining lengths of stay and little growth in costs per discharge have contributed to a steady improvement in financial performance among PPS-exempt providers (see Figure 4-1). With payments to rehabilitation hospitals and units exceeding reported costs by 5 percent in 1996, that provider class performed the best financially under Medicare. Payments exceeded costs by 2 percent and 1 percent, respectively, in long-term and psychiatric facilities.

Despite the overall financial gains suggested by ratios of payments to costs, the lack of any cost limits on new PPS-exempt facilities prior to the BBA fueled a financial disparity between older and newer facilities (see Table 4-2). That difference is greatest among older and newer long-term hospitals and psychiatric units. For example, almost 30 percent of long-term hospitals that have operated under TEFRA limits since 1990 or earlier

FIGURE 4-1

Payment-to-cost ratios for three classes of providers exempt from the acute care prospective payment system, 1990-1996



Source: MedPAC analysis of Medicare Cost Report data from HCFA. □

were paid less than their reported costs in 1996. By contrast, fewer than 5 percent of newer long-term hospitals were reimbursed less than their costs in that year.

Overall, PPS-exempt facilities comprise a set of inpatient providers that have responded to their industry environments and to a common set of Medicare payment rules that have encouraged growth in the number of providers. Aggregate spending has been increasing at a rapid pace, reflecting both increased patient volume and payment inequities across providers. Through passage of the BBA, the Congress signaled concern about these trends when it enacted cost limits for new providers, made several payment policy changes for existing facilities, required implementation of a PPS for rehabilitation hospitals and units by October 2000, and required a report by October 1999 on prospective payment for long-term hospitals (see Chapter 5). Against this backdrop, the Commission presents its recommendations on updating target amounts, modifying the cap on target

amounts, and encouraging new case-mix classification research regarding psychiatric patients.

Updates to target amounts

For fiscal years 1999 through 2002, the BBA established a provider-specific formula to update PPS-exempt target amounts (see Figure 4-2). The formula specifies a larger update to providers whose costs exceed their targets and a smaller (as low as zero) update to those whose costs are less than their targets. Overall, the formula is designed to narrow the gap between a facility's target amount and costs and to help lessen payment inequities among PPS-exempt facilities.

The update formula is based on the projected annual increase in HCFA's market basket index for PPS-exempt facilities. The facility-specific amounts vary depending on the difference between a facility's costs and target amount for the most recent year reported. For example, a provider's fiscal year 2000 update amount

TABLE 4-2

Facility financial performance, by year subject to the Tax Equity and Fiscal Responsibility Act, 1996

Type of facility	1990 or earlier		After 1990	
	Ratio of payments to costs	Share of facilities paid less than their costs	Ratio of payments to costs	Share of facilities paid less than their costs
Rehabilitation	1.05	15.3%	1.06	6.9%
Hospitals	1.08	5.4	1.07	4.8
Units	1.04	17.4	1.06	7.4
Psychiatric	1.00	29.9	1.03	15.1
Hospitals	1.02	21.4	1.01	19.5
Units	1.00	33.8	1.04	13.8
Long-term hospitals	0.97	28.6	1.06	4.5

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

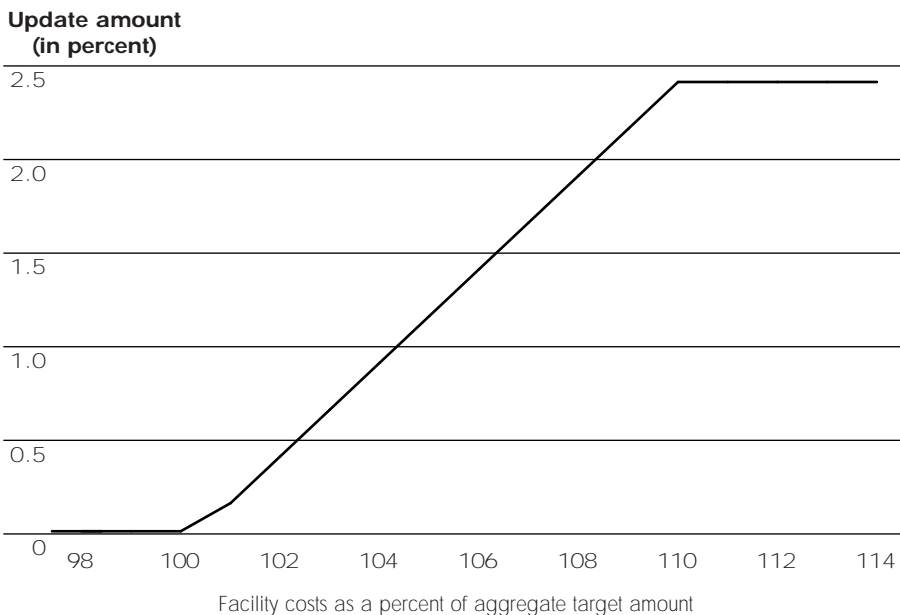
likely will be calculated from its fiscal year 1997 costs and target. Given the current fiscal year 2000 market basket forecast of 2.4 percent for PPS-exempt providers, updates would range from 0.15 percent to 2.4 percent for facilities with costs exceeding their targets and would be zero for those with costs less than their targets.

RECOMMENDATION 4A

The Secretary should increase the market basket amount in the target amount update formula by 0.4 percentage points for fiscal year 2000.

FIGURE 4-2

Target amount update formula, fiscal years 1999-2002



Source: MedPAC analysis of update formula in the Balanced Budget Act of 1997, assuming a market basket amount of 2.4 percent.

The Commission's update framework for PPS-exempt hospitals and units resembles the one it uses for acute care PPS hospitals (see Chapter 3). The input price element of the update framework is based on the forecasted increase in HCFA's PPS-exempt hospital market basket index, which reflects anticipated changes in prices, such as those for labor, supplies, and equipment. The categories and price variables of the PPS-exempt index are the same as those in the PPS market basket, but the PPS and exempt indices differ slightly in their weights for wages, benefits, and pharmaceuticals.

MedPAC's update framework incorporates three adjustments to HCFA's market basket index (see Table 4-3). The first adjustment reflects a difference between HCFA's and MedPAC's weights for the components of the index. The Commission weighs equally the expected growth in employee compensation in the hospital industry and the general economy, whereas HCFA gives less weight to the hospital industry projections. To account for this difference, a -0.1 percentage point adjustment is made to the current market basket forecast. This adjustment reflects the slower projected growth in hospital industry wages compared with other industries, after years of faster growth in hospital wages.

The second adjustment accounts for errors in previous market basket forecasts. Since the index is a forecast of price changes, differences between projected and actual price increases normally occur. Because the update is based on the forecasts, these errors can inappropriately inflate (or understate) the target amounts in each year and over time. MedPAC corrects these errors when actual price data become available, which is two years after forecasts are applied to payments. Because the BBA specified a zero update in fiscal year 1998, however, there is no need for an adjustment for that year in the Commission's fiscal year 2000 update recommendation.

MedPAC's update framework also considers scientific and technological advances in PPS-exempt facilities. This

**TABLE
4-3**

Update framework for target amounts, fiscal year 2000

Component	Percent
Fiscal year 2000 market basket forecast	2.4
Adjustment for HCFA and MedPAC market basket	- 0.1
Correction for fiscal year 1998 forecast error	N/A
Adjustment for scientific and technological advances	0.5
Sum of components	2.8 or MB+0.4
Basis of update formula in legislation	MB

Note: MB (market basket). Market basket values and forecasts supplied by HCFA as of December 1998. These are subject to change as more current data become available. N/A (not applicable).

allowance acknowledges changes in treatment patterns and medical or information technologies that may increase costs. Based on its assessment, the Commission concluded that technological improvements required to address the year 2000 computer problem may increase PPS-exempt facility costs in fiscal year 2000 by an estimated 0.5 percent.

Hospitals depend heavily on computer technology and information systems, and year 2000 malfunctions can potentially compromise patient care, interrupt core practice continuity, and create substantial liability exposure for hospitals. A broad spectrum of services may be affected, from electronic data interchange for patient records, medical research, and billing to medical devices with embedded computer systems. Clinical departments, such as laboratories, also are particularly dependent on automation and susceptible to year 2000 malfunctions. These malfunctions and service disruptions can come from both internal and external sources, such as administrative and clinical information systems; medical devices and equipment; vendors of medical supplies, pharmaceuticals, and food services; and third-party payers.

Unlike MedPAC's update framework for PPS payments, the one for PPS-exempt target amounts does not include a productivity adjustment because TEFRA

bonus payments explicitly reward facilities that control costs through productivity improvements. Additional adjustments for productivity improvements would not be appropriate.

Cap on target amounts

Payments for the three largest exempt classes are based on the least of a facility's costs per discharge, its facility-specific target amount, and its class's cap. The caps are set at the 75th percentile target amount for that class in fiscal year 1996, inflated to the current year. For fiscal year 1999, target amounts for psychiatric facilities are capped at \$10,787 for fiscal year 1999; the targets for rehabilitation providers are capped at \$19,562; and the targets for long-term hospitals are capped at \$38,593 (Federal Register 1998).

RECOMMENDATION 4 B

The Congress should adjust the wage-related portion of the target amount caps on exempt providers to account for geographic differences in labor costs.

The Commission believes that wage adjustments should be applied where appropriate to determine payments for all Medicare providers. The target amount caps, therefore, should account for

differences in area labor costs. Urban providers, which account for almost 75 percent of PPS-excluded facilities, generally incur higher labor costs than do rural ones. Further, the caps enacted by the BBA for newly exempt providers are wage adjusted. However, the caps on existing providers are not adjusted to account for this factor. To recognize this important and measurable source of cost variation, the Commission believes the caps for existing providers should be wage adjusted. The Commission presumes that legislation would be required to do so.

Improvements to psychiatric facility payment

In the long run, the problems inherent in the TEFRA system and the remedies contained in the BBA will primarily affect psychiatric facilities and patients because rehabilitation facilities will cease to be subject to TEFRA payment rules they once come under a prospective system (see Chapter 5).

RECOMMENDATION 4 C

The Secretary should encourage additional research in case-mix classification for psychiatric patients, with an eye toward developing a prospective payment system for them in the future.

Prospective payment for rehabilitation hospitals and units and long-term hospitals would leave psychiatric facilities comprising over 96 percent of all PPS-exempt facilities in the future. In addition, they would represent the only PPS-exempt class subject to the caps on new and existing providers because cancer and children's hospitals are not subject to those provisions.

Commission simulations of TEFRA payments suggest that the BBA provisions

will reduce payment inequities across PPS-exempt facilities (MedPAC 1998). However, the TEFRA system still cannot account for differences in patient mix and treatment patterns, which are key factors associated with variation in patient costs. As a result, some facilities that serve a particularly severe case mix could face unreasonably low payments due to the cap.

It is difficult to assess fully the fairness and adequacy of Medicare payments to psychiatric facilities without an adequate measure of case mix. Since the Congress implemented TEFRA, researchers have explored the potential of several classification systems for psychiatric patients. Work in that area has reaffirmed the inadequacy of DRGs alone to account for resource variation across psychiatric patients and has resulted in more comprehensive diagnosis-based

designs that incorporate additional patient characteristics (English et al. 1986). Factors that improve the predictive ability of classification designs include the type of psychiatric service used, severity of illness, patient age, and marital status (Stoskopf and Horn 1992, Taube et al. 1984). Some designs have used more detailed patient assessments that yield information on a patient's history of mental illness, substance abuse, and prior use of psychiatric services (Fries et al. 1993).

Classification research also has revealed the difficulties of predicting resource use of both acute care and chronic care psychiatric patients within a single design (Fries et al. 1993, Frank and Lave 1986). While designs that predict resource use during inpatient stays have potential for acute care patients, outlier

mechanisms or systems that measure per diem resources are necessary to classify patients with extremely long lengths of stay. Indeed, resource use and practice patterns vary substantially between acute care and chronic care patients and between the facilities that treat predominately one or the other of these patient types.

Collectively, this research suggests that a psychiatric case-mix classification system may be possible; however, a substantial amount of work remains. Given the limitations of the TEFRA payment system, the Commission encourages additional classification research with the goal of further improving the fairness and adequacy of payments to facilities treating psychiatric patients. ■

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C H A P T E R

5

**Post-Acute Care Providers:
Moving toward Prospective Payment**

R E C O M M E N D A T I O N S

The Secretary should:

- 5A** Collect a core set of patient assessment information across all post-acute settings.
- 5B** Establish quality monitoring systems for post-acute care as prospective payment systems are implemented.
- 5C** Conduct a demonstration to assess the potential of the Functional Independence Measure–Function Related Groups classification system to predict the resource use of intensive rehabilitation patients in skilled nursing facilities.
- 5D** Continue to refine the classification system used in the skilled nursing facility prospective payment system to improve its ability to predict the resources associated with nontherapy ancillary services.
- 5E** Explore the potential for revising the rehabilitation groups of the classification system used in the skilled nursing facility prospective payment system to reduce reliance on measurements of rehabilitation time.
- 5F** Develop a method for updating payment weights in the skilled nursing facility prospective payment system as soon as possible.
- 5G** Identify any distortions in the base payment rates of the skilled nursing facility prospective payment system and explore options for correcting them as better data become available.
- 5H** Develop ways to ensure skilled nursing facilities’ accountability for accurately assessing patient needs and classifying them for payment purposes.
- 5I** Develop a wage index based on skilled nursing facility wage data and use it to adjust payments for those facilities’ services.
- 5J** Develop a discharge-based prospective payment system for rehabilitation facility patients based on the Functional Independence Measure–Function Related Groups classification system. Policies to address transfers and short-stay outliers would be necessary components of such a system.
- 5L** Require home health agencies to use consistent, service-specific codes on all patient bills for services provided during home health visits.
- 5O** Evaluate all relevant case-mix and prospective payment methodologies for their utility in developing a prospective payment system for long-term hospitals.

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The Congress should:

- 5K** Establish in law clear eligibility and coverage guidelines for home health services.
- 5M** Require independent assessments of need for beneficiaries receiving extensive home health services to ensure the appropriateness of such care. Beneficiaries receiving 60 or more home health visits should qualify for assessments. Assessors should confer with prescribing physicians to modify care plans as needed.
- 5N** Require modest beneficiary cost-sharing for home health services, subject to an annual limit. Low-income beneficiaries should be exempt from cost-sharing.

Post-Acute Care Providers: Moving toward Prospective Payment

The Balanced Budget Act of 1997 initiated substantial changes in payment policy for providers of post-acute care under Medicare. The legislation set forth a timetable for implementing prospective payment for skilled nursing facilities, rehabilitation hospitals and units, and home health agencies. It signaled an intent to pay long-term hospitals prospectively as well. In this chapter, the Commission makes recommendations that pertain collectively to post-acute providers as well as several recommendations that are specific to the prospective payment system in operation for skilled nursing facilities and under development for rehabilitation facilities, home health agencies, and, eventually, long-term hospitals.

In this chapter

- Issues across post-acute care providers
 - Improving the payment system for skilled nursing facilities
 - Developing a prospective payment system for rehabilitation facilities
 - Ensuring appropriate use of home health services
 - Exploring prospective payment options for long-term hospitals
-

Issues across post-acute care providers

Although the types of patients treated and the mix of services furnished traditionally have differed across types of post-acute care providers, distinctions are less clear today. Differences between skilled nursing facility (SNF) and rehabilitation facility services diminished partly because until last year Medicare reimbursed SNFs their full costs of furnishing rehabilitation services. Along with technological advances in home care technologies, generous reimbursement policies also encouraged home health agencies to provide some services that used to be furnished mainly in nursing facilities.

Substantial differences in service capabilities and patient mix, however, still exist across post-acute care providers. Medicare coverage policies allow SNFs and home health agencies to treat a wider range of patients compared with rehabilitation facilities. Rehabilitation facilities and long-term hospitals also must meet hospital certification standards (see Chapter 4). Finally, functional abilities, medical needs, and treatment objectives point patients to specific post-acute care settings.

Collecting common patient assessment information across settings

A lack of readily available data on patient function and health status limits the ability to identify where differences and overlaps in patients occur and to compare costs and payments across provider types. In particular, policymakers are concerned that payment policies may furnish incentives for providers to place patients in settings for financial, rather than for clinical, reasons. A core set of common data about patients in all post-acute care settings will improve considerably the ability to monitor and make policy decisions about post-acute care.

RECOMMENDATION 5A

The Secretary should collect a core set of patient assessment information across all post-acute settings.

A fundamental element of the Health Care Financing Administration's (HCFA) post-acute care payment policy and monitoring efforts has been its recent modification of the Minimum Data Set (MDS), a patient assessment instrument originally designed to monitor the quality of care furnished to nursing facility patients. The new instrument, the Minimum Data Set for Post-Acute Care (MDS-PAC), is intended to be appropriate for patient assessment in any inpatient post-acute setting: SNFs, rehabilitation hospitals and units, and long-term hospitals (see Table 5-1). The MDS-PAC was tested in SNFs that furnish rehabilitation and medically complex care and in rehabilitation and long-term hospitals. The instrument includes more detailed questions than the MDS concerning patient diagnoses, physical and cognitive function, medical service needs, and prognosis. It focuses on diagnoses that are common to patients in rehabilitation and long-term hospitals, such as cardiovascular, musculoskeletal, and neurological conditions.

The Medicare Payment Advisory Commission (MedPAC) commends HCFA's development of the MDS-PAC and encourages its refinement and use. The instrument will facilitate greatly comparisons of patient characteristics and service use across inpatient post-acute care settings. Insights gleaned from these data should inform future prospective payment system (PPS) policies, as well as longer term policy considerations about post-acute care.

Home health agencies also are required to collect information on their patients' needs and function. The data set developed for the home health setting is the Outcomes and Assessment Information Set (OASIS). OASIS includes approximately 100 questions covering 14 categories of care (see Table 5-2). Though less comprehensive than the MDS-PAC, the OASIS includes questions on ambulation, management of medications, psychological and emotional behavior,

TABLE 5-1

Sections of the Minimum Data Set-Post Acute Care assessment instrument

- A. Patient identification information
- B. Admission information and payment source
- C. Cognitive patterns
- D. Communication and vision patterns
- E. Mood and behavior pattern
- F. Functional status
- G. Bladder and bowel continence
- H. Diagnoses
- I. Medical complexities
- J. Other health conditions
- K. Oral and nutritional status
- L. Procedures and services
- M. Functional prognosis
- N. Resources for discharge

Source: Hebrew Rehabilitation Center for the Aged, Boston. January 1999.

and living arrangements. The Secretary intends to modify the OASIS to obtain additional data to develop a case-mix classification system for use in a prospective payment system for home health services.

Because standardized patient information for home health users would be otherwise lacking, the Commission supports the collection of OASIS data. In the long run, however, a core set of common patient assessment information should be collected across all post-acute care providers. These core data could be collected by developing common definitions of elements of OASIS and MDS-PAC.

Ensuring access to quality care

The shift from cost-based payments to prospective rates creates incentives for providers to reduce their costs. Some facilities may respond by reducing the amount of care they furnish. For example, providers may not furnish patients with needed services, or they may avoid admitting certain types of patients entirely. In addition, access to care could be reduced if facilities close. Monitoring

**TABLE
5-2**

**Sections of the
Outcomes and
Assessment
Information Set**

- A. Clinical record items
- B. Demographics and patient history
- C. Living arrangements
- D. Supportive assistance
- E. Sensory status
- F. Integumentary status
- G. Respiratory status
- H. Elimination status
- I. Neurological, emotional, and behavioral status
- J. Activities of daily living and instrumental activities of daily living
- K. Medications
- L. Equipment management
- M. Emergent care
- N. Agency discharge and inpatient facility admission information

Source: Center for Health Services and Policy Research, Denver. October 1998.

the services to ensure that beneficiaries have access to providers and receive the care patients need will therefore be important.

RECOMMENDATION 5B

The Secretary should establish quality monitoring systems for post-acute care as prospective payment systems are implemented.

As required in the nursing home reform provisions in the Omnibus Budget Reconciliation Act of 1989, skilled nursing facilities submit patient information using the MDS to the survey and certification agency in their states. MDS data are intended to help improve care in nursing facilities by monitoring residents' health status and outcomes. With such data, providers can measure and improve their care and benchmark that against other facilities. MDS data also help state survey agencies target their activities toward particular facilities.

As required by the Balanced Budget

Act of 1997 (BBA), the Secretary is establishing a medical review process to examine the effects of the PPS recently implemented for SNF services. Because the Congress was concerned about the impact of a PPS on nonroutine care (such as therapies, medications, and physician services), medical review activities will focus on these areas. HCFA is currently developing this process through contracts with some of its peer review organizations. These contractors will analyze MDS data to identify trends suggesting access or quality problems and will develop focused interventions to address deficiencies. A key benefit of this effort is that it will encourage better coordination among the entities responsible for different aspects of quality monitoring and enforcement: Medicare fiscal intermediaries, peer review organizations, state survey and certification organizations, and Medicaid programs.

Home health agencies also now are required to collect OASIS data and submit them to state survey agencies. Using these data, agencies will be able to compare their patients with those served by other agencies and evaluate progress resulting from quality improvement actions. Like the MDS data collection effort, the OASIS data will allow state survey agencies to compare past and current performance and assess the quality improvement activities of home health agencies (HCFA 1997).

Medicare does not require rehabilitation facilities to submit MDS or other patient assessment data. Since 1990, though, most rehabilitation facilities have monitored patients using an 18-item functional status instrument. Its widespread use has enabled comparisons of rehabilitation patient function over time and across providers. The instrument's questions recently were integrated into the MDS-PAC. That integration will improve quality monitoring efforts after a rehabilitation PPS is implemented by enabling analysis of patient trends both before and after changes in payment policy.

Collecting and analyzing patient assessment information across post-acute care settings should lead to a better understanding of the quality of care and

outcomes of patients across settings. Some recent published studies using detailed patient information have compared, for example, patients in rehabilitation hospitals and SNFs. Most of these focused on the outcomes of stroke and hip fracture patients in the two settings. Stroke patients were found to fare better in rehabilitation facilities than SNFs, while fewer outcome differences by setting were identified among hip fracture patients (Kramer et al. February 1997, Kane et al. 1996, Ottenbacher and Jannell 1993). A core set of data collected and analyzed across post-acute care settings would aid the monitoring and refinement of payment policies and ultimately help ensure fair payments and access to appropriate post-acute care services.

Applying consistent methods of payment

The Commission supports the principle of developing consistent payment methods where appropriate, such as when a similar mix of patients and services are found in different settings (see Chapter 1). In the area of post-acute care, policymakers currently face unattractive trade-offs regarding payment consistency. Consistency could be realized most quickly by adapting for rehabilitation hospitals and units (and possibly for long-term hospitals) the per diem classification system used in the PPS recently implemented in nursing facilities.

However, as discussed below, the Commission believes a discharge-based system is more appropriate for rehabilitation facilities because these providers focus on the intensive rehabilitation of patients with the goal of functional improvement and discharge. But MedPAC also is concerned about the potential overlap of patients and services between SNFs that have established intensive rehabilitation services and rehabilitation facilities. In fact, an estimated 69 percent of SNF patients are classified as SNF rehabilitation patients under the current SNF payment system (HCFA 1998). MedPAC believes it is appropriate to work toward a discharge-based system for intensive rehabilitation patients treated in both settings.

RECOMMENDATION 5C

The Secretary should conduct a demonstration to assess the potential of the Functional Independence Measure–Function Related Groups classification system to predict the resource use of intensive rehabilitation patients in skilled nursing facilities.

Largely because of the potential overlap of patients and services across post-acute care provider types, the Commission has urged the Secretary to consider more consistent payment policies across these settings. To accomplish this, HCFA plans to pay rehabilitation facilities on a per diem basis and develop a rehabilitation PPS with the same method used in the SNF PPS.

The Commission believes, however, that a discharge-based payment system is more appropriate for intensive rehabilitation patients in SNFs and for rehabilitation facility patients. Past efforts to develop a discharge-based system for SNF patients have failed mainly because of difficulties including all nursing facility patients (SNF patients and longer stay, Medicaid and private-pay patients) into a single classification scheme. But preliminary research has yielded a

discharge-based design that used diagnostic and functional characteristics to successfully classify rehabilitation patients treated in both SNFs and rehabilitation facilities (Kramer et al. June 1997).

That work suggests it may be possible to classify SNF rehabilitation patients by modifying and using a discharge-based classification system for rehabilitation hospital patients. In the mid-1990s, HCFA sponsored the development and evaluation of a system that classifies patients in rehabilitation hospitals, the Functional Independence Measure–Function Related Groups (FIM–FRG) classification system. The system was found to be a robust predictor of per discharge costs of Medicare patients (Carter et al. 1997).

Because this system already has been developed for rehabilitation hospital patients, the Commission urges the Secretary to assess the ability of the FIM–FRG system to predict resource use for intensive rehabilitation patients in SNFs and explore modifications that could result in a discharge-based classification system compatible for patients in both settings. Such a demonstration would have two potential benefits. First, a modified FIM–FRG system might describe the rehabilitation patients in SNFs more accurately than does the RUG–III system

(the classification system used for SNF prospective payment). Second, if this is the case, HCFA could pursue the use of a per discharge payment system based on the FIM–FRG system for all inpatient rehabilitation patients, regardless of the setting where they are treated. This would help accomplish policymakers' goal of consistent payment policies for like services and would use the unit of payment that many consider more appropriate for intensive rehabilitation patients, regardless of where they receive care.

Improving the payment system for skilled nursing facilities

Skilled nursing facility payments have been among the fastest growing components of Medicare spending, increasing 36 percent annually since 1987. Part A SNF expenditures reached an estimated \$13.2 billion in 1997. Although the pace of this growth has slowed in the last few years, it continues to exceed that of payments for most other services.

To slow this growth, the Congress required implementation of a prospective

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Elements of the skilled nursing facility prospective payment system

The skilled nursing facility (SNF) prospective payment system uses a classification system called the Resource Utilization Group system, version III (RUG–III).¹ RUG–III is a 44-group hierarchical patient classification system. The first level comprises seven major categories (rehabilitation, extensive services, special care, clinically complex, impaired cognition, behavior only, and physical function reduced) representing groups of patients with certain clinical

conditions (see Table 5-3). Within each category, patients are classified based on functional status (measured by an index of activities of daily living or ADL), and the number and types of services used. The 26 RUG–III groups in the first four major categories are consistent with Medicare coverage criteria for special rehabilitation and skilled nursing services. Patients classified into these groups are presumed to meet SNF level of care criteria, at least initially. Many patients in the remaining

three categories (18 RUG–III groups) would not meet Medicare coverage criteria (these categories more often are used to describe Medicaid patients).

Patients are assigned to a RUG–III classification group based on required, periodic assessments of patients using the Minimum Data Set (MDS).² After each MDS

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- 1 The RUG–III system was designed using information on the characteristics of nursing facility patients (long-term Medicaid and private residents as well as Medicare patients) and wage-weighted staff time. Patient characteristics were derived from the Minimum Data Set patient assessment instrument. Wage-weighted staff time measured the staff resources used to care for groups of patients over a 24-hour period for nursing staff and over the span of a week for therapy services (physical, occupational, and speech). Patient characteristics and wage-weighted staff time for the initial version of RUG–III were collected from March to December 1990 for 7,648 patients in 202 nursing homes in seven states. Two additional staff time data collections were performed on 154 Medicare-certified units of hospitals and free-standing facilities in 12 states (including six of the original seven).
- 2 The assessment required on the fifth day covers days 0 through 14; that on the fourteenth day covers days 15 through 30; that on the thirtieth day covers days 31 through 60; that on the sixtieth day covers days 61 through 90; and that on the ninetieth day covers days 91 through 100.

Elements of the skilled nursing facility prospective payment system

TABLE 5-3 Components of the Resource Utilization Group-III patient classification system

Patient categories	Number of RUG-III groups	Variables
Rehabilitation ^a	12	therapy intensity and type, nurse rehabilitation, ADL
Extensive services ^b	3	therapy type
Special care ^c	3	ADL
Clinically complex ^d	6	ADL, depression
Impaired cognition	4	ADL, nurse rehabilitation
Behavior only ^e	4	ADL, nurse rehabilitation
Physical function reduced	10	ADL, nurse rehabilitation
Total	44	

Note: Variables are the patient characteristics and service needs used to divide categories into RUG-III groups. ADL (activities of daily living).

- ^a Patients requiring any combination of physical, occupational, or speech therapy.
^b Patients with an ADL score of at least 7 and who meet at least one of the following criteria: parenteral feeding, suctioning, tracheostomy, ventilator/respirator.
^c Patients with an ADL score of at least 7 and who require special care (such as burns, coma, quadriplegia, septicemia, radiation therapy).
^d For example, patients with dialysis, aphasia, pneumonia, cerebral palsy.
^e Patients exhibiting symptoms such as wandering, hallucinations, or physical or verbal abuse of others.

Source: MedPAC summary of definitions in Table 2.C, Federal Register, May 12, 1998, Vol. 63, No. 91, p. 26262.

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assessment, a patient's RUG-III assignment is recorded on the claim sent to the fiscal intermediary for payment, and the MDS data are sent to the state survey and certification agency.

A payment weight was developed for each RUG-III group reflecting the average level of resources used to provide nursing services to patients in the group. The weights range from 1.70 for the extensive services classification group to 0.46 for the physical function reduced group. Payment weights for therapy services also were developed for the RUG-III

rehabilitation groups, ranging from a high of 2.25 to a low of 0.43.

To determine the payment for the nursing and therapy components of each RUG-III group, the skilled nursing and therapy payment weights for a classification group are multiplied by the applicable urban or rural federal base payment rates (see Table 5-4). (The same urban or rural rates apply to both freestanding and hospital-based SNFs.) Then, in recognition of the fixed costs associated with the care of nursing home patients, the adjusted nursing and therapy components are summed with a noncase-mix component rate to account for the average costs of general services and,

if applicable, a therapy noncase-mix component rate to account for the low-level rehabilitation services provided to patients not in the rehabilitation category.

The total federal rate for a RUG-III group is then adjusted by the hospital wage index to reflect the wage level in the SNF's market area. The labor-related component is multiplied by the wage index for the SNF's location and added to the nonlabor component. (Almost 76 percent of the total, the labor-related component reflects the combined expenditure share of the components of the SNF market basket index that are believed to be affected by local wages and salaries and employee benefits and locally produced services).

The per diem payment rates under this system are intended to provide full payment for all facility services. Except for costs of approved medical education programs, the rates cover all routine, ancillary, and capital costs, as well as those for most ancillary items and services for which payment previously was made under Part B.³

The federal base payment rates in the PPS were derived from the allowable per diem routine, ancillary, and capital costs incurred by SNFs in fiscal year 1995 and from an estimate of the per diem average amount paid for ancillary services (including deductible and coinsurance amounts) under Part B for Part A-eligible SNF patients during the same period.⁴ Exceptions payments are excluded, as are all costs for exempt facilities. The

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- 3 The per diem rates exclude amounts for services furnished by physicians and certain other practitioners, such as qualified psychologists, and dialysis services and supplies. These services will continue to be covered and paid for under Part B. Costs for physical, occupational, and speech therapy services are included in the per diem rate even if they are furnished by or under the supervision of a physician.
- 4 Under the previous cost-based payment system, new providers were exempt from the routine cost limits for up to their first four years of operation. The costs of these providers are not included in the calculation of the new federal base payment rates. Exceptions payments (additional payments for providers with reasonable costs exceeding the limits) are also excluded.

Elements of the skilled nursing facility prospective payment system

**T A B L E
5 - 4**

Unadjusted federal per diem rates in the skilled nursing facility prospective payment system

Rate	Nursing case-mix	Therapy case-mix	Therapy noncase-mix	Noncase-mix
Urban	\$109.48	\$82.67	\$10.91	\$55.88
Rural	104.88	95.51	11.66	56.95

Source: HCFA, Federal Register. May 12, 1998, Vol. 63, No. 91, p.26260.

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resulting per diem cost for each provider was trended forward to the first payment period by applying an annual update factor equal to the

increase in the SNF market basket index minus one percentage point for each intervening year.

The updated per diem costs for each provider were standardized to remove

the effects of differences in wage levels across areas and variations in patient mix among facilities. The urban and rural federal rates were calculated separately as the simple average of two weighted averages. The first was the average per diem cost for all urban or rural facilities (weighted by the number of covered days in each SNF). The second was the average per diem cost for urban or rural freestanding facilities (also weighted by covered days). Calculating the simple average of these averages puts substantially more weight on freestanding facilities' costs than those of hospital-based SNFs.

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payment system by July 1, 1998. Under the SNF PPS, a case-mix-adjusted and wage-adjusted per diem payment is made to cover the routine, ancillary, and capital costs incurred in treating a skilled nursing facility patient. During a three-year transition period, each facility's per diem payment is based on a blend of a facility-specific rate and its wage-adjusted federal rate. In the first year, the blend is 75 percent facility-specific, dropping to 50 percent in the second year and 25 percent in the third year. SNFs that first received payments on or after October 1, 1995, will be paid based on the federal rates immediately, with no transition period.

The Commission recommends several changes to improve the classification system and payment rates and weights of the PPS. MedPAC also urges that methods be put in place to ensure SNFs classify patients appropriately.

Refining the SNF classification system

The RUG-III classification system is based on the time providers spend furnishing nursing and therapy (physical, occupational, and speech) services. But patients also can vary systematically in their use of other ancillary services and supplies, such as respiratory therapy, lab

tests, imaging services, drugs and biologicals, and transportation. These differences are reflected in the payment system's nursing and therapy weights only to the extent that they are correlated with the use of nursing and therapy services.

Nevertheless, the PPS pays for nontherapy ancillaries prospectively, assuming that the use of these services and supplies is correlated with skilled nursing time. Payments therefore may not be adequate for patients who need relatively high levels of nontherapy ancillary services and supplies. This could result in access problems for medically complex patients, such as those classified in the extensive services RUG-III groups. These patients appear to have nontherapy ancillary charges that are higher than those of other residents (White et al. 1998). At the same time, payments may be too high for patients who use relatively few nontherapy ancillaries.

RECOMMENDATION 5D

The Secretary should continue to refine the classification system used in the skilled nursing facility prospective payment system to improve its ability to predict the resources associated with nontherapy ancillary services.

The Commission supports HCFA's efforts to assess the extent of problems concerning nontherapy ancillary services. A contractor is evaluating potential refinements to the classification system to improve its predictive capability. Preliminary findings point to some possible refinements to the classification system (White et al. 1998). A higher-weighted classification group could be created for patients who meet the requirements for both the extensive services and the rehabilitation RUG-III groups. These patients often require both costly nontherapy ancillaries and substantial amounts of rehabilitation services.

Alternatively, the classification system could be modified to incorporate more patient information, such as diagnosis items from the Nursing Severity Index (NSI), an instrument that predicts in-hospital mortality rates and lengths of stay for hospitalized patients. A strong relationship was found between a subset of 15 NSI diagnoses and SNF costs.

Revising the rehabilitation groups of the classification system

The first and generally highest paid hierarchy in the RUG-III classification

system is the rehabilitation category. It comprises 5 subcategories and 14 final classification groups. Rehabilitation patients in SNFs are assigned to one of the five RUG–III groups based on an assessment of the weekly number of therapy minutes needed, days of therapy needed, and type of therapy needed (physical, occupational, and speech). Patients are further classified according to function, as measured by an assessment of their ability to perform activities of daily living.

RECOMMENDATION 5E

The Secretary should explore the potential for revising the rehabilitation groups of the classification system used in the skilled nursing facility prospective payment system to reduce reliance on measurements of rehabilitation time.

As described earlier, the Commission recommends the Secretary explore adapting the discharge-based FIM–FRG system for classifying intensive rehabilitation patients in SNFs. In the shorter-term, MedPAC is concerned about the potential for gaming that exists in the RUG–III system, particularly in the classification groups applying to SNF rehabilitation patients. In those groups, the minutes of therapy a rehabilitation patient undergoes largely determine that patient’s RUG–III assignment. This raises the likelihood that providers will manipulate patient assignments to maximize reimbursement. The rehabilitation RUG–III groups are vulnerable to both an overestimation of therapy needed and an underprovision of needed therapy. By contrast, other classification groups in the RUG–III system are defined by patient function and need for skilled nursing services (such as intravenous medications and tube feeding) that may be less easily manipulated.

The RUG–III classification system was designed with very little information about rehabilitation patients in SNFs.

More comprehensive information can be collected about these patients through the MDS–PAC. Using this instrument, the Secretary should explore methods to classify rehabilitation SNF patients that do not rely on minutes of therapy time consumed.

Updating the payment weights

Over time, the RUG–III weights should change as practice patterns, technology, and payment incentives affect the resources used to furnish nursing facility services. If the weights are not updated periodically, payment inequities and inappropriate financial incentives may develop.

RECOMMENDATION 5F

The Secretary should develop a method for updating payment weights in the skilled nursing facility prospective payment system as soon as possible.

The payment weights of the PPS are based on measurement of staff time in about 350 SNFs.⁵ Options for updating the weights include either repeating those studies periodically for a larger and broader sample of SNF patients or recalibrating the weights using the average per diem charges associated with each classification group. Neither option is ideal, but some update mechanism is necessary.

Relying on staff-time measurement studies to update payment weights is problematic because such weights may reflect the “Hawthorne effect,” in which staff in the study settings know they are being monitored and do not perform as they normally do. Further, SNFs in the studies may classify patients more accurately than do other SNFs. The resulting weights reflect relative resources for patients in each classification group as they should be assigned—but they may not reflect cost differences among groups given patterns of patient classification by a typical

provider. These discrepancies would be greater to the extent that patient assignments are manipulated to obtain higher payments.

Another problem is that staff-time studies do not fully capture variations in expected costs associated with factors other than staff time. For example, patients may vary systematically in their use of nontherapy ancillary services and supplies, the costs of which may not be adequately reflected in the nursing and therapy weights. This cost variation also is not captured in the noncase-mix (general services) component of the payment because this component is set at a constant amount across all classification groups. Following HCFA’s refinements to payment for nontherapy ancillary services, a method for updating payments for those services also will be required.

An alternative approach to developing payment weights would use average per diem charges in each RUG–III group to recalibrate the weights, as is done in the acute care PPS. Payment weights in the hospital PPS automatically adjust over time, reflecting the effects of changes in technology and practice patterns on all inpatient costs and accounting for shifts in patient mix within and across each DRG. For example, if relatively low-cost cases that previously would have been classified in a low-weight DRG are coded so that they fall in a higher-weight DRG, then the weight for the higher category will fall (because the average charges in that category will decline). Thus, the effects of case-mix changes on payment weights in each DRG are automatically accounted for (albeit with a two-year lag, reflecting the availability of claims for use in recalibration). Using a claims-based recalibration method, however, does not prevent aggregate payments from rising inappropriately.

Whether and how SNF claims data could be used to recalibrate the SNF payment system depend on how well relative charges correspond to relative

5 The staff-time measurement studies were conducted in 12 states and included about 1 percent of all SNFs and about 0.2 percent of all SNF patients.

costs. They also depend on how closely the reported charges correspond to the PPS payment components. Under consolidated billing requirements, a SNF claim will include separate charges for routine services (room, board, and skilled nursing care) and ancillary services, whether they are furnished by a SNF or under arrangement with an outside supplier. Charges for therapy services will be reported separately from those for other ancillary services and supplies, such as imaging services or drugs. In addition, each claim will identify the patient's RUG-III assignments and the periods of days to which they apply.

These data could be used to calculate (or recalibrate) separate weights for therapy services and other ancillary services, but only if the charges for these services were recorded separately for each period corresponding to a different RUG-III assignment. Thus, if a patient's RUG-III classification changed during the stay—as would be expected for most patients—the charges for each type of service would have to be recorded separately for each period. Further, if use of other ancillary services varied systematically among RUG-III groups, then separate weights could be constructed for the general services rate component.

Even if SNF charges for all service categories were recorded separately for each distinct classification period, however, claims data probably would not be adequate for recalibrating the skilled nursing weights. Skilled nursing charges are subsumed in routine service charges, which are paid at a constant per diem amount. Consequently, the per diem routine service charges do not reflect variations in skilled nursing intensity among the RUG-III groups.⁶

To address this problem, either skilled nursing services would have to be charged separately on the claim (with the amount varying to reflect intensity of care) or the skilled nursing weights would have to be developed from a different source. If nursing payment

weights were derived from a different method (such as staff-time studies) and therapy and other ancillary service weights were based on claims data, then the recalibration process would partially account for the effects of case-mix creep.

Under any case-mix adjusted PPS, case-mix creep affects aggregate spending for services. Under the SNF payment system, providers will face strong financial incentives to shift patients to higher-weighted classification groups, thereby raising aggregate Medicare spending. This shift could be offset by prospectively adjusting the annual federal payment update. The BBA granted the Secretary authority to make either prospective or retrospective adjustments for this purpose. If the payment rates were periodically adjusted to correct for case-mix creep, however, SNFs that do not shift cases would be penalized. Consequently, minimizing case-mix creep by improving the classification system is essential to protect both program integrity and payment equity among providers.

Correcting distortions in base payment rates

In developing the federal base payment rates, HCFA standardized providers' allowable 1995 per diem costs to remove the effects of differences in wage levels across areas and variations in the mix of patients cared for by SNFs. These adjustments were made to estimate what each SNF's per diem costs would have been if it had operated in a labor market with national average wage levels and if it had served the national average patient mix in the base year. The adjustments affect both the overall level of payment and the distribution across facilities. Ideally, HCFA would have adjusted the labor component of facilities' costs using a wage index developed from SNF wages. The wage-adjusted per diem costs for each SNF would then have been case-mix adjusted using a facility-specific weight

developed from data on patient RUG-III assignments.

However, HCFA was forced to use the hospital wage index because a SNF wage index is not available. Data on patient RUG-III assignments were unavailable as well (except for the few facilities participating in the Nursing Home Case Mix and Quality demonstration program). To adjust for variations in case mix, HCFA developed a rough case-mix measure (called the MedPAR analog) based on the limited information about diagnoses and therapy charges available on the SNF claims data.

The information is particularly limited for the rehabilitation RUG-III groups because SNF claims do not record the minutes of therapy received, which is the main element used to classify rehabilitation patients in the SNF payment system. When HCFA compared the case-mix values generated from claims with those resulting from MDS assessments for a sample of SNFs, it found that the therapy case-mix values based on MDS data were 28 percent higher.

RECOMMENDATION 5G

The Secretary should identify any distortions in the base payment rates of the skilled nursing facility prospective payment system and explore options for correcting them as better data become available.

The Commission is concerned that an unknown amount of error was introduced into the initial federal rates because of the use of the hospital wage index and the SNF claims data to adjust facility costs. The rates may be higher or lower than the Congress intended and may be somewhat distorted across areas and facilities. The accuracy of the rates could and should be improved as the data needed to do so become available.

⁶ This differs from the situation for hospital inpatient care in which nursing intensity differences among the DRGs are largely captured by the correlation between nursing intensity and average length of stay, and by separate charges for intensive care.

Ensuring accurate classification assignments

The MDS used for classification includes several subjective elements (such as patient performance on activities of daily living). The classification assignments also rely on judgments that are largely or wholly under the control of the SNF, such as whether to give the patient 480 or 500 minutes of therapy services per week. As a result, providers will face incentives to manipulate patient assignments to maximize reimbursement.

RECOMMENDATION 5H

The Secretary should develop ways to ensure skilled nursing facilities' accountability for accurately assessing patient needs and classifying them for payment purposes.

Since the potential for manipulating RUG-III assignments to increase payments appears to be substantial, it will be necessary for HCFA to develop methods to ensure that SNFs accurately assess and report patient needs. The medical review process currently being developed for SNFs will provide an opportunity to examine trends in RUG-III classification assignments (see Recommendation 5B.) HCFA also will need to conduct periodic reviews of medical records to ensure that classification assignments reasonably match patient needs as reflected in their records.

Developing a wage index for skilled nursing facilities

Medicare's payments to SNFs are adjusted by the hospital wage index to reflect differences in wage levels across geographic areas. However, applying that index to SNFs may contribute to inequitable payments because nursing facilities employ a different skill mix than do hospitals (nursing facilities use proportionately more aides.) Additionally, the relative level of aides' salaries compared with nurses' salaries may not be

the same across geographic areas.

Geographic differentials in labor prices for SNF employees also differ from those for hospital employees (ProPAC 1992). This may be because state regulations affecting nursing facility staffing differ from those affecting hospitals. States also may have a greater impact on nursing facility costs because of their Medicaid programs and survey and certification roles.

RECOMMENDATION 5I

The Secretary should develop a wage index based on skilled nursing facility wage data and use it to adjust payments for those facilities' services.

An accurate wage index is needed to account for geographic differences in wages and to maintain payment equity among providers. To this end, the Social Security Amendments of 1994 required HCFA to collect data on wages and hours of paid employment for SNFs beginning no later than October 31, 1995. Until these data have been received and analyzed, the hospital wage index is the best available measure of geographic variation in wage levels. But it should be replaced as soon as possible with a more direct measure based on SNF wage data. If the quality of the data SNFs submit on their annual cost reports is not adequate for developing a wage index, then HCFA should resolve reporting problems as quickly as possible. Because a change in the wage index used would redistribute payments among SNFs, consideration should be given to phasing it in.

Developing a prospective payment system for rehabilitation facilities

The Congress requires that the Secretary implement a prospective payment system for rehabilitation hospitals and units by October 1, 2000. During the first year of a two-year transition, payments will be a

blend of two-thirds of what a facility would have been paid under TEFRA and one-third of the prospective payment amount. In the second year, payments will consist of one-third of the TEFRA amount and two-thirds of the prospective payment amount. During this period, aggregate payments must be 2 percent less than what they would have been solely under TEFRA.

The BBA does not specify a particular patient classification system or unit of payment for the payment system.⁷ One classification system that could be used is the FIM-FRG system. That system was originally designed using data from 37,000 rehabilitation patients in hospitals and units during 1990 and 1991. It was further refined using 1994 data on 90,000 patients. Payment weights and other payment system elements (such as outlier policies) were constructed using Medicare allowed charges.

The FIM-FRG system is a discharge-based classification system that sorts patients into one of 21 diagnostic categories such as stroke, spinal cord, and cardiac and uses assessments of patient functional and cognitive abilities and age to classify them into one of about 70 groups (see Table 5-5). The patient assessment data used to design the classification system were obtained from the Uniform Data System for Medical Rehabilitation (UDSMR). The UDSMR is an ongoing national repository of information on rehabilitation patients operated by the State University of New York at Buffalo. The UDSMR collects data on patient age, sex, living situation prior to hospitalization, diagnosis leading to disability, and functional status at admission and discharge. It also includes patient admission and discharge information and hospital charges. Over one-half of all rehabilitation hospitals and units submit information to UDSMR.

The FIM-FRG classification system is considered to be stable over time and predictive of length of stay and per discharge resource use (Carter et al. 1997). The system was found to predict 33 percent of the variation in both resource use and length of stay across patients.

7 The BBA specifies that the Secretary may include patient impairment, age, related prior hospitalization, comorbidities and functional capability as case-mix adjustment factors. It requires wage adjustments, update factors based on the market basket index, outlier payments to not exceed 5 percent of prospective payments, and special payment adjustments allowed for Alaska and Hawaii.

Rehabilitation facilities

Medicare is the largest single payer for inpatient rehabilitation services. In 1996, rehabilitation hospitals and units treated over 450,000 patients, 70 percent of whom were Medicare beneficiaries. Patients treated in the inpatient rehabilitation setting must be capable of undergoing, and likely to improve functionally from, receiving approximately three hours of therapy daily. Medicare requires that at least 75 percent of a rehabilitation facility's patients be admitted for care for one or more of 10 specified neurological, musculoskeletal, or burn conditions. The most common diagnoses of beneficiaries admitted to rehabilitation facilities, though, are stroke, hip fracture, and major joint reattachment procedures such as hip replacement. Those diagnoses describe more than half of beneficiaries in rehabilitation facilities.

Rehabilitation hospitals and units have responded to changes in the post-acute care environment as well as to a

set of Medicare payment rules under the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) that have encouraged growth in spending and patient volume (see Chapter 4). Aggregate spending has increased at a fairly rapid pace, reflecting increased patient volume rather than increased payments per discharge. Aggregate Medicare operating payments to rehabilitation facilities rose 18 percent annually between 1990 and 1996, from \$1.9 billion to \$4.3 billion. Since 1990, payments per discharge have risen less than the rate of inflation, reaching \$10,500 in 1996.

Most of the approximately 1,100 rehabilitation facilities are units of acute care hospitals (representing almost one-fifth of such hospitals). Recently, freestanding rehabilitation hospitals have undergone substantial ownership consolidation. In 1997, one corporation owned or managed over one-half of all rehabilitation hospitals and about 15 percent of hospitals and units combined (Japsen 1998, Wheatley et al. 1998).

data gathered. HCFA intends to use rehabilitation facility staff-time measurements taken during the study to create the payment weights needed for a rehabilitation facility PPS.

RECOMMENDATION 5J

The Secretary should develop a discharge-based prospective payment system for rehabilitation facility patients based on the Functional Independence Measure-Function Related Groups classification system. Policies to address transfers and short-stay outliers would be necessary components of such a system.

The Commission is concerned about the adequacy of the sample size in HCFA's rehabilitation staff-time study. Based on its statistical analyses of estimating an adequate sample size for such a study, MedPAC believes that a substantial increase in patients is necessary to devise a robust classification system and reliable and valid payment weights. Such a sample should include the range of diagnoses and functional disabilities treated in rehabilitation facilities and should allow for a statistically sufficient number of patients within each classification group created. An insufficient sample size may undesirably limit the number of classification groups and increase the variation estimated within each group.

In general, any facility operating under a prospective payment system relies on payments for less costly patients within a group to average out losses incurred from more costly patients within that group. A high degree of patient variability within a group, however, increases the chances for overall underpayment or overpayment to a particular facility. Such variability encourages facilities to seek patients likely to be less costly and thus can discourage access for patients with more extensive rehabilitation needs.

Recently, a modification to the FIM-FRG system (called the functional gain FRGs) has been developed that incorporates patient assessment at both admission and discharge (Stineman et al. 1997). If built into a payment system, that type of information could allow provider payments to be adjusted to reflect differences in patient outcomes, which could help counteract incentives to inappropriately reduce costs and care quality.

As noted earlier, rather than pursue a per discharge payment system based on the FIM-FRG system, HCFA is moving toward more uniform payment policies across post-acute care settings by designing a system that is conceptually similar to the per diem PPS recently implemented for SNFs. The SNF PPS

uses a classification system that relies on the MDS patient assessment tool, which was designed for use only in nursing facilities.

HCFA has modified the MDS for use in rehabilitation facilities and long-term hospitals, as well as SNFs. The new instrument, the MDS-PAC, is promising as a patient assessment tool in rehabilitation and other post-acute care facilities. However, because the instrument is new, there is almost no repository of MDS-PAC information on rehabilitation patients. Consequently, HCFA is now sponsoring a study of approximately 2,000 rehabilitation patients to collect patient assessment information using the new instrument and devise a classification system from the

**TABLE
5-5**

Components of the Functional Impairment Measure–Function Related Groups classification system for rehabilitation patients

Rehabilitation impairment category	Number of function related groups	Variables
Stroke	9	motor, cognitive, age
Brain dysfunction, traumatic	5	motor, cognitive
Brain dysfunction, nontraumatic	4	motor, age
Spinal cord dysfunction, traumatic	4	motor
Spinal cord dysfunction, nontraumatic	4	motor
Guillain Barre	2	motor
Neurological, other	2	motor
Orthopedic, lower extremity fracture	4	motor, cognitive
Orthopedic joint replacement	7	motor, cognitive, age
Orthopedic, other	2	motor
Arthritis, osteo	2	motor
Arthritis, rheumatoid and other	2	motor
Amputation, lower extremity	2	motor
Amputation, other	1	—
Cardiac	3	motor
Pulmonary	2	motor
Pain syndrome	2	motor
Major multiple trauma	2	motor
Major multiple trauma with brain/spinal injury	3	motor, cognitive
Miscellaneous	3	motor
Evaluation only	2	motor
Total number of classification groups	67	—

Note: Variables are used to divide rehabilitation impairment categories into function related groups. Motor and cognitive refer to subscales used to assess patient function. Age is patient age.

Source: Margaret G. Stineman et al., Development of function-related groups version 2.0: a classification system for medical rehabilitation, Health Services Research. October 1997, Vol. 32, No. 4, p.529-548.

used in Medicare’s rehabilitation PPS has evoked considerable debate. In moving toward a uniform payment policy across post-acute care settings, HCFA intends to pay rehabilitation facilities on a per diem basis, as is done in the SNF PPS. Indeed, a common payment unit could reduce any financial steering of patients who might be treated in either the rehabilitation or SNF setting.

Nevertheless, the Commission believes that a discharge-based PPS is most appropriate for services provided to patients in rehabilitation facilities. Ideally, the unit of payment under a prospective payment system should reflect the product of the provider. For patients in rehabilitation facilities, that product is the discharge because the goal of inpatient rehabilitation is to maximize function following a debilitating event and furnish patients with the skills to return home. Given this, MedPAC believes the Secretary should adopt a discharge-based payment system for rehabilitation hospitals and units.

A discharge-based rehabilitation payment system also would be consistent with the acute care PPS. Over 60 percent of rehabilitation facilities are units of acute care hospitals, and those units account for 80 percent of all rehabilitation patient days. Rehabilitation (and other PPS-exempt) hospitals and hospital units also have operated under a discharge-based system since 1982. Further, most policymakers assume a per diem system would increase lengths of stay in rehabilitation facilities. If HCFA responded to that trend by reducing the per diem rates, some fear that cycle ultimately could diminish the intensity of inpatient rehabilitation.

The chief weakness of a discharge-based rehabilitation payment system is that it could encourage inappropriately early discharges and an increased use of other post-acute care providers following the rehabilitation stay. These are important concerns, but they could be mitigated by policies addressing short-stay outliers and transfers. Under a short-stay outlier policy, a provider would receive a reduced

Because of its concerns about the sample size and the tight time frame during which HCFA aims to develop the new PPS, the Commission is more confident at the outset in the validity of the patient groups and payment weights of the FIM–FRG system as the basis for a rehabilitation PPS. Further, such a system could be implemented relatively easily since the data elements needed to classify patients under the FIM–FRG system have been integrated into the MDS–PAC assessment tool.

Even if the FIM–FRG system is not used as the basis for the rehabilitation PPS, there are several ways that, at a minimum, it could be used to improve the PPS constructed from HCFA’s rehabilitation staff-time study. For

example, FIM–FRG classification group assignments easily could be analyzed along with the MDS–PAC classification data obtained on patients in the staff-time study. Since the FIM–FRGs have been widely used in the rehabilitation community for several years, that process could help validate the MDS–PAC. In addition, the payment weights of the FIM–FRG system could be updated using the most recent Medicare data available and compared with the measurement of resource use gathered during the staff-time study. This comparison could lead to improved payment weights and offer insight on the most appropriate method to recalibrate payment weights after the PPS is in operation.

Selection of the payment unit to be

payment if it discharged a patient home within an exceptionally short amount of time. Under a transfer policy, a provider's payment also would be reduced if it prematurely transferred a patient to another post-acute care provider.

Monitoring discharge patterns and lengths of stay would help determine the adequacy of outlier and transfer policies. In 1996, roughly 45 percent of rehabilitation patients were discharged home, another 40 percent were discharged home with home health services, and 10 percent went to skilled nursing facilities (MedPAC 1998). This represents a doubling since 1990 of home health service use following rehabilitation stays and a slight increase in transfers to SNFs. In 1996, the average length of stay in rehabilitation facilities was about 17 days. About 5 percent of patients with the most common diagnoses treated in rehabilitation facilities stayed an average of four days (see Table 5-6).

Regardless of the unit of payment used in the rehabilitation PPS, trends in lengths of stay and discharge patterns should be monitored to help assess changes in patient mix and practice patterns associated with prospective payment.

Ensuring appropriate use of home health services

Medicare home health expenditures have grown rapidly in the last decade because of increases in both the number of beneficiaries receiving home care and the number of services per user. Between 1988 and 1996, the number of beneficiaries receiving home health services doubled while the average number of visits per user climbed from 23 to 79 (MedPAC 1998). Recent changes in payment policies appear to have reversed this trend. Current

estimates suggest that Medicare spending for home health services decreased slightly in 1998 compared with 1997 levels.

The BBA required the Secretary to develop a case-mix adjusted prospective payment system for home health services by October 1999. The Omnibus Consolidated and Emergency Supplemental Appropriations Act of 1999 delayed that implementation date to October 2000. In the meantime, home health agencies are paid under an interim payment system put in place in October 1997. Under the interim system, agencies are paid their costs subject to the lower of an aggregate per visit limit or an aggregate per beneficiary limit. In fiscal year 1998, the aggregate per visit limits were reduced from 112 percent of the national mean cost per visit provided by the agency to 105 percent of the median of that cost. The per beneficiary limits are based on a blend of agency-specific historical costs and historical costs of agencies in the same geographic region or the national median of these limits.⁸

The home health industry expressed concern that the payment limits established by the BBA are too low, claiming that agencies bound by the aggregate per beneficiary limit would attempt to reduce costs by providing fewer visits but then would be bound by overly stringent per visit cost limitations. Agencies argued that they face the difficult choice of incurring financial losses or denying patients services for which they are eligible. The Congress responded to these concerns by increasing slightly the per visit limits and some of the per beneficiary limits for fiscal year 1999.⁹

Because the per beneficiary limits are based on inflation-adjusted historical costs, however, these limits may not reflect home health agencies' current patient mix. Under typical circumstances, agencies would

serve a mix of high and low cost patients and mirror the earlier mix on which their limits are based. Some agencies, however, report they are unable to achieve this balance.

Ideally, a prospective payment system creates appropriate incentives by adjusting the payment rates to reflect the relative costs of serving different types of patients. Designing such a system has not been easy, however, because users of home health services have extremely diverse needs. In particular, it has been difficult to design a PPS that appropriately classifies patients who require both short and longer-term home health services.

In addition to implementing a prospective payment system, the Commission recommends the Congress and the Secretary explore additional methods to ensure appropriate use of home health services. These include clearly defining home health eligibility and coverage guidelines, requiring an independent needs assessment for beneficiaries making extensive use of home health care, standardizing coding for home health visits, and implementing beneficiary cost-sharing.

Establishing clear eligibility and coverage guidelines

The scope of home health care has changed markedly since Medicare began covering it. For example, before 1980, beneficiaries were required to have a three-day hospital stay before becoming eligible for home health services and were limited to 100 visits per year. The Omnibus Reconciliation Act of 1980 removed these restrictions. In the mid-1980s, HCFA made administrative changes to the coverage guidelines with the intention of slowing the growth in the number of beneficiaries receiving home care and reducing the number of visits per user. In 1988, the legal basis of the agency's guidelines was

8 During fiscal year 1998, the per beneficiary limits for established agencies (those with full cost reporting periods ending in fiscal year 1994) were 75 percent of 98 percent of agency-specific costs in fiscal year 1994 plus 25 percent of 98 percent of costs of agencies in that region in fiscal year 1994. The per beneficiary limits for "new" agencies were the median of the limits for established agencies. Both the per beneficiary limit and the per visit limits are adjusted upward for inflation by the home health market basket except during a two year freeze period.

9 Fiscal year 1999 per beneficiary limits for agencies whose fiscal year 1998 limits were below the national median were set at one-third the difference between the 1998 limits and the national median. P.L. 105-277 also set the per beneficiary limits for "new" agencies at the median of the per beneficiary limits based on 100 percent of costs rather than 98 percent. The law established limits for agencies certified on or after October 1, 1998, at 75 percent of the limit for "new" agencies as defined in the Balanced Budget Act. The law also increased the per visit limits to 106 percent of the median cost per visit for cost reporting periods beginning in fiscal year 1999.

**T A B L E
5 - 6**

Distribution of length of stay in rehabilitation facilities, by diagnosis related group of prior acute care hospital admission, 1996

DRG of prior acute hospital admission	Percentile (in days)							
	5th	10th	25th	50th	75th	90th	95th	Average
209 Major joint and limb reattachment procedure of lower extremity	4	5	7	11	15	20	23	11.8
14 Specific cerebrovascular disorders except transient ischemic attack	4	7	11	18	26	35	42	19.8
210 Hip and femur procedures except major joint, age >17 with CC	5	7	11	15	21	27	32	16.4
113 Amputation for circulatory system disorders except upper limb and toe	4	7	11	16	23	31	38	18.1
214 Back and neck procedures with CC	4	5	8	12	18	26	33	14.4
1 Craniotomy age >17 except for trauma	4	6	10	16	24	34	42	18.5
471 Bilateral or multiple major joint procedure of lower extremity	4	5	8	11	15	19	23	11.8
211 Hip and femur procedures except major joint age >17 without CC	5	7	10	14	19	25	29	15.3
106 Coronary bypass with cardiac catheterization	3	5	8	14	20	27	31	14.8
127 Heart failure and shock	4	6	9	14	19	26	31	14.9

DRG (diagnosis related group). CC (complication and/or comorbidity). These DRGs accounted for 64 percent of rehabilitation facility patients. Source: MedPAC analysis of 1996 claims data from HCFA.

challenged in court (*Duggan v. Bowen* 1988). As a result of this lawsuit, HCFA revised its guidelines to clarify eligibility and coverage for home health care. The revised guidelines allowed more beneficiaries to qualify for home health care and permitted more services to be furnished to users of the benefit.

Medicare eligibility requirements are narrow but vaguely defined. Moreover, coverage guidelines regarding services for eligible patients may be broad. To qualify, beneficiaries must be homebound and require intermittent skilled nursing services or physical or speech therapy as certified by physicians. Once eligible, individuals may receive any number or combination of these qualifying services as well as occupational therapy, medical social services, and home health aide visits on a part-time or intermittent basis.

These guidelines are not applied uniformly across home health providers. Eligibility and coverage determinations are made largely by fiscal intermediaries, which screen claims to identify services that are not covered or do not qualify as reasonable and necessary. Because home health practices vary widely by region, though, it has been difficult to develop national guidelines. Consequently, coverage determinations may be inconsistent across geographic areas.

RECOMMENDATION 5 K

The Congress should establish in law clear eligibility and coverage guidelines for home health services.

The BBA requires the Secretary to submit a report to the Congress regarding the requirement that beneficiaries receiving home health services be homebound. The report will discuss approaches to applying the homebound requirement for determining eligibility. In addition, the BBA requires the Secretary to develop normative standards for coverage determination. To that end, HCFA contractors are developing qualitative standards of home health use based on patient characteristics and need. These standards of service frequency and intensity are intended to replace the current edits performed by the fiscal intermediaries. Moreover, the standards may be used to provide feedback to physicians and other providers involved in the post-acute treatment plan.

Although the guideline revisions are important steps to clarifying coverage and eligibility rules, they are likely to be controversial. As in the past, the Department of Health and Human Services could face lawsuits regarding its coverage and eligibility guidelines. Greater legislative

authority is necessary if the Secretary is to defend the policies in court. Therefore, the Commission urges the Congress to give the Secretary clear authority to enforce eligibility and coverage guidelines by defining them in statute.

Standardizing coding for visits

Home health agencies are not required to specify the content of home health visits to receive Medicare payment. Agencies report the type of visit provided (skilled nursing services; physical, occupational, or speech therapy; medical social services; or home health aide services). Some of the aggregate payment limits apply to visits, although the definition of a visit within each of the six visit categories is not standardized. Because the content of visits in each category varies in and across agencies, this inconsistency precludes accurate cost comparisons of visits.

RECOMMENDATION 5 L

The Secretary should require home health agencies to use consistent, service-specific codes on all bills for services provided during home health visits.

Since October 1998, agencies have been

required to specify the length of home health visits in 15-minute increments on their Medicare bills. Although time-increment coding is a significant improvement over prior practices, information concerning the specific services provided in the visit is still lacking. The lack of a standardized coding system to describe services during home health visits permits agencies to reduce the number of services provided during visits to keep costs below their payment limits.

Information about the services furnished during a home health visit would allow HCFA to better monitor the adequacy and appropriateness of care as well as compare practice patterns across agencies before and after implementation of a PPS. Although the payment unit under the PPS is likely to be an episode of care rather than a visit, clearly defined service codes would allow for easier detection of quality problems. The HCFA Common Procedure Coding System should be used in developing the visit codes so that service descriptions will be consistent across sites that provide similar care.

Independently assessing need

Under current coverage guidelines a beneficiary may continue to receive home health care indefinitely. Better management of patients who make extensive use of home health services is necessary to ensure that care is appropriate.

RECOMMENDATION 5 M

The Congress should require independent assessments of need for beneficiaries receiving extensive home health services to ensure the appropriateness of such care. Beneficiaries receiving 60 or more home health visits should qualify for assessments. Assessors should confer with prescribing physicians to modify care plans as needed.

For beneficiaries receiving home health services, Medicare rules require

physicians to certify the need for care every 62 days. Prescribing physicians confer with agency-employed nurses to develop and modify patient care plans and determine ongoing patient needs. In some cases, physicians determine patient needs without having examined them during the preceding period of care. Physicians may face pressures from beneficiaries, their families, and home health agencies to continue services. The Commission believes an independent assessment of need would reduce the uncertainty physicians may face when evaluating the need for home care.

Independent evaluations also would provide more objective assessments than those furnished by agencies. Nurses employed by agencies may be influenced by financial incentives facing their employers. For example, a cost-based payment system encourages agencies to furnish services of marginal clinical value. To the extent these incentives exist under the interim payment system, an independent assessment would help minimize the provision of those services. Under an episode-based PPS, providers may face incentives to stint on care. Independent assessments would help ensure that patients receive the care they need.

The Commission recognizes there are several issues that would need to be addressed if this policy were implemented, and a demonstration may be an appropriate way to solve them. For example, methods to pay for this service in the context of Medicare's fee-for-service program would need to be explored. The frequency of assessments also would need to be determined. In addition, to ensure the quality of the assessments, it would be important to establish clear guidelines concerning the qualifications of individuals performing assessments and acceptable case-load levels.

Cost-sharing for home health services

Cost-sharing serves an important function in insurance plans. When the cost of a service is borne entirely by the insurer, the recipient of the service has little incentive to decline the service if it

provides even the smallest benefit. By making individuals responsible for a portion of the costs associated with the service, beneficiaries will consider the value of that service more carefully. For that reason, most benefits under Medicare require cost-sharing. Clinical laboratory services and home health care are the only major Medicare benefits that currently do not require cost-sharing.

RECOMMENDATION 5 N

The Congress should require modest beneficiary cost-sharing for home health services, subject to an annual limit. Low-income beneficiaries should be exempt from cost-sharing.

The Commission believes that the need for home health services would be evaluated more critically if beneficiaries shared some costs of that care with the Medicare program. In addition, cost-sharing for home health services could help identify fraud and abuse. Beneficiaries currently receive a summary notice of Medicare bills submitted on their behalf, but cost-sharing may more effectively encourage beneficiaries to review the number and types of services billed.

Beneficiary cost-sharing for home health services could take several forms depending on the method used for paying agencies. Under the current system, which relies heavily on visit costs to determine payment rates, a per visit copayment is a logical choice. A deductible could be used in a prospective system that uses an episode of care as the payment unit. A per visit copayment also would be possible under episode-based prospective payment, because visits furnished to individual beneficiaries will continue to be tracked to determine whether services are paid under Medicare Part A or Part B.

The Commission appreciates the burden that cost-sharing would pose for beneficiaries and therefore recommends that cost-sharing be nominal and subject to annual limits. Regardless of the level of cost-sharing, though, home health users with supplemental insurance coverage

would not directly incur these costs, but would bear them indirectly through higher premiums for Medigap coverage.

The Commission also recommends that low-income Medicare beneficiaries be exempt from cost-sharing for home health services. Because Medicaid pays premiums and deductibles for some low-income beneficiaries, these costs would be borne partially by states.

Exploring prospective payment options for long-term hospitals

The BBA did not require implementation of a prospective payment system for long-term hospitals. However, the Congress signaled its intent to pay these hospitals on a prospective basis in the future by requiring the Secretary to submit a report in 1999 concerning a prospective system for them.

Currently, inpatient operating payments to long-term hospitals are based on each hospital's costs per discharge, subject to facility-specific limits established by TEFRA and to national limits established by the BBA (see Chapter 4). TEFRA was intended as an interim system until a PPS would be implemented; however, the system has remained in effect longer than expected. The unintended consequences of sustaining TEFRA have included a steady growth in the number of long-term hospitals (and other PPS-exempt facilities) and a substantial payment inequity between older and newer ones. Across all PPS-exempt providers, that disparity is most evident among older and newer long-term hospitals. Almost 30 percent of long-term hospitals that have operated under TEFRA cost limits since 1990 or earlier were paid less than their reported costs in 1996, while less than 5 percent of newer long-term hospitals were reimbursed less than their costs in that year.

While the BBA's provisions are aimed at reducing payment inequities across these facilities, the TEFRA system still cannot account for differences in patient mix and treatment patterns. Given the continuing difficulties in ensuring fair

and adequate payments to facilities under TEFRA, the Commission encourages the exploration of all relevant methodologies

to help HCFA develop a valid and reliable PPS that adequately predicts resource use of long-term hospital patients.

Long-term hospitals

Long-term hospitals are exempt from the acute care PPS if they have an inpatient length of stay greater than 25 days and are not otherwise classified as a rehabilitation or psychiatric hospital. These hospitals constitute a small (about 200 facilities) but heterogeneous group that furnishes a range of intensive services including trauma and cancer treatment, respiratory therapy for ventilator-dependent patients, pain and wound management, and comprehensive rehabilitation. Roughly one-third of these facilities specialize predominately in treating ventilator-dependent patients.

Long-term hospitals are unevenly distributed geographically (see Table 5-7). Many of the oldest hospitals are located in the northeast area of the country, while much of the growth in these facilities has occurred in southern states. In other areas, patients with characteristics like those treated in long-term hospitals are probably

cared for during extended stays in acute care hospitals and in skilled nursing facilities that furnish medically complex care.

Most patients in long-term hospitals have several diagnosis codes on their medical records, indicating that they have multiple comorbidities and likely are less stable upon admission than patients admitted to other post-acute settings (ProPAC 1996, ProPAC 1992). Additionally, a higher share of daily patient costs in long-term hospitals are attributable to ancillary costs (49 percent) relative to other post-acute settings (42 percent in rehabilitation hospitals and SNFs). Over three-fourths of long-term hospital patients are admitted within a month following acute care hospital stays. Patients without a prior acute care stay are more likely to be younger and eligible for Medicare due to a disability compared to patients with prior acute care stays (ProPAC 1996).

TABLE 5-7

Geographic distribution of long-term hospitals and Medicare beneficiaries, 1998

HCFA region	Number of hospitals	Share of hospitals	Share of beneficiaries
Total	207	100%	100%
Boston	25	12.1	5.5
New York	9	4.3	10.3
Philadelphia	15	7.2	10.9
Atlanta	32	15.5	20.2
Chicago	33	15.9	18.6
Kansas City	7	3.4	5.2
Denver	8	3.9	2.8
Dallas	58	28.0	10.3
San Francisco	18	8.9	12.5
Seattle	2	1.0	3.7

Source: MedPAC analysis of data from the Offices of Survey and Certification and Strategic Planning, HCFA.

RECOMMENDATION 50

The Secretary should evaluate all relevant case-mix and prospective payment methodologies for their utility in developing a prospective payment system for long-term hospitals.

The BBA requires that the Secretary develop and submit to the Congress by October 1, 1999, a proposal for legislation that would establish a case-mix adjusted PPS for long-term hospitals. The Secretary must consider several methodologies, including an extension to long-term hospitals of the current payment system for acute care hospitals. The Commission will comment publicly on the Secretary's report once it is developed.

Under its goal of moving to a uniform payment policy for post-acute care providers, HCFA may favor developing a PPS that is similar to the one it recently implemented for SNFs and is proposing for rehabilitation hospitals. In concept,

such a plan would entail conducting a study of patients in long-term hospitals to characterize patients using the MDS-PAC instrument and measure clinical staff time associated with patient care. From that, a classification system and set of relative weights would be constructed to predict the daily resource use of long-term hospital patients. As discussed earlier, the Commission encourages the collection of a core set of common patient assessment elements across all post-acute settings and supports the development and refinement of the MDS-PAC. It is necessary, however, that such a study include a sufficient sample size to ensure development of a valid classification system.

The BBA also requires the Secretary to also explore an extension to long-term hospitals of the discharge-based DRG system used for acute care hospital payment. The Commission agrees that development efforts for a long-term hospital PPS should include an assessment of that system. Such work would entail, for example, a comparison of patients, costs, and payments of long-

term hospitals with the outlier cases of acute care hospitals.

Similarly, some researchers have taken the discharge-based DRG approach and modified it for long-term hospital patients (Maynard et al. 1996). This design uses 179 DRGs that were found to describe long-term hospital patients, plus an additional five groups that combine patients with other DRGs into similar cost categories. Relative weights for those 184 groups were calculated using allowed charges for long-term hospital patients. The researchers found this design as predictive of per discharge resource use as the acute care PPS. Main advantages of the design include its administrative simplicity and efficiency, its consistency with the discharge basis of the current long-term hospital payment system, and its similarity to the DRG-based PPS for acute care hospitals. This proposal is the most developed of the long-term hospital proposals and should be considered for its potential as a long-term hospital PPS. ■

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C H A P T E R

6

**Changing Medicare's Payment Systems
for Ambulatory Care Facilities**

R E C O M M E N D A T I O N S

In establishing ambulatory care prospective payment systems in general, the Secretary should:

- 6A** Define the unit of payment for ambulatory care facilities as the individual service, consisting of the primary service that is the reason for the encounter, the ancillary services and supplies integral to it, and limited follow-up care, but not the physicians' services. The unit of payment should be defined consistently across all ambulatory care settings.
- 6B** Use costs of individual services, not groups of services, to calculate the relative weights that apply to ambulatory care prospective payment systems. Relative weights should be calculated consistently across all ambulatory settings.
- 6C** Evaluate payment amounts under both the hospital outpatient prospective payment system and the ambulatory surgical center prospective payment system together with practice expense payments for services provided in physicians' offices under the revised Medicare Fee Schedule to ensure that unwarranted financial incentives that could inappropriately affect decisions regarding where care is provided are not created.
- 6D** Study means of adjusting base prospective payment rates for patient characteristics such as age, frailty, comorbidities and coexisting conditions, and other measurable traits.
- 6E** Seek legislation to develop and implement a single update mechanism that would link conversion factor updates to volume growth across all ambulatory care services.

In implementing a prospective payment system for the hospital outpatient setting, the Secretary should:

- 6F** Not use patient diagnosis to calculate relative weights or make payments, but rather should base payment for these services on the medical visit indicator coded using the Health Care Financing Administration Common Procedure Coding System.
- 6G** Closely monitor hospital outpatient service use to ensure that beneficiary access to appropriate care is not compromised.
- 6H** Re-evaluate the decision not to make additional payment adjustments under the new system, and should tie any proposed adjustments to patient characteristics. Any such facility-level adjustments that are proposed until such time as a patient level adjuster is available should reflect the population of Medicare patients treated by facilities identified to receive such adjustments.
- 6I** Seek, and the Congress should pass, legislation to increase the rate of the beneficiary coinsurance buy-down. The cost of the faster buy-down should be financed by increases in program spending, rather than through additional reductions in payments to hospitals.

In changing the prospective payment system for ambulatory surgical centers, the Secretary should:

- 6J** Carefully monitor changes in service provision between the ambulatory surgical center and physician office setting that may occur after HCFA's loosening of numerical guidelines for determining ambulatory surgical center list eligibility.

Changing Medicare's Payment Systems for Ambulatory Care Facilities

Medicare spending for ambulatory care services—medical evaluation and management visits, minor surgical procedures, diagnostic imaging, and laboratory tests — has grown substantially since the early 1980s. Medicare pays for many of these services differently according to where they are provided. Until the enactment of the Balanced Budget Act of 1997, Medicare used cost- and charge-based reimbursement in the hospital outpatient setting to pay for these services. In this chapter, the Medicare Payment Advisory Commission offers recommendations on making payments more equitable across settings and services, by using a common definition of the unit of payment, using a common method to calculate relative weights, and moving all payments for ambulatory care—including physicians' fees—under a combined volume control and update mechanism. We also make several specific technical recommendations regarding implementation of the hospital outpatient prospective payment system mandated by the Balanced Budget Act of 1997, and recommend reducing the inappropriately high beneficiary coinsurance for hospital outpatient services.

In this chapter

- Balanced Budget Act reforms: implementing ambulatory care prospective payment
 - General recommendations for all ambulatory care settings
 - Recommendations specific to the prospective payment system for hospital outpatient services
 - Recommendation specific to the prospective payment system for ambulatory surgical centers
-

Ambulatory care comprises a wide variety of medical services, provided in an equally wide variety of settings. In general, the term covers those acute care services that do not require an inpatient hospital stay or other facility admission and are provided in a relatively tightly defined clinical “encounter.”

As ambulatory care has grown over time to represent an ever larger share of total Medicare payments, problems with the existing payment systems have been highlighted. The Congress addressed many of these problems in specific provisions of the Balanced Budget Act of 1997 (BBA). But because of the scope and number of

BBA-mandated changes to ambulatory care payment policies, there is considerable uncertainty regarding the ways in which providers and beneficiaries will be affected once the changes are fully implemented.

This chapter focuses primarily on Medicare’s policies governing facility payments.¹ After describing the major

Prior law payment systems for ambulatory care

Medicare’s payment method for hospital outpatient services under pre-BBA mechanisms is one of the most complicated components of the program. Over time, it has evolved into an intricate patchwork of different mechanisms, each aimed at specific services or specific classes of hospitals. Further, the services provided in hospital outpatient departments can also be provided in other facilities such as ambulatory surgical centers (ASCs).

Hospital outpatient departments

Payments to hospital outpatient departments, which account for the bulk of Medicare’s spending for ambulatory facility services, have risen at an annual rate of over 12 percent since 1983 reaching \$17.2 billion in 1997 (see Table 6-1). Medicare spending for hospital outpatient services has also grown as a percentage of total Medicare payments to hospitals, growing from about 7 percent in 1983 to nearly 20 percent in 1997. At present, most short-term hospitals provide outpatient services to Medicare beneficiaries.

Under prior law, Medicare reimbursed hospitals for most outpatient services using three different payment methods: the lesser of costs or charges; the lesser of costs, charges, or a blended rate; and a

number of fee schedules (for clinical laboratory services, prosthetics and orthotics, and durable medical equipment) with the specific method based on type of service. Except for the fee schedules, these payment methods were applied retrospectively on an aggregate basis during the settlement of the hospitals’ Medicare cost reports. As a result it was difficult, if not impossible, to know the amount Medicare paid for a given outpatient service; even if this amount could have been determined, it could only have been known once the cost reporting process was complete, long after the service was provided.

Lesser of costs or charges

Medicare payments for medical visits (evaluation and management services), therapy and rehabilitation services, and some surgeries furnished in hospital outpatient settings were based on the facility’s reasonable costs or customary charges.² This payment method offered no incentive for hospitals to control their costs because increases in hospitals’ costs generally resulted in increased payments. Conversely, hospitals that reduced their costs generally received reduced payments.

The beneficiary coinsurance for these services was 20 percent of hospitals’ charges. Because charges for hospital outpatient services (particularly services subject to a blended rate) have

grown faster than hospitals’ costs (and therefore faster than Medicare payments), the coinsurance payment grew over time to represent a larger and larger share of total payments to hospitals. Currently, beneficiary coinsurance represents about 47 percent of the total Medicare payment hospitals receive for outpatient services, compared with 20 percent for most other services.

Lesser of costs, charges, or a blended rate

In an effort to contain program spending, the Congress restructured Medicare payment methods in the late 1980s. Hospitals providing ASC-approved surgical procedures and certain radiology and diagnostic procedures were paid the lesser of their costs, charges, or a blended rate, which combined a fee schedule amount with the lesser of their costs or charges. The Medicare program achieved savings under the blended rates because hospital costs and charges generally were higher than the ASC rates or relevant fee schedule amounts. Except for technical modifications, these formulas still define how the Health Care Financing Administration (HCFA) pays for services subject to a blended payment limitation.

The blended payment methodology is flawed in two specific ways. First, an error in the formula

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1 Although ambulatory care does encompass the physicians’ office setting, a broader treatment of physician payment issues is found in Chapter 7 of this report. Similarly, while many rehabilitative services are provided on an outpatient basis by certain types of ambulatory providers, these services are distinct enough from the more acute services traditionally classified as ambulatory care to warrant a separate discussion in Chapter 4.

2 Under Medicare reimbursement rules, hospitals’ outpatient operating costs are reduced by 5.8 percent and their capital costs by 10 percent for purposes of calculating payments. As a result, the highest payment-to-cost ratio a hospital could theoretically attain was 0.942, in the case of facilities with no outpatient capital costs.

Prior law payment systems for ambulatory care

**TABLE
6-1**

Medicare spending for ambulatory services provided in selected ambulatory settings, 1983-1997 (in billions)

	Hospital outpatient departments	Ambulatory surgical centers
1983	\$3.2	N/A
1984	3.7	N/A
1985	4.4	N/A
1986	5.2	\$0.1
1987	6.2	0.2
1988	7.0	0.3
1989	7.6	0.3
1990	8.5	0.4
1991	9.7	0.4
1992	11.0	0.6
1993	12.3	0.6
1994	13.9	0.7
1995	15.4	0.8
1996	16.6	0.9
1997	17.2	1.1

Note: 1983-1985 spending figures unavailable at time of publication.
Source: HCFA, Office of Information Services, and MedPAC analysis of Medicare Cost Reports.

continued from page 102

used to calculate the blended payment meant that the program payment amount did not properly reflect the full offset of beneficiary coinsurance. As a result, hospitals paid a blended rate received an excess payment from Medicare, known as formula-driven overpayment (FDO). Second, blended rates provided hospitals with an incentive to increase their charges relative to their costs and the relevant fee schedule amounts for services subject to a blended payment calculation. If hospitals increased their charges enough, they could avoid the blended rates altogether by shifting a larger share of the payment liability to the beneficiary.

Prospective payment rates

A number of Medicare services provided in hospital outpatient facilities are paid using prospective payment rates. These include laboratory services, prosthetics and orthotics, physical therapy,

mammography screening, and some surgical dressings and supplies. Hospitals provide dialysis services under a prospective composite rate as well. Medicare's payments are generally the lesser of hospital charges or Medicare's applicable fee schedule. Such fee schedule payment systems achieve savings for the Medicare program because their rates are generally below the payments that would have been made under cost-based methods.

Ambulatory surgical centers

In the fall of 1982, Medicare began covering certain surgical procedures provided in ASCs. A Medicare-certified ASC is a distinct facility that provides outpatient surgery services exclusively, has an agreement with HCFA to participate in Medicare as an ASC, and meets certain conditions of participation (42 CFR § 416.2).

Medicare began to cover ASC services largely as a means of reducing spending growth by shifting some

inpatient care to less costly facilities. These services were defined as surgical procedures that were generally provided on an inpatient basis but could safely be performed in less intensive ambulatory sites. This definition was intended to encourage the migration of inpatient surgical procedures to the less costly ASC setting, without encouraging a shift of services from the office setting to ASCs, where reimbursement is generally higher. These concepts formed the basis for HCFA's list of services that would be covered in ASCs.

The ASC benefit represents one of Medicare's earliest experiments with prospective payment in ambulatory settings. Procedures that Medicare included on the ASC list in 1983 initially were assigned to one of four groups for payment purposes on the basis of their estimated costs, and a prospective payment rate was calculated for each group. Beneficiaries were liable for 20 percent of the ASC rate. Over time, the number of eligible procedures increased, as did the number of payment groups. Currently, there are some 2,500 surgical procedures on the ASC list, grouped into eight payment categories.

Since the inception of the ASC benefit, the number of ASCs participating in the Medicare program has grown rapidly. At the end of 1983, just 239 ASCs provided services to Medicare beneficiaries. By 1998, more than 2,300 such facilities were participating in the program. As the number of Medicare-certified ASCs increased over time, so did payments and service use. Medicare program payments to ASCs increased in the mid-1990s by about 12 percent annually, from nearly \$500 million in 1993 to almost \$700 million in 1996. ASC service volume increased by 13 percent annually over this same period, from just over one million allowed services in 1993 to slightly over 1.5 million services in 1996.

components of Medicare's ambulatory care payment systems, the chapter identifies a number of areas requiring important policy decisions and presents the Commission's recommendations on how those decisions should be made.

Balanced Budget Act reforms: implementing ambulatory care prospective payment

The Congress remedied many of the problems with Medicare's hospital outpatient payment system by specific provisions of the BBA. For example, the BBA eliminated the formula-driven overpayment with cost reporting periods beginning in fiscal year 1998. It also directed the Health Care Financing Administration (HCFA) to implement a prospective payment system (PPS) for hospital outpatient services. For the first time since the inception of the program this system will allow hospitals to know their payments for outpatient services in advance. The outpatient PPS will also sever the direct link between hospitals' costs and charges and the payments they receive, eliminating the incentive to increase reported costs in order to receive higher Medicare reimbursements. Finally, the outpatient PPS will begin to reduce the disproportionate beneficiary coinsurance liability.

These benefits to the Medicare program and its beneficiaries come at a price, however. The program savings from the BBA's provisions represent reduced payments to hospitals. Under prior law, the highest Medicare reimbursement a hospital could receive for outpatient services was about 94 percent of their reported costs. In the aggregate, payments for hospital outpatient department (OPD) services were about 90 percent of reported costs in 1996 with considerable variation among classes of hospitals (see Table 6-2). If the formula-driven overpayment had been eliminated in

that year, aggregate payments to hospitals would have fallen by about 9 percent, reducing aggregate payments to about 82 percent of costs, but with different impacts by class of hospital. Further, HCFA estimates that additional reductions in payments will occur as the hospital outpatient PPS is implemented sometime in 2000, with some groups of hospitals experiencing very sharp reductions in payments (HCFA 1998a).

Indeed, the BBA intended to reduce both the level of payments to hospitals for outpatient services (by eliminating the formula-driven overpayment) and the future rate of growth in spending (through the legislated updates to the conversion factor), and to provide financial relief to the program's beneficiaries who receive ambulatory services in the hospital outpatient setting. However, the magnitude of the resulting effects indicates that HCFA should pay close attention to the design and implementation of the new payment system to ensure that these changes do not reduce beneficiary access to appropriate outpatient services.

At the same time that HCFA is implementing BBA-prescribed changes to the hospital outpatient payment system, the agency will similarly update its payment system for ambulatory surgical centers. Simultaneously, HCFA will make substantial changes in the way it calculates and pays for physicians' practice expenses under the Medicare Fee Schedule. Given both the scope and the number of changes that are occurring in Medicare's ambulatory care payment systems, the Medicare Payment Advisory Commission (MedPAC) has developed a number of recommendations that may assist HCFA in making these changes.

MedPAC's ambulatory care recommendations are in three categories. The first set of recommendations applies to ambulatory care in general, regardless of setting. The second set of recommendations deals with specific elements of HCFA's proposed PPS for

hospital outpatient services. Finally, we present a recommendation dealing with HCFA's proposed changes to the ASC benefit.

General recommendations for all ambulatory care settings

These recommendations address the major steps involved in designing an ambulatory care prospective payment system:

- defining the unit of payment,
- calculating relative weights,
- evaluating payment amounts across settings,
- adjusting payments across settings, and
- controlling spending through rate updates.

Taken together, these recommendations lay the groundwork for bringing consistency to Medicare's ambulatory care payment systems.

Defining the unit of payment

Developing prospective payment systems requires defining the unit of payment or the package or bundle of services that the payment is intended to cover (see Chapter 1).

RECOMMENDATION 6A

The secretary should define the unit of payment for ambulatory care facilities as the individual service, consisting of the primary service that is the reason for the encounter, the ancillary services and supplies integral to it, and limited follow-up care, but not the physicians' services. The unit of payment should be defined consistently across all ambulatory care settings.

T A B L E
6 - 2

Medicare hospital outpatient payment-to-cost ratios, with impacts attributable to elimination of formula-driven overpayment and prospective payment system implementation

Hospital group	1996 actual payment-to-cost ratio, before formula-driven overpayment elimination	1996 estimated payment-to-cost ratio, after formula-driven overpayment elimination	HCFA estimate of additional percentage change with PPS implementation	Implied outpatient payment-to-cost ratio under PPS, based on HCFA estimates	Percent of Medicare revenue attributable to outpatient services
All hospitals	0.8958	0.8152	- 0.038	0.7842	9.9
Rural	0.9157	0.8234	- 0.052	0.7806	14.7
Urban	0.8912	0.8133	- 0.033	0.7865	9.3
Bedsize (rural)					
< 50	0.8873	0.8073	- 0.098	0.7282	19.6
50 - 99	0.9112	0.8120	- 0.069	0.7560	15.5
100 - 149	0.9288	0.8260	- 0.046	0.7880	13.5
150 - 199	0.9290	0.8354	- 0.020	0.8187	13.0
200 +	0.9336	0.8518	0.001	0.8527	11.4
Bedsize (urban)					
< 100	0.8802	0.7982	- 0.074	0.7391	15.5
100 - 199	0.8834	0.8289	- 0.025	0.8082	10.4
200 - 299	0.9116	0.8289	- 0.007	0.8231	9.2
300 - 499	0.9126	0.8377	- 0.033	0.8101	8.6
500 +	0.8477	0.7783	- 0.070	0.7238	8.3
Teaching activity ^a					
Major teaching	0.8422	0.7745	- 0.094	0.7017	9.2
Other teaching	0.8945	0.8173	- 0.018	0.8026	9.1
No teaching	0.9123	0.8269	- 0.031	0.8013	11.2
Proprietary	0.9266	0.8484	- 0.011	0.8391	7.9
Voluntary	0.9096	0.8263	- 0.040	0.7932	9.9
Government	0.8137	0.7435	- 0.040	0.7138	12.5
Cancer hospitals	0.8727	0.8123	- 0.292	0.5751	22.0
Rural DSH ^b	0.9093	0.8181	N/A	N/A	N/A
Urban DSH	0.8823	0.8069	N/A	N/A	N/A
Non DSH	0.9145	0.8278	- 0.003	0.8253	25.1

Note: Payment-to-cost ratios are for service payments and costs only and do not include settlement adjustments. DSH (disproportionate share). HCFA (Health Care Financing Administration). PPS (prospective payment system).

^a HCFA measures teaching activity by number of residents; MedPAC uses resident-to-bed ratio.

^b HCFA and MedPAC use different definitions. In general, outpatient percentage of Medicare payments varies inversely with DSH, but the PPS impacts vary with DSH: higher DSH percentage results in greater impacts.

Source: MedPAC analysis of PPS-13 Medicare Cost Reports; Federal Register, September 8, 1998.

Two models for defining the payment unit in ambulatory settings can be found in Medicare's payment systems. One model is the approach that Medicare uses to reimburse hospitals for inpatient services. Medicare makes a single fixed payment for all of the services associated with a condition or procedure that is the reason for an

inpatient hospital admission. The rationale for this approach is that because of the variety of services that could be provided during the course of an inpatient hospital stay and because so many of these services are related in various ways, it would be impractical to develop prospective payment rates for each possible combination.

Moreover, the interval between the admission and discharge is easily defined and amenable to consideration as a single bundle of services. A single payment for a bundle of services also encourages provider innovation and efficiency in providing care, by giving hospitals an incentive to reduce the costs of providing services relative to

the fixed Medicare payment. HCFA's experience with a broadly defined payment unit in the inpatient setting has been generally successful, both in controlling the growth in program expenditures and in providing hospitals with incentives to provide more cost-efficient care to Medicare beneficiaries.

The second model for defining the unit of payment is the one used in determining payment for physicians' services. Here, the bundle or package of services that the payment amount is intended to cover is more tightly defined. It consists of the HCFA Common Procedure Coding System (HCPCS)-coded primary service that is the reason for the visit and those medical and surgical supplies "incident to" it (42 CFR § 414.34).³ Other major services provided in conjunction with a medical visit in a physician's office are reimbursed separately under relevant payment policies.

The most appropriate model for the hospital outpatient PPS depends on the perception of outpatient services. Because the outpatient department is an integral part of the hospital, one could argue that the services it provides should be treated more like other hospital services. In contrast, hospital OPD services can be seen as relating to a more tightly circumscribed encounter and therefore more like services provided in the physicians' office.

MedPAC believes that services provided in the hospital outpatient setting are more analogous to office-based services than they are to inpatient admissions. First, the duration, scope, intensity, and range of services provided in the outpatient and office settings are sufficiently similar that they can be described by the same HCPCS coding system. Second, many of the distinctions that once separated the different types of ambulatory facilities are blurring, and

often the same service can be provided in an OPD, physician's office, or other freestanding facility. The unit of payment should therefore be defined as the individually coded primary service and its necessary and essential ancillary services and supplies, including limited follow-up care, if integral to the primary service.⁴ This definition reflects the short-term nature of the ambulatory encounter, and should be applied consistently across ambulatory settings.

Calculating relative weights

The next step in designing ambulatory care prospective payment systems requires calculating a set of relative weights to differentiate payments among services.

RECOMMENDATION 6B

The Secretary should use costs of individual services, not groups of services, to calculate the relative weights that apply to ambulatory care prospective payment systems. Relative weights should be calculated consistently across all ambulatory settings.

HCFA has chosen to group ambulatory services in the hospital outpatient setting—and in the ASC setting—for purposes of payment, using a system known as Ambulatory Payment Classification (APC). The APC payment system is similar to that currently used in the ASC setting in that services and procedures with similar costs are grouped together to calculate payments; each of the discrete procedures in a group is paid the same amount.⁵ APCs are thought to be an improvement over the previous ASC payment groups in that the APC groups are constituted on the basis of the clinical similarity of services and patient

diagnoses as well as service costs. Under HCFA's proposal, the full range of ambulatory services will be classified into approximately 300 APC payment groups.

Alternatively, relative weights—and the corresponding payment amounts—could be calculated at the level of the individual HCPCS-coded service. In this case, the resulting set of relative weights would look more like those used under the Medicare Fee Schedule for physicians' services. Each procedure or service would have its own relative weight, calculated independently from data specific to that service, relative to all other services.

HCFA has espoused a grouping approach for several reasons. First, the agency believes that grouping services facilitates pricing for new or low volume services and procedures. A relatively small number of discretely coded services accounts for the majority of Medicare outpatient use (MedPAC 1998a; MedPAC 1998b). Given this distribution of services, HCFA believes that calculating individual relative weights for low volume services would imply "a level of precision that is often not warranted due to low procedure volume or questionable cost data" (HCFA 1998a).

Second, HCFA argues that grouping may discourage "upcoding," which occurs when two closely related services or procedures have significantly different payment rates, and providers report the higher-priced code when submitting their claims to Medicare. The inpatient analog to upcoding has been empirically documented (Carter, et al. 1990; Carter, et al. 1991). Grouping services would reduce incentives for upcoding because closely related services would have the same payment rates.

HCFA lists a number of additional benefits of grouping services to calculate

3 The HCPCS consists of the American Medical Association's Current Procedural Terminology (CPT) codes and descriptions for medical procedures and services, and a variety of HCFA-specific services and procedures identified by alphanumeric codes.

4 For example, suture thread and bandages are supplies that would be considered an integral part of an initial visit to repair a laceration. Under prior law, hospitals could bill for these supplies as separate line items, without a HCPCS code identifier. Under the definition of the unit of payment recommended here, these supplies would be included in the unit of payment. Similarly, a brief follow-up visit to remove sutures could also be considered integral to the primary reason for the outpatient encounter—the laceration repair—and the facility costs incurred in providing such follow-up care could also be included in the unit of payment.

5 For example, under the current ASC payment system, upper gastrointestinal endoscopies (HCPCS code 43239) and colonoscopies with biopsy (HCPCS code 45378) have the same payment rate of \$422.

relative weights, including administrative simplicity (rates need be calculated for only 300 groups rather than 5,000 individual services) and potential future consistency of payment across settings (APCs have been proposed in both the hospital outpatient and the ASC settings, and HCFA argues they could ultimately be applied in physicians' offices). Also implicit in HCFA's discussion of the proposed system is that the grouping approach can accommodate a larger unit of payment, which would act as a de facto form of volume control.

While grouping has certain potential advantages, such an approach would entail considerable costs and drawbacks. The grouping approach favored by HCFA invokes a much more complicated design logic than a service-level fee schedule. As a result, the system demands a closer analysis of its hypothesized benefits relative to its likely costs than HCFA has published in its proposed rule.

For example, HCFA notes that the grouping approach helps establish service-level relative weights and payment rates for new or low volume services, for which cost data may be unreliable, undocumented, or not readily available. However, the agency deems these same data as adequate to combine with higher-volume procedures to calculate weights for the group as a whole. In other words, the use of groups to calculate weights masks questionable cost data for low volume and new procedures. This strategy is clearly demonstrated in the proposed revisions to the ASC payment system, in which HCFA used the grouping approach to calculate weights for the 60 percent of the payment groups "for which we had little or no Medicare volume or reliable cost data" (HCFA 1998b).

HCFA also asserts that the groups are composed of procedures that are similar both in terms of clinical indications and resource costs. The first part of this claim is subject to interpretation, and there is no evidence in the proposed rule to assess the validity of the second. However, the

disproportionate impacts on different classes of hospitals in changing to the new outpatient PPS relative to the overall impact suggest that the APC groups may be less homogeneous than HCFA believes.

Finally, it is likely that hospitals will experience an additional administrative burden in changing to the new system. Hospitals may be required to purchase or develop new computer software and will experience additional education and training costs stemming from the APC grouping approach. MedPAC believes that the burden imposed by the APC system outweighs its benefits in ambulatory settings.

Evaluating payment amounts across settings

Medicare's payment systems for ambulatory care are in considerable flux as this report goes to press. Some of HCFA's proposals are being implemented, some are still under development, some are being revised in light of solicited comments, and some have been proposed, but are stalled because of nonpolicy considerations, such as adjusting computer systems to deal with the year 2000 problem. However, it is clear that once these various new payment systems and revisions of existing systems are put into place, Medicare's ambulatory care landscape will be very different from that existing in the pre-BBA world.

RECOMMENDATION 6C

The Secretary should evaluate payment amounts under both the hospital outpatient prospective payment system and the ambulatory surgical center prospective payment system together with practice expense payments for services provided in physicians' offices under the revised Medicare Fee Schedule to ensure that unwarranted financial incentives that could

inappropriately affect decisions regarding where care is provided are not created.

This evaluation should focus primarily on services commonly provided in more than one ambulatory setting. The Secretary should conduct such an evaluation using both a financial analysis of the payment amounts and a clinical analysis of appropriateness of setting. In the event that inappropriate payment differences are found to exist, the Secretary should begin to develop a means of recalibrating the payment amounts to minimize their potential impacts on choice of setting.

Currently, Medicare's various ambulatory care payment systems reimburse individual providers and classes of providers differently for the same service (see Table 6-3). For example, in 1996, the median payment to hospitals for a diagnostic colonoscopy was \$358. The base ASC rate for the service was \$408, and the base practice expense component under the Medicare Fee Schedule was \$143 when the service was provided in the office setting. While some of this variation may reflect differences in the underlying cost structures among different kinds of facilities, payments could further vary within settings; in the hospital setting, the Medicare payment was more a function of each hospital's own costs and charges than any explicit payment policy.

Significant differences in payments for the same service among ambulatory settings may provide incentives that could inappropriately influence where an ambulatory service was provided. For example, the difference between the ASC rate and the practice expense payments for the diagnostic colonoscopy noted above could affect a physician's decision regarding where to perform the procedure, especially if ownership or other financial arrangements are active considerations. Previous coverage regulations governing such shifts in setting would be loosened somewhat under HCFA's new proposals. Different

**TABLE
6-3**

Differences in prior law and post-BBA prospective payment rates across settings for selected high-volume ambulatory care services

Type of service	HCPCS code	Description	Prior law (1996)			Post-BBA (1999)		
			Median OPD payment	ASC base rate	Practice expense base rate	OPD base rate	ASC base rate	Practice expense base rate ^a
ASC Surgery	43239	Upper GI endoscopy with biopsy	\$375.00	\$408.00	\$119.00	\$326.31	\$327.00	\$249.77
	45378	Diagnostic colonoscopy	358.00	408.00	143.00	347.00	405.00	303.35
	45380	Colonoscopy with biopsy	394.00	408.00	166.00	347.00	405.00	356.93
	45385	Colonoscopy with lesion removal	410.00	408.00	230.00	416.00	354.00	391.68
	66984	Extract cataract, insert lens	1150.00	903.00	517.00	977.00	863.00	---
Radiology	71010	Chest X-ray, one view	30.00	---	16.00	39.52	---	13.03
	71020	Chest X-ray, two views	30.00	---	20.00	39.52	---	17.38
	73510	X-ray of hip	32.00	---	19.00	39.52	---	15.93
	70450	CT scan of brain/head	188.00	---	156.00	256.39	---	131.76
	76091	Mammography, both breasts	39.00	---	43.00	34.96	---	36.19
Diagnostic	93000/05/10	12 lead electrocardiogram	14.00	---	15.00	17.73	---	6.90
	93015	Cardiovascular stress test	52.00	---	55.00	73.98	---	55.02
	93307	Echo exam of heart	93.00	---	127.00	143.39	---	52.49
	93880	Duplex scan of extracranial arteries	108.00	---	123.00	120.09	---	88.69
	94760	Blood oxygen level (oxymetry)	11.00	---	9.00	39.52	---	7.60
Cost-based	99201	Office or outpatient visit, new patient	85.00	---	13.00	36.48 to 77.02	---	47.78
	99213	Office or outpatient visit, established patient	54.00	---	114.00	42.06 to 66.38	---	45.25
	99281	Emergency visit, brief	70.00	---	10.00	53.71 to 102.35	---	---
	99282	Emergency visit, limited	81.00	---	14.00	53.71 to 102.35	---	---
	99283	Emergency visit, moderate	118.00	---	17.00	53.71 to 155.56	---	---

Note: BBA (Balanced Budget Act of 1997). HCPCS (HCFA Common Procedure Coding System). ASC (ambulatory surgical center). GI (gastrointestinal). OPD (outpatient department).

^a Practice expense amounts are for first year of phase-in.

Source: MedPAC analysis of HCFA 5 percent sample physician/supplier and hospital outpatient claims, 1996; Federal Register, June 12, 1998; Federal Register, September 8, 1998.

payment rates among settings could also affect the coinsurance amounts paid by beneficiaries requiring these services.

The BBA began to phase-in substantial revisions to the practice expense component of the Medicare Fee Schedule and completely overhauled the payment system for hospital outpatient departments. At the same time, HCFA proposed to revise its payment system for ASCs. As a result, payment amounts for all ambulatory services will change once the BBA's provisions are fully implemented. However, as Table 6-3 shows, the amount paid for a given service will continue to be different depending on the setting in which it is

provided. Historically, HCFA has calculated payment amounts for each setting independently, therefore the Commission cannot be certain that differences in payments under the new systems will be any more justified than they were under prior law.

Therefore, we recommend that HCFA investigate differences in payments for the same service across settings, particularly the high volume services that constitute the bulk of Medicare's ambulatory care expenditures. Specifically, pending the development of a unified payment policy for ambulatory care, HCFA should work to ensure that differences in same-service payment amounts across settings do not provide

financial incentives that could unduly affect providers' decisions regarding where ambulatory care takes place. MedPAC recognizes that the rate-setting process under the Medicare Fee Schedule and the process proposed for the hospital outpatient PPS are both subject to strict legislative constraints. Changes in legislation would be required to adjust payments among settings accordingly. However, identifying the potential magnitude of this problem if such adjustments are not made is an appropriate first step.

Adjusting payments across settings

Historically, HCFA has adjusted Medicare's payments for medical

services in various settings to achieve certain policy goals, such as ensuring access to care. For example, prospective payments for inpatient services are adjusted to compensate hospitals for their teaching activity or the share of low income patients that they treat. Fee schedules are specific to geographic areas to reflect differences in input prices, and physicians are given a payment adjustment if they practice in medically underserved areas. ASC payments are adjusted by the local wage index to recognize differences in labor costs. Special payment policies have been developed to handle entire classes of hospitals and specialized facilities such as sole community hospitals, rural health clinics, and PPS-exempt hospitals. The vast majority of these adjustment mechanisms are setting specific.

RECOMMENDATION 6 D

The Secretary should study means of adjusting base PPS rates for patient characteristics such as age, frailty, comorbidities and coexisting conditions, and other measurable traits.

Such adjustments would help to rationalize payments across ambulatory settings, ensure that payments more closely reflected resources used in providing care, and assist in reducing differences in payments for the same service when provided in different settings.

MedPAC believes that HCFA should use the opportunities afforded by the BBA-mandated ambulatory care payment changes to begin developing a more unified and rational ambulatory care payment system. Under such an approach, payment would be less dependent on the type of facility (or the class of facility within a given type), and more dependent on the relative costliness of providing specific services to individual patients. This principle would apply both within and among ambulatory settings.

Currently, no viable patient-level adjuster exists that could be used to

calibrate payments to patient characteristics or conditions. Diagnoses at the time ambulatory services are provided are likely not appropriate for this purpose, and links between more immutable patient characteristics and ambulatory service costs have not been adequately studied. However, MedPAC believes that the benefits of this approach are substantial enough to warrant further investigation.

As an interim measure, HCFA should evaluate the appropriateness of facility-level adjustments in order to preserve access to care for particularly vulnerable segments of the Medicare population, but only if it can be demonstrated that certain classes of facilities serve relatively homogeneous populations requiring specialized care. MedPAC raises this possibility with some reservation, however, because such adjustments are often difficult to abolish once they are implemented.

Controlling spending through rate updates

Much of the increase in Medicare spending for hospital outpatient services, and ambulatory care in general, is attributable to increases in the volume of services provided. Volume growth has occurred partly due to historical growth in the Medicare fee-for-service population, but also because of increases in the number of outpatient encounters per beneficiary, and in the number of services provided in each outpatient encounter. Almost 60 percent of outpatient volume growth can be traced to such increases in service intensity (Miller and Sulvetta 1994).

Because volume growth is such a strong driving factor in increasing program expenditures for hospital outpatient services, the BBA directed HCFA to implement a volume control mechanism in conjunction with the hospital outpatient PPS.

RECOMMENDATION 6 E

The Secretary should seek legislation to develop and

implement a single update mechanism that would link conversion factor updates to volume growth across all ambulatory care services.

This system should apply to spending for hospital outpatient departments, ambulatory surgical centers, physicians' services, federally qualified health centers, rural health clinics, and other facilities as appropriate. The ambulatory update mechanism should not unduly restrict the appropriate migration of services from inpatient to ambulatory settings, or among ambulatory settings.

This recommendation is guided by the general premise that a potential for substitution of services exists among ambulatory care settings, and that providers may respond to perceived inadequacies in payment rates or payment rate updates by shifting services among settings. This potential is made more likely by the ongoing integration of health care providers under coordinating networks and centralized financial control. The incentive to shift services among ambulatory care settings would be minimized under a more unified ambulatory care payment system. It logically follows that a unified system would also incorporate a standardized update mechanism, and a standardized method of controlling spending growth, as necessary. A unified sustainable growth rate would help fulfill both of these requirements.

The primary means of controlling spending under a combined volume control system is the update to the conversion factors in each of the ambulatory systems. Under a unified system, aggregate volume estimates, and their corresponding Medicare spending, should be pooled across ambulatory settings. Acceptable levels of increase would be determined by quantifying factors that could contribute to increases in service use or costs across all ambulatory settings. Changes in fee-for-service enrollment, in medical technology permitting desirable shifts in setting, or in

the costs of medical services could be considered within the update framework. External factors such as growth in national income or general inflation could be considered within this framework, but would not be its primary driver. The combined system should be flexible enough to permit the continued migration of services from more costly inpatient settings to less costly ambulatory venues as medical technology continues to evolve.

Recommendations specific to the prospective payment system for hospital outpatient services

The recommendations discussed above reflect MedPAC's long-term objective of a unified prospective payment system for all ambulatory care settings. More immediately, HCFA has published a proposal for prospective payment in the hospital outpatient setting, in compliance with specific mandates in the BBA. MedPAC has a number of recommendations on the specifics of this proposal.

Using ICD-9 diagnosis codes in setting rates and making payments

The Ambulatory Payment Classification system uses two distinct methods to group and pay for ambulatory care services. Surgical procedures, radiology services, and diagnostic and imaging services are classified based on the HCPCS code corresponding to the service. Medical visits, however, are classified and paid based not only on the HCPCS-coded visit but also on the patient's diagnosis that is reported on the claim. The HCPCS-coded visit is grouped to an APC group, and the International Classification of Diseases (ICD-9-CM) diagnosis code is cross referenced to one of 20 major diagnostic categories (MDCs). HCFA chose this approach to achieve an appropriate range of payments

within the medical visit category. Implicit in this approach is the notion that the range of payments becomes more pronounced when a greater scope of ancillary services is included in the unit of payment.

RECOMMENDATION 6 F

The Secretary should not use patient diagnosis to calculate relative weights or make payments under the hospital outpatient PPS, at least initially. Payment for these services should be on the basis of the medical visit indicator coded using the HCPCS.

If the Secretary determines that using diagnosis codes is needed to differentiate payment, the Department should issue explicit coding instructions to providers to improve the quality of the data available to make such assessments.

Difficulties in coding have been documented since HCFA began requiring HCPCS coding for hospital outpatient reimbursement. Mismatches between hospital and physician coding for the same service have been particularly problematic. One study by the Office of the Inspector General suggested a mismatch rate of 24 percent for selected surgical procedures, which presumably would be less subject to interpretation than establishing diagnosis (OIG 1994). Such discrepancies in coding have even been documented among physician and hospital inpatient claims for the same service (OIG 1989).⁶ Introducing diagnosis coding as an axis of payment raises further potential for coding discrepancies, a fact that HCFA has acknowledged previously in no uncertain terms:

Principal diagnoses on bills submitted by Medicare physicians and suppliers in 1994 associate medical conditions identified by providers with program expenditures and services volumes.

The HCFA-1500 billing form requires up to four diagnoses, in priority order. It is well-known that diagnosis coding practices may vary over time and geographically. Moreover, it is sometimes difficult for the clinician to isolate the most important diagnosis for designation as principal on a claim.

(HCFA 1996)

MedPAC recognizes that stratifying payment based on the acute diagnosis attempts to achieve payments that more closely track the costs of providing services to individual beneficiaries. However, we believe that using patient diagnosis to determine payment as proposed by HCFA is not practicable, given the current state of the available data and the lack of definitive rules for reporting patients' diagnoses under the proposed system.

Monitoring hospital outpatient service use

Once the BBA's hospital outpatient provisions are fully implemented, including the elimination of the formula-driven overpayment, the beneficiary coinsurance buy-down, and the outpatient PPS, most hospitals' Medicare payments probably will go down. At the same time, HCFA is making substantial changes to the payment systems for ASCs and for physician practice expense under the Medicare Fee Schedule. However, HCFA's estimates of the anticipated impacts of these changes suggest that those experienced by hospitals, both in the aggregate and among classes of hospitals, will be the most pronounced.

RECOMMENDATION 6 G

Given the magnitude of the impacts of the BBA's combined outpatient provisions, the Secretary should closely monitor hospital outpatient service use to ensure that beneficiary access to appropriate care is not compromised.

⁶ Interestingly, the OIG recommended in the latter case that HCFA work with the AMA to reduce the number of visit codes to help prevent nonmatching claims.

The BBA's goals included reducing the current level of payments to hospitals for outpatient services and reducing the future rate of growth of these payments. The Commission supports these measures as both desirable and necessary. However, both the magnitude of the payment reductions relative to current law and certain design elements of HCFA's proposed system could cause significant disruptions in hospitals' willingness or ability to provide Medicare beneficiaries with necessary ambulatory care services. As a result, beneficiaries may experience reduced access to these services or may find that they are only available in less desirable clinical settings.

It is likely that the differential impacts on different classes of hospitals will be reduced if HCFA adopts a payment system based on individual services, rather than groups of services. Even so, MedPAC recommends that HCFA closely monitor the provision of ambulatory care services by hospital outpatient departments once the BBA's outpatient provisions are fully implemented. In particular, HCFA should work to ensure that beneficiary access to necessary and appropriate ambulatory care is not compromised under the outpatient PPS. HCFA should monitor:

- the absolute provision of certain benchmark services in hospital OPDs,
- changes in the provision of services by certain classes of hospitals,
- shifts of OPD services to other ambulatory settings,
- changes in the rate of migration of services from inpatient to outpatient settings, and
- other measures that could indicate compromised access.

Payment adjustments within the hospital outpatient setting

Differences in payments across settings should, to the extent possible, be linked

with patient characteristics that affect the relative costliness of providing the service. MedPAC believes that the same principle should equally hold true in assessing the need for payment adjustments within settings. In its proposed rule on the outpatient PPS, however, HCFA proposes only a payment adjustment to reflect differences in input prices attributable to local area wages.

RECOMMENDATION 6H

The Secretary should re-evaluate the decision not to make additional payment adjustments under the new system and should tie any proposed adjustments to patient characteristics. Any such facility-level adjustments that are proposed until such time as a patient level adjuster is available should reflect the population of Medicare patients treated by facilities identified to receive such adjustments.

In the hospital inpatient setting, Medicare adjusts its diagnosis related group (DRG) payments to recognize certain inherent cost differences and to achieve certain policy goals. For example, hospitals that treat a large share of low income patients and those that engage in high levels of teaching activity receive adjustments to their payments that reflect Medicare's valuation of these activities. Similarly, providers such as sole community hospitals and rural referral centers are subject to separate payment policies due to their importance in the geographic areas they serve. All of these adjustments are made based on the characteristics of the hospital as a whole. Any hospital conforming to the characteristics of a class of hospital identified for special treatment is eligible to receive such adjustments.

In the ambulatory care context, Medicare should move toward an

approach that recognizes variation in the costliness of resources needed to provide services to different beneficiaries. That is, payment for the same service should be the same regardless of where it is provided; any deviations from equal payment should reflect differences in patient characteristics. The acute ICD-9-CM diagnosis code that is entered on the ambulatory care claim is not appropriate for making such adjustments, however, given concerns about the validity of these data on historical claims, and the lack of explicit reporting rules under the proposed system. Instead, MedPAC recommends that HCFA evaluate the relationship between more immutable patient characteristics (for example, certain chronic conditions or other physiological characteristics) and their effects on the cost of providing care.

Beneficiary coinsurance

One artifact of prior law payment policy governing hospital outpatient services is that beneficiaries are liable for nearly 50 percent of the total payment to hospitals for these services, compared with 20 percent for most other Medicare covered services.⁷ The disproportionate beneficiary share for hospital outpatient services stems from calculating coinsurance as 20 percent of charges, while the program share is calculated as the lesser of costs or charges (or a blend, where applicable) net of the beneficiary copayment. Since hospitals' charges are generally much higher than their costs, beneficiaries are responsible for a larger share of the total payment. The BBA addresses this issue, but provides for only a very gradual reduction in beneficiary coinsurance.

RECOMMENDATION 6I

The Secretary should seek, and the Congress should pass, legislation to increase the rate of the beneficiary coinsurance buy-down. The cost of the faster buy-down

7 There is no beneficiary coinsurance for home health services or clinical laboratory services.

should be financed by increases in program spending, rather than through additional reductions in payments to hospitals.

The BBA will begin to reduce the beneficiary coinsurance by manipulating the shares of payments under the outpatient PPS. When a prospective rate is calculated for a given service (or, in the case of HCFA's proposal, a group of services), the beneficiary and program shares of the rate are calculated based on the composition of prior law payments for the service (see Table 6-4).

The approach to calibrating beneficiary coinsurance for hospital outpatient services outlined in the BBA is methodologically sound. However, as the buy-down could take decades to phase in completely. MedPAC believes that the coinsurance reduction should occur at a faster rate than under the BBA's provisions, preferably with a certain date

of completion. Moreover, the cost of the faster buy-down should be financed by corresponding increases in program spending, rather than through additional reductions in payments to hospitals.

The cost of a more rapid buy-down would be significant, and, some might argue, unnecessary, because most Medicare beneficiaries have some sort of supplemental insurance that insulates them from the direct coinsurance liability (PPRC 1997). However, MedPAC believes that beneficiary coinsurance for hospital outpatient services has been a driving force in the recent double-digit increases in Medigap insurance premiums that have occurred in recent years. While the implementation of outpatient PPS will eliminate the continuing incentive for hospitals to increase their charges, Medigap premiums will likely continue to rise as insurers bring their revenues and expenditures into actuarial balance. Additionally, the continued disproportionate coinsurance liability will

continue to severely affect the 13 percent of the Medicare beneficiary population who do not have secondary coverage when they receive ambulatory services in hospital OPDs.

Recommendation specific to the prospective payment system for ambulatory surgical centers

Finally, MedPAC presents a single recommendation regarding HCFA's implementation of changes to the ASC payment system.

HCFA proposes to reduce the importance of the site of service criteria discussed above that have historically been used to determine whether Medicare would cover a surgical procedure in ambulatory surgical centers. Additionally, the agency proposes to modify guidelines regarding

Beneficiary coinsurance buy-down

TABLE 6-4

Hypothetical example of coinsurance buy-down for cataract extraction with intraocular lens insertion

	1996	1997	1998	1999	...	2012	2013
Rate	\$1,100.00	\$1,155.00	\$1,212.75	\$1,273.39	...	\$2,401.16	\$2,521.22
Beneficiary	506.00	506.00	506.00	506.00	...	506.00	506.00
Program	594.00	649.00	706.75	767.39	...	1,895.16	2,015.22
Beneficiary share	46.0%	43.8%	41.7%	39.7%	...	21.1%	20.1%
Program share	54.0%	56.2%	58.3%	60.3%	...	78.9%	79.9%
Update Percent	5	5	5	5	...	5	

The Medicare Payment Advisory Commission (MedPAC) estimated the average hospital payment for cataract extraction with intraocular lens insertion at slightly over \$1,100 in 1996, of which the program payment made up roughly 54 percent (\$594) and the beneficiary coinsurance 46 percent (\$506). If we use these rates and percentages to represent the effective rates at the outset of the outpatient prospective payment system (PPS), we can estimate the effects of the

Balanced Budget Act (BBA) provision.

Assume a 5 percent annual update to the payment rates. In the second year of the PPS, then, the unadjusted payment rate for cataract surgery would be \$1,155. In order to "buy down" the beneficiary coinsurance percentage, the BBA directs that the beneficiary coinsurance be held constant at the original dollar amount, until the beneficiary coinsurance equals 20 percent of the unadjusted PPS rate. In

this example, in the second year, the beneficiary coinsurance would still be \$506. In the second year, then, the beneficiary coinsurance falls from 46 percent to 44 percent of the Medicare payment. This trajectory continues until the coinsurance is equal to 20 percent of the payment rate, at which time it begins to increase along with the rate update. Under these assumptions, it would be 17 years before this point is reached.

length of operative time, time under anesthesia, and recovery time that have been used to assess coverage of surgical procedures in ASCs.

RECOMMENDATION 6J

The Secretary should carefully monitor changes in service provision between the ASC and physician office setting that may occur after HCFA's loosening of numerical guidelines for determining ASC list eligibility.

MedPAC supports the notion that beneficiaries, with their physicians, should be able to select the most appropriate setting for their care. If ASCs can safely provide certain

ambulatory surgeries that were previously excluded from the ASC list due to the limitations described above, the coverage changes proposed by HCFA could improve beneficiary access to these services.

However, as we noted previously, because of the historical development of Medicare's various ambulatory care payment systems, Medicare's reimbursement for similar services usually differs by setting, often without a specific rationale. This discrepancy creates financial incentives that could affect the choice of setting. In practice, these incentives do not appear to have had a large effect, partly because of standards of appropriate medical practice, but also because of the strength of Medicare coverage regulations.

As coverage rules governing ASC services are loosened, services could more easily, and sometimes inappropriately, shift from other settings. The Commission is concerned that such shifts might increase costs to the program or to beneficiaries, or compromise the quality of the care beneficiaries receive. The Commission recommends that revisions to the ASC payment system be more explicitly tied to concurrent changes to Medicare's hospital outpatient and physician payment systems. Additionally, we reiterate that use of ambulatory care services should be carefully monitored once these changes are put into effect. ■

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C H A P T E R

7

**Continuing Reform of Medicare
Payments to Physicians**

R E C O M M E N D A T I O N S

To refine practice expense relative value units for the Medicare Fee Schedule, the Secretary of Health and Human Services should:

- 7A** Determine whether a clinical consensus exists about the appropriate settings in which services should be provided. For services that should not be provided in physicians' offices, the Secretary should set both the office and facility practice expense relative value units at the lower facility practice expense level.
- 7B** Use a service-by-service approach to decide which services are subject to a site-of-service differential.
- 7C** Include in the refinement process participants with expertise in payment methods, survey research, and accounting; representatives from the physician community; and payers other than Medicare.

To prepare for implementation of new professional liability insurance expense relative value units, the Secretary should:

- 7D** Consider the frequency of closed malpractice claims with payment, by service, as a basis for the relative value units. Such relative value units would reflect each service's risk of a malpractice claim and would be resource based.

To improve the sustainable growth rate system, the Congress should:

- 7E** Revise the sustainable growth rate to include measures of changes in the composition of Medicare fee-for-service enrollment.
- 7F** Revise the sustainable growth rate to include a factor of growth in real gross domestic product per capita plus an allowance for cost increases due to improvements in medical capabilities and advancements in scientific technology.
- 7G** Amend a provision of the Balanced Budget Act of 1997 to require the Secretary to publish an estimate of conversion factor updates by March 31 of the year before their implementation.
- 7H** Reduce time lags between sustainable growth rate measurement periods by allowing calculation of the sustainable growth rate and update adjustment factors on a calendar year basis.
- 7I** Require the Secretary to correct estimates used in sustainable growth rate system calculations every year.

Continuing Reform of Medicare Payments to Physicians

Implementing the new requirements for physician payments mandated by the Balanced Budget Act of 1997 raises a number of important questions. How should the Health Care Financing Administration decide which services are subject to a site-of-service payment differential? How should the agency proceed with refining practice expense relative value units during the transition to full implementation of resource-based values in 2002? What is the best methodology for developing relative value units for professional liability insurance expense? How can the Congress improve the sustainable growth rate system to allow it to better accommodate changes in beneficiary use of services and to correct certain technical problems with the system? This chapter considers these questions and makes recommendations for ensuring that the changes mandated by the Balanced Budget Act are carried out effectively.

In this chapter

- Making the transition to resource-based practice expense relative value units
 - Developing relative value units for professional liability insurance expense
 - Improving the sustainable growth rate system
-

This chapter addresses, first, implementation of resource-based practice expense relative value units (RVUs) in the Medicare Fee Schedule. The Health Care Financing Administration (HCFA) needs to make important decisions during a four-year transition period, which began on January 1, 1999, in order to implement these RVUs, as required by the Balanced Budget Act of 1997 (BBA). Some of those decisions concern a site-of-service differential, which reduces practice expense payments for certain services provided in settings other than physicians' offices. Other decisions pertain to refinement of the interim resource-based practice expense RVUs that HCFA is using during the transition. To assist HCFA with these decisions, the Medicare Payment Advisory Commission (MedPAC) has developed recommendations on the site-of-service differential and refinement of practice expense RVUs.

This chapter also considers HCFA's plans to implement resource-based professional liability insurance (PLI) expense RVUs. HCFA is developing new PLI expense RVUs for implementation on January 1, 2000. MedPAC has prepared a recommendation on HCFA's methodology for developing the RVUs.

Finally, the chapter addresses ways the Congress could improve the sustainable growth rate system. Those improvements are of two types: modifying the system to allow it to better accommodate changes in beneficiary use of needed services; and addressing specific technical issues in order for the system to function as intended.

Overview of Medicare Fee Schedule payments to physicians

The Medicare Fee Schedule, established under the Omnibus Budget Reconciliation Act of 1989 (OBRA89), is used to determine payment rates for each of the more than 7,000 services that physicians provide to beneficiaries. It is designed to be resource based. That is, if delivery of a service requires twice as many resources as delivery of another service, then its payment rate should be twice as high.

The fee schedule's measures of resource use are its relative value unit (RVUs). They correspond to three different types of resources used to provide physicians' services:

- physician work, including the time, intensity of effort, skill, and risk to the patient associated with each service,
- practice expense, including the cost of nonphysician staff, office space, equipment, and supplies, and
- professional liability insurance (PLI) expense.

When OBRA89 was passed, a research project, conducted by William Hsiao and his colleagues at Harvard University, was underway to develop work RVUs. Completion of this project allowed implementation of resource-based work RVUs when the fee schedule was introduced in 1992. Since estimates of the practice expense and PLI expense associated with each service were not available in 1992, RVUs for those two components of provisions in the fee schedule were based on historical charges, as a temporary measure.

Implementation of provisions in the Balanced Budget Act of 1997 concerning practice expense and PLI expense will make the fee schedule fully resource based.

Each service has a total relative value which is the sum of its work, practice expense, and PLI expense RVUs. On average, a service's total RVUs are distributed across the three components of the fee schedule as follows: work, 54.5 percent; practice expense, 42.3 percent; and PLI expense, 3.2 percent.

When payment rates are calculated, RVUs are adjusted for geographic differences in practice costs with geographic practice cost indexes (GPCIs). These GPCIs vary according to payment localities identified by the Health Care Financing Administration. There are 89 payment localities at present. Generally conforming to state boundaries, they often include entire states. When a state includes multiple localities, its larger metropolitan areas are usually assigned to one or more localities and the rest of the state forms a separate locality.

The actual payment amount for a service is produced by multiplying its adjusted RVUs by a dollar conversion factor. The conversion factor is updated annually under the sustainable growth rate system. That system allows for updates that reflect medical inflation, changes in Medicare fee-for-service enrollment, growth in the economy, and changes in spending due to changes in law and regulations.

Making the transition to resource-based practice expense relative value units

HCFA will refine resource-based practice expense RVUs during a four-year phase-in period that will end in 2002. To refine the RVUs, the agency plans to address two sets of issues:

- limitations of the service-specific data used to develop practice expense RVUs, and
- broad technical and methodological issues.

Service-specific data issues

In developing practice expense RVUs, HCFA relies on data from Clinical Practice Expert Panels (CPEPs) for the estimation of the direct costs of providing specific services. Those costs include salaries of nonphysician clinical staff and the costs of medical supplies and equipment. Data on the time physicians spend providing specific services are also used.

Both HCFA and physicians' organizations have raised questions about the validity of these service-specific data. HCFA has found inconsistencies in the data as it has developed the practice expense RVUs, and the agency has received numerous comments from physicians' organizations and others about problems with the data.

In comments on a proposed rule published by HCFA in June 1998, MedPAC addressed the need to refine service-specific data (MedPAC 1998). The Commission recommended a role for the American Medical Association's (AMA) Relative Value Scale Update Committee (RUC) or a similar organization in the review of the data.

This recommendation is now being carried out. The RUC has established a Practice Expense Advisory Committee (PEAC) that will address service-specific data and other issues. The PEAC will include physicians as well as

representatives from a range of nonphysician groups such as the American Nurses Association, the American Academy of Physician Assistants, and the Medical Group Management Association. Given the organizations represented, the PEAC should be able to play a key role in refining service-specific data.

Technical and methodological issues

In addition to service-specific data issues, HCFA also anticipates considering broader technical and methodological issues. As listed in the Medicare Fee Schedule final rule for 1999 (HCFA 1998a), these issues include:

- possible bias in the practice expense methodology in favor of high revenue specialties,
- validation of physicians' self-reported aggregate practice cost data from the AMA's Socioeconomic Monitoring System (SMS) survey,
- criteria for using data other than those from the SMS survey, and
- allocation of indirect expenses to specific services based on factors other than physician work and direct expenses.

Other technical and methodological issues are also discussed in the final rule. For example, the rule describes several issues related to HCFA's site-of-service differential policy that need to be addressed during refinement. Additionally, HCFA remains interested in establishing a policy, originally proposed in June 1997, to reduce practice expense payments for services provided in conjunction with an office visit. While MedPAC recommended against this policy, as originally proposed, further consideration of the issue during refinement would be appropriate.

The following sections address our recommendations on HCFA's site-of-service differential policy and the more general issue of how HCFA should proceed with the refinement process.

Site-of-service differential. Medicare's physician payment policies include a site-

of-service differential that reduces practice expense payments for services provided in facility settings, such as hospital outpatient departments and ambulatory surgical centers. The differential recognizes that physicians' practice costs are generally lower when services are provided outside of the office setting. It attempts to avoid duplicating facility payments with practice expense payments to physicians.

Before 1999, the site-of-service differential applied to a group of about 700 services routinely provided in physicians' offices, including office visits, eye examinations, and some endoscopic procedures. Practice expense payments for those services were reduced by 50 percent if they were provided in facility settings.

The site-of-service differential policy changed in 1999 when the transition to resource-based practice expense RVUs began. As the new RVUs are phased in through 2002, the uniform 50 percent differential is being replaced with service-specific differentials that are based on the CPEP data. In some cases, the differences between payment rates for services provided in an office compared to services provided in a facility will become larger. For example, the physician payment rates for a frequently provided joint procedure (code 20610) were, in 1998, \$47.33 in an office and \$39.07 in a facility. If the new resource-based practice expense RVUs were fully implemented in 1999, the payment rates for this service would be \$84.74 in an office and \$44.11 in a facility. For other services, such as visits provided in offices and hospital outpatient departments, the difference between office and facility payment rates will remain the same or become smaller.

Several issues pertaining to the new site-of-service differential policy remain unresolved. Based on comments HCFA received on the new policy, the most important issue concerns the appropriateness of providing certain services in physicians' offices instead of hospital outpatient departments and other facilities. Some gastrointestinal endoscopic services have received much attention in this regard.

In their comments on HCFA's June 1998 proposed rule on practice expense RVUs, gastroenterologists said these services should not have different practice expense RVUs for the office and facility settings because it is unsafe to provide these services in an office. They were also concerned that different RVUs could create an incentive for delivering the services in the inappropriate office setting. Finally, the gastroenterologists stated that HCFA is not authorized to have different payment levels for different settings.

HCFA's response to these concerns was that the agency was not aware of any studies showing that gastrointestinal endoscopy services are being unsafely performed in offices. HCFA also cited its confidence that physicians will continue to exercise their best clinical judgment as to the most appropriate setting for their patients. On the issue of different RVUs for different settings, HCFA indicated that different RVUs should not create incentives favoring one setting over another as long as the differences in RVUs reflect differences in practice costs. Finally, HCFA stated that it is required to develop resource-based practice expense RVUs that reflect cost differences among services. Data indicate that physicians' practice costs are higher in the office setting than in facility settings.

HCFA proposes to further address site-of-service differential issues during the refinement process.

RECOMMENDATION 7A

To refine practice expense RVUs for the Medicare Fee Schedule, the Secretary of Health and Human Services should determine whether a clinical consensus exists about the appropriate settings in which services should be provided. For services that should not be provided in physicians' offices, the Secretary should set both the office and facility practice

expense RVUs at the lower facility practice expense RVU level.

To date, HCFA has made decisions about which services are subject to the site-of-service differential based on utilization data. Before 1999, the differential was applied to services that were provided at least 50 percent of the time in physicians' offices.¹ Under the new site-of-service differential policy, HCFA has generally developed distinct office and facility practice expense RVUs for services provided at least 10 percent of the time in each type of setting.

To help ensure patient safety, the process for deciding which services are subject to the site-of-service differential should be revisited during the refinement process. Clinical criteria should be considered during this process. Where appropriate, decisions regarding the applicability of the site-of-service differential should reflect a clinical consensus about the settings in which specific services should be provided.

Given concerns about the site-of-service differential and patient safety, the Commission believes these issues should receive careful consideration as early as possible during the refinement process. Furthermore, the list of services subject to the site-of-service differential will require periodic review as standards of medical practice change. MedPAC believes the list should be reviewed every two years.

Pending decisions about the services subject to the site-of-service differential, monitoring of changes in beneficiary use of services by site will be necessary. MedPAC intends to integrate such monitoring with its work on changes in beneficiary use of services. Its focus will be on gastrointestinal endoscopy services and other services most affected by the new site-of-service differential policy. If there are changes in use of services by site, the Commission will explore ways of monitoring the quality of those services.²

RECOMMENDATION 7B

To refine practice expense RVUs for the Medicare Fee Schedule, the Secretary should use a service-by-service approach to decide which services are subject to a site-of-service differential.

HCFA's fee schedule final rule for 1999 implies that there are two approaches to deciding on the applicability of the site-of-service differential to specific services. In the case of gastrointestinal endoscopy services, the rule addresses a range of services (codes 43234 through 45385). In the case of a group of urology services, however, the rule is very specific and identifies six individual codes within a range of urology services that should be considered during refinement.

Service-specific decisions about the applicability of the site-of-service differential is consistent with current medical practice, as illustrated by gastrointestinal endoscopy services (see Table 7-1). While these services are usually provided in settings other than a physician's office, diagnostic sigmoidoscopy is an exception. Over 70 percent of diagnostic sigmoidoscopies are provided in physicians' offices. Decisions about site-of-service differentials should be consistent with such variation in practice patterns within ranges of services.

Refinement process. In contrast with service-specific data issues, which will be addressed by comments from the RUC and the PEAC, HCFA has no clearly identifiable source of comments and suggestions on the broad range of technical and methodological issues that must also be addressed. For the refinement process to address this latter set of issues successfully, HCFA will need participants in the process with the necessary skills and expertise, such as economists, researchers, and accountants.

1 In 1996, the differential was extended to include services on the ambulatory surgical center covered list of procedures.

2 In the case of gastrointestinal endoscopy services, complication rates by site of service can be monitored with Medicare claims data. Complications of these services include perforation, hemorrhage, and nosocomial infection (Agency for Health Care Policy and Research 1998).

**T A B L E
7 - 1**

Provision of the top five gastrointestinal endoscopy services by site of service, 1997

HCPCS Code	Service	Site of Service	Frequency
43239	Upper GI endoscopy with biopsy	Office	5.1%
		Inpatient	34.6
		OPD	49.7
		ASC and other	10.6
45378	Diagnostic colonoscopy	Office	5.9
		Inpatient	25.4
		OPD	58.0
		ASC and other	10.6
45330	Diagnostic sigmoidoscopy	Office	71.3
		Inpatient	8.7
		OPD	17.5
		ASC and other	2.5
43235	Upper GI endoscopy, without biopsy	Office	3.9
		Inpatient	51.0
		OPD	38.7
		ASC and other	6.4
45385	Colonoscopy with lesion removal	Office	5.1
		Inpatient	16.0
		OPD	65.4
		ASC and other	13.5

Note: Data are for the first six months of the year. OPD (outpatient department). ASC (ambulatory surgical center). GI (gastrointestinal).

Source: MedPAC analysis of 1997 Medicare claims, 5 percent sample of beneficiaries.

important part of Medicare’s payments to physicians. For certain services, PLI expense payments are 10 percent or more of the total. PLI expense RVUs for spinal laminectomy (code 63047), for example, are 12.1 percent of total RVUs.

Progress toward implementing resource-based RVUs

HCFA is now working with a private contractor to develop resource-based PLI expense RVUs. The contractor may use a basic methodology provided by HCFA or may develop a different methodology. In either case, the contractor is expected to complete work in time for release of a proposed rule in June 1999 and implementation of the RVUs on January 1, 2000.

The Commission is concerned that application of the basic methodology provided to the HCFA contractor will not produce RVUs that are fully resource based. Briefly, the methodology would base RVUs on a premium index that varies among physician specialties or groups of specialties. This index would be a weighted average of state or local premiums for a standard professional liability insurance policy. PLI expense RVUs would be a weighted average of the values of the index, adjusted for budget neutrality, across the physician specialties providing each service. The only source of variation in the RVUs would be physician specialty. For a group of services provided by only one specialty, all the services would be assigned the same PLI expense RVU weight.

An alternative methodology for developing the RVUs

The Commission is aware that other methodologies, in addition to the one provided to the HCFA contractor, will be considered during development of new PLI expense RVUs. The Commission believes these methodologies should address differences in PLI expenses not only by specialty but also by service.³

RECOMMENDATION 7C

To refine practice expense RVUs for the Medicare Fee Schedule, the Secretary should include in the refinement process participants with expertise in payment methods, survey research, and accounting; representatives from the physician community; and payers other than Medicare.

The technical and methodological issues discussed in HCFA’s final rule span a broad range. They include payment methods, survey research, and accounting. While HCFA has much of this expertise in-house, resources from outside the agency will probably also be needed. Since payers other than Medicare use the fee schedule’s RVUs, representation of those payers may also be appropriate.

Survey research expertise will be particularly important during the refinement process. As discussed in detail in the Commission’s comments on the June 1998 proposed rule, additional data, like that from the AMA’s Socioeconomic Monitoring System survey, will be needed to refine the practice expense RVUs. The involvement of survey research experts will be valuable during this process.

Developing relative value units for professional liability insurance expense

While payments for PLI expenses are a small share of total fee schedule payments (3.2 percent), they remain an

3 Brennan and colleagues (1993) provides an example of early research on variation in PLI expenses by service, measured in terms of the risk of a malpractice claim.

RECOMMENDATION 7D

To prepare for implementation of new PLI expense RVUs, the Secretary should consider the frequency of closed malpractice claims with payment, by service, as a basis for the RVUs. Such RVUs would reflect each service's risk of a malpractice claim and would be resource based.

The PLI expense RVUs by service could reflect the frequency of closed professional liability claims with payment or claims payout by service. The Commission has a preference for frequency of claims because the RVUs would be less vulnerable to outliers and because claims payout does not reflect uninsured costs to the physician, such as loss of reputation and time to defend a claim. If PLI expense RVUs do not reflect variation in claims by service, physicians will have an incentive to provide some services more than others.

Improving the sustainable growth rate system

For this report, the Commission considers improvements for the sustainable growth rate (SGR) system. We recommend that the system be modified to accommodate more fully changes in beneficiary use of needed services. We also address two technical issues related to SGR system calculations:

- mismatches of time periods, and
- correction of estimates.

Broader SGR issues, including extension of the SGR system to providers other than physicians, such as hospital outpatient departments and ambulatory surgical centers, are addressed in Chapter 6.

The sustainable growth rate system

Under the sustainable growth rate system (SGR), conversion factor updates are determined by the Medicare Economic Index (MEI) and an update adjustment factor.

Medicare Economic Index. The MEI measures changes in the prices of various inputs used to produce physicians' services. Those inputs include physicians' earnings, staff salaries, supplies, equipment, and professional liability insurance. The base year for the index is 1996. Data used to calculate the MEI come from a variety of sources, including the Socioeconomic Monitoring System survey, conducted by the American Medical Association, and the Employment Cost Index, from the Bureau of Labor Statistics.

According to the MEI, increases in physicians' input prices have slowed in recent years. From 1985 to 1992, the MEI increased at an average annual rate of 3.1 percent, with increases in the index ranging from 2.7 percent to 3.5 percent (HCFA 1998a). Since then, the MEI has increased at an average annual rate of 2.1 percent, with the increases ranging from 1.8 percent to 2.3 percent.

Update adjustment factor.

Calculation of the update adjustment factor requires comparing Medicare's cumulative actual fee-for-service spending for physicians' services since a base year (1997) to cumulative allowed spending for that same period. Allowed spending is calculated as 1997 base year spending, projected forward by the sustainable growth rate. If actual spending was more than allowed spending, the update adjustment factor reduces the conversion factor to recoup the difference. If actual spending was less than allowed spending, the update

adjustment factor increases the conversion factor.⁴

Four factors make up the sustainable growth rate:

- the percentage increase in fees for physicians' services,
- the percentage change in Part B enrollees (excluding those enrolled in Medicare+Choice plans),
- the projected growth in real gross domestic product (GDP) per capita, and
- the percentage change in spending for physicians' services resulting from changes in law and regulations (but not due to changes resulting from the update adjustment factor).

The real gross domestic product (GDP) per capita factor in the sustainable growth rate is a key element of the system. Given the other factors in the SGR, the real GDP per capita factor allows spending to grow to accommodate increases in the volume and intensity of services that beneficiaries receive, but only at a rate supported by growth in national income. The factor is intended to achieve a balance between necessary growth in the volume and intensity of services and affordability of Medicare's spending for physicians' services.

Before passage of the Balanced Budget Act of 1997 (BBA), one of MedPAC's predecessor commissions, the Physician Payment Review Commission, recommended an SGR system with a factor of growth in real GDP per capita plus 1 or 2 percentage points. This recommendation was based on Medicare's experience with growth in

continued on page 123

4 The comparison of cumulative actual and allowed spending since a base year is one of the differences between the sustainable growth rate system and the volume performance standard (VPS) system that it replaced. The VPS system was designed to control annual spending growth only and not cumulative spending.

The sustainable growth rate system

continued from page 122

the volume and intensity of physicians' services provided to beneficiaries (PPRC 1997). In 1990, when Physician Payment Review Commission (PPRC) first recommended linking growth in physician payments to growth in GDP, volume and intensity growth exceeded real GDP growth by 4 to 5 percentage points. Growth in physician payments of 1 or 2 percentage points above real GDP growth was thought to be a realistic goal that would improve the affordability of those payments but allow for growth in medical capabilities.

Calculation of the conversion factor update. Conversion factor

updates are calculated as the product of the update adjustment factor and Health Care Financing Administration's (HCFA's) estimate of the change in the MEI. To prevent large changes in the conversion factor in any given year, the sustainable growth rate system limits the size of annual updates to 3 percentage points above the MEI and 7 percentage points below. Although this could lead to spending above or below the allowed amount during a year, any differences between actual and allowed spending would be made up in subsequent years because updates are based on accumulated spending since 1997.

Medicare fee-for-service enrollment changed during a recent 5-year period (see Table 7-2). From 1993 to 1997, beneficiaries in the 65-to-74 age group decreased as a percentage of total fee-for-service enrollment, from 47.1 percent to 43.7 percent. At the same time, all other age groups increased as a percentage of the total. Mortality rates also showed a small increase, from 4.8 percent to 5.0 percent.

Reasons for the change in the age distribution of fee-for-service enrollment need to be analyzed further. Growth in two age groups—age 75 to 84 and age 85 and over—could be due in part to increases in longevity. Shifts in beneficiary enrollment from fee-for-service to managed care is another possibility. From 1993 to 1997, managed care enrollment among Medicare beneficiaries increased from 7.1 percent to 15.0 percent.

Demographic changes in fee-for-service enrollment can lead to changes in spending for physicians' services (see Table 7-3). For example, the decrease in the percentage of beneficiaries in the 65-to-74 age group will increase overall spending per beneficiary because average monthly payments for physicians' services for that age group are relatively low. On the other hand, the increase in disabled beneficiaries under the age of 65 will tend to lower overall spending per beneficiary because average payments for that group are the lowest among all the age groups we considered.

Recent experience suggests that the effects of demographic changes in fee-for-service enrollment may be relatively small, however. The change in the composition of fee-for-service enrollment from 1993 through 1997 led to about a 0.6 percent increase in physician payments per beneficiary over the five year period, or about 0.1 percent per year.⁵ Of course, such effects could become larger if, for example, growth in beneficiary enrollment in Medicare+Choice plans accelerates.

Changes in use of needed services

The sustainable growth rate system is used to calculate annual updates to the Medicare Fee Schedule conversion factor. It bases the updates on increases in the prices of inputs used to produce physicians' services, as measured by the Medicare Economic Index (MEI), but only to the extent that growth in total expenditures for physicians' services is consistent with the sustainable growth rate. In this way, the system aims to preserve beneficiary access to needed physicians' services while maintaining the affordability of those services.

The Commission believes that changes in Medicare fee-for-service enrollment and growth in real gross domestic product (GDP) per capita may not adequately address the factors that will affect beneficiary use of needed services in the coming years.

With respect to fee-for-service enrollment, demographic shifts in the

beneficiary population, in addition to changes in the number of enrollees, are likely to affect expenditures for physicians' services. Those demographic shifts include the aging of the population and the approaching Medicare eligibility of the baby boom generation starting in 2011. Growth in beneficiary enrollment in Medicare+Choice plans could also change the composition of fee-for-service enrollment.

Within the SGR, the Commission is concerned that the factor of growth in real GDP per capita may not be sufficient to allow for improvements in medical capabilities and advancements in scientific technology that are characteristic of health care (Newhouse 1993).

RECOMMENDATION 7E

The Congress should revise the SGR to include measures of changes in the composition of Medicare fee-for-service enrollment.

The demographic characteristics of

5 A quantity index, holding constant average monthly physician payments, was used to measure the increase in physician payments from 1993 to 1997. Quantities were measured in terms of percentages of beneficiaries with different combinations of the age, sex, and decedence characteristics discussed.

**TABLE
7-2**

Composition of fee-for-service enrollment by age, sex, and decedence, 1993-1997

	Year					Difference between 1993 and 1997
	1993	1994	1995	1996	1997	
Age						
Under 65	15.4%	15.7%	16.2%	16.6%	16.8%	1.4%
65-74	47.1	46.5	45.8	44.8	43.7	- 3.4
75-84	28.1	28.2	28.3	28.6	29.2	1.1
85+	9.4	9.6	9.8	10.0	10.3	0.9
Sex						
Male	42.1	42.2	42.2	42.3	42.2	0.1
Female	57.9	57.8	57.8	57.7	57.8	- 0.1
Died						
No	95.2	95.2	95.1	95.0	95.0	- 0.2
Yes	4.8	4.8	4.9	4.9	5.0	0.2

Note: Percentages within beneficiary categories may not sum to 100 due to rounding.

Source: MedPAC analysis of Medicare enrollment files, 5 percent sample of beneficiaries.

In the interim, adjustments in the SGR for changes in the composition of fee-for-service enrollment may not be necessary every year. Periodic adjustments, perhaps every five years, might be adequate pending larger demographic shifts in enrollment patterns.

A further improvement for the SGR system relates to trends in the growth of beneficiary use of services. Those trends suggest that the SGR may not include an adequate allowance for improvements in medical capabilities and advancements in scientific technology. During the period 1985 to 1991, before the Medicare Fee Schedule was introduced, growth in beneficiary use of services averaged 6.9 percent per year and ranged from 3.7 percent to 9.3 percent (see Figure 7-1). This volume growth exceeded growth in real GDP per capita in each of those years. In some cases, the difference was 7 percentage points or more.

RECOMMENDATION 7F

The Congress should revise the SGR to include a factor of growth in real gross domestic product per capita plus an allowance for cost increases due to improvements in medical capabilities and advancements in scientific technology.

While growth in beneficiary use of services has slowed in recent years, both in absolute terms and relative to real GDP growth, this slowdown may be transitory. Projections from HCFA actuaries show increases in the volume of physicians' services starting in 2001 because of an aging fee-for-service population, greater use of specialists and more expensive techniques, and other factors (Board of Trustees 1998). From 2001 to 2008, the average annual rate of growth in the volume of physicians' services is expected to be 3.6 percent, according to the actuaries' projections. That average is 1.6 percentage points more than the 2.0 percent average for 1992 to 1996. It is also higher than Congressional Budget Office (CBO) projections of real GDP per capita growth for 2001 to 2009, which range from 1.4 percent to 1.6 percent. An allowance in the SGR, in addition to real GDP growth, would help the rate accommodate future increases in the volume of physicians' services. Such an allowance would also make the SGR consistent with MedPAC's hospital update framework that includes a factor for scientific and technological advances (see Chapter 3).

Another improvement for the SGR system relates to a provision of the BBA.

Before passage of the BBA, the Secretary of Health and Human Services was required to make a conversion factor update recommendation to the Congress by April 15 of every year. One of MedPAC's predecessor commissions, the Physician Payment Review Commission (PPRC), was then required to comment on the Secretary's recommendation and make its own recommendation by May 15. These recommendations, from the Secretary and PPRC, were necessary to implement the volume performance standards (VPS) system used to update annually the Medicare Fee Schedule conversion factor before passage of the BBA.

When the BBA replaced the VPS system with the SGR system, it eliminated the requirements for consideration of conversion updates in the spring of each year. Now, HCFA publishes the updates in the fall of every year, with no opportunity for stakeholders to review and comment before their implementation.

RECOMMENDATION 7G

The Congress should amend a provision of the BBA to require the Secretary to publish an

**TABLE
7-3**

Average monthly payments for physicians' services by age, sex, and decedence, fee-for-service enrollees, 1993-1997

	Year				
	1993	1994	1995	1996	1997
Age					
Under 65	\$86.01	\$96.76	\$106.24	\$108.00	\$109.67
65-74	92.52	104.14	112.76	113.78	118.31
75-84	119.54	134.19	145.21	145.59	151.19
85+	119.00	134.64	145.59	144.43	150.92
Sex					
Male	105.81	119.42	129.60	131.18	136.22
Female	98.53	110.69	120.04	120.46	125.14
Died					
No	85.98	97.01	105.22	105.79	109.26
Yes	411.59	459.80	489.75	495.03	522.15
All	101.59	114.37	124.07	124.99	129.81

Source: MedPAC analysis of Medicare claims and enrollment files, 5 percent sample of beneficiaries.

estimate of conversion factor updates by March 31 of the year before their implementation.

Publication of estimates of conversion factor updates and the data upon which they are based in the spring of each year would allow MedPAC to review and comment on them before the final updates are published. MedPAC could then advise the Congress on the updates as necessary.

SGR technical issues

A HCFA notice announcing the SGR for the 1999 fiscal year (FY) discussed two technical issues pertaining to the data used to implement the SGR system (HCFA 1998b). The first issue involves time lags between measurement periods applicable to the different SGR system calculations. The second issue concerns HCFA's ability to update estimates used in the system as more recent data become available.

Time lags between measurement periods. Data from various measurement periods are used in the SGR system. As discussed in HCFA's FY 1999 SGR notice, time lags between these measurement periods can lead to oscillation in conversion factor updates. HCFA simulations have shown that the time lags cause the updates to swing sharply between its limits of MEI

plus 3 percentage points and MEI minus 7 percentage points. Such oscillation, an artifact of the structure of the system, undermines the validity of the updates.

To illustrate the importance of the mismatches in measurement periods, the Commission simulated conversion factor updates for the next 10 years, from 2000 through 2009 (see Appendix E). The results of the simulations are consistent with HCFA's and show that the agency's concerns about the SGR's time lags are well founded (see Figure 7-2). If the volume and intensity of services per beneficiary increase by 2 percent a year, a change that is consistent with Medicare's experience since the fee schedule was introduced in 1992, conversion factor updates will begin to oscillate in 2004 between a maximum increase of 5.3 percent and maximum decrease of -4.7 percent.

The oscillation in conversion factor updates is caused by the mismatch of time periods between the update adjustment factor and the conversion factor update. An update adjustment factor is calculated in terms of expenditures during a year that ends on March 31. It determines a conversion factor update applicable to a calendar year. Since actual expenditures during the year on which the update

adjustment is based are unlikely to equal actual expenditures during the year when the conversion factor update occurs, the update adjustment will almost always be too high or too low. Subsequent rounds of update adjustments and conversion factor updates attempt to correct these errors while producing still more errors. The result is extreme oscillation in conversion factor updates.

RECOMMENDATION 7H

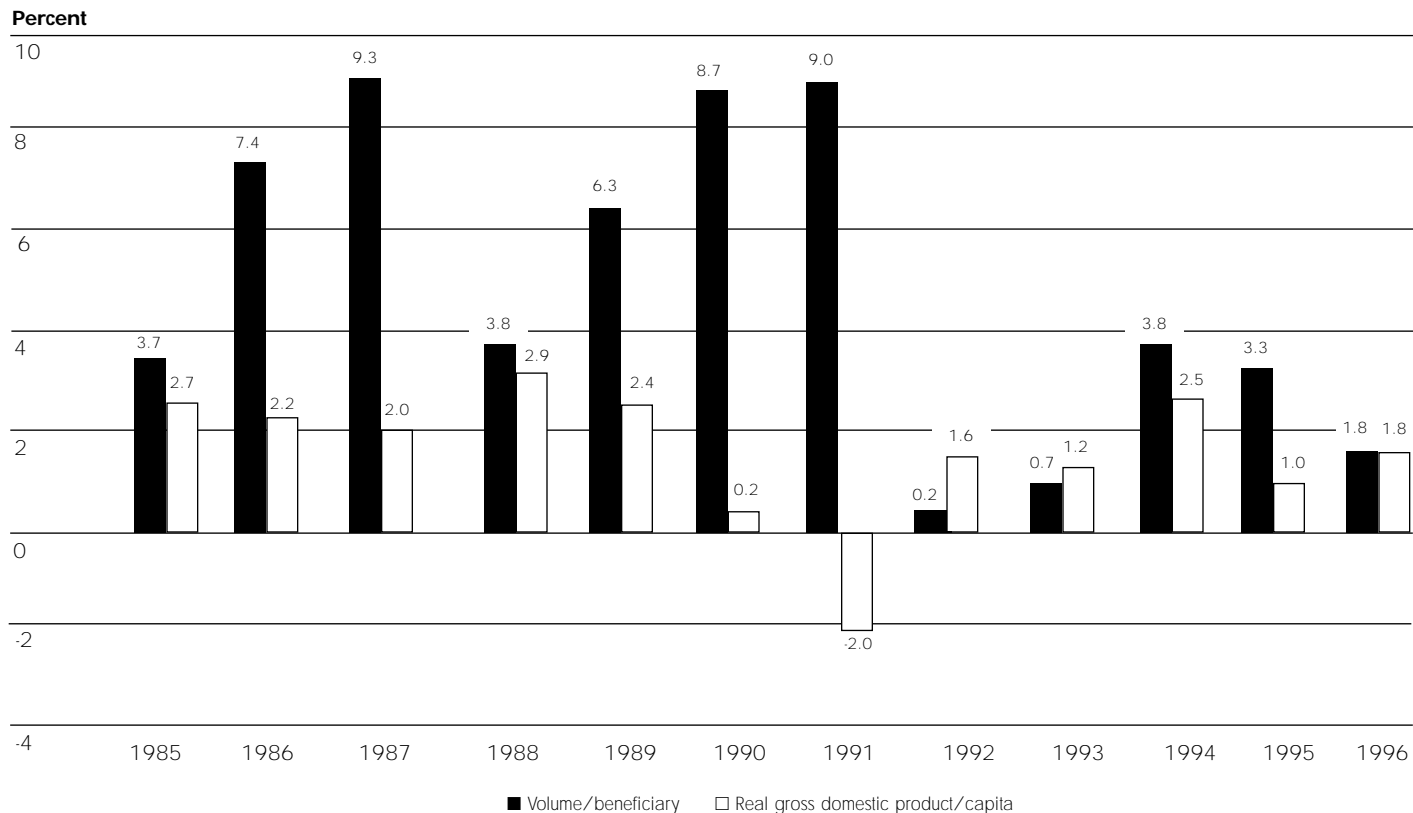
The Congress should reduce time lags between SGR measurement periods by allowing calculation of the SGR and update adjustment factors on a calendar year basis.

Reducing the oscillation in conversion factor updates requires eliminating time lags in the SGR system where possible. One way to reduce these time lags is to put all components of the SGR system on a calendar year basis. To be consistent with conversion factor updates, the SGR and the update adjustment factor should be calculated for calendar years.

To carry out this recommendation, HCFA would need to estimate expenditures from the last year for which data on actual expenditures are available through the calendar year when a conversion factor update is to be

**FIGURE
7-1**

Growth in volume and intensity of physicians' services per beneficiary and growth in real gross domestic product per capita, 1985-1996



Source: Board of Trustees, Federal Supplementary Medical Insurance Trust Fund, 1998; and Council of Economic Advisers, 1998.

implemented. Commission simulations show that, with such estimation, oscillation in conversion factor updates can be reduced (see Figure 7-2).

While a calendar year SGR system would reduce the potential for oscillation in conversion factor updates, some volatility in the updates may still be possible. For example, sensitivity analysis of a calendar year SGR system shows that a relatively large, one-time increase in the volume and intensity of physicians' services can produce oscillation in the updates over a number of years as the updates are constrained by the limits of 3 percentage points above MEI and 7 percentage points below MEI (see Appendix E). The analysis also shows that removing the limits will not eliminate the oscillation and could lead to large changes in the conversion factor.

Further work is necessary to explore improvements in the SGR system beyond putting its calculations on a calendar year basis. So far, the Commission's work on improving the system has been limited to minimal modifications of the current system. Additional work may show that alternative methods could be implemented that would reduce the potential for oscillation in conversion factor updates even in years after relatively large increases in the volume of services. The Commission plans to pursue this work during the coming year.

Correction of estimates. The changes in spending due to fee increases, fee-for-service enrollment, real GDP per capita, and laws and regulations that make up the SGR are all based on HCFA estimates. As discussed in the FY 1999 SGR notice, these estimates are subject to error. For

example, as the new Medicare+Choice options are implemented, HCFA may find that its initial estimates of changes in fee-for-service enrollment were too high or too low. HCFA believes that the 4.3 percent decrease in fee-for-service enrollment included in the SGR for FY 1999 could be off by as much as 1 percentage point, erroneously reducing aggregate fee schedule payments by about \$400 million in the year 2000.

RECOMMENDATION 71

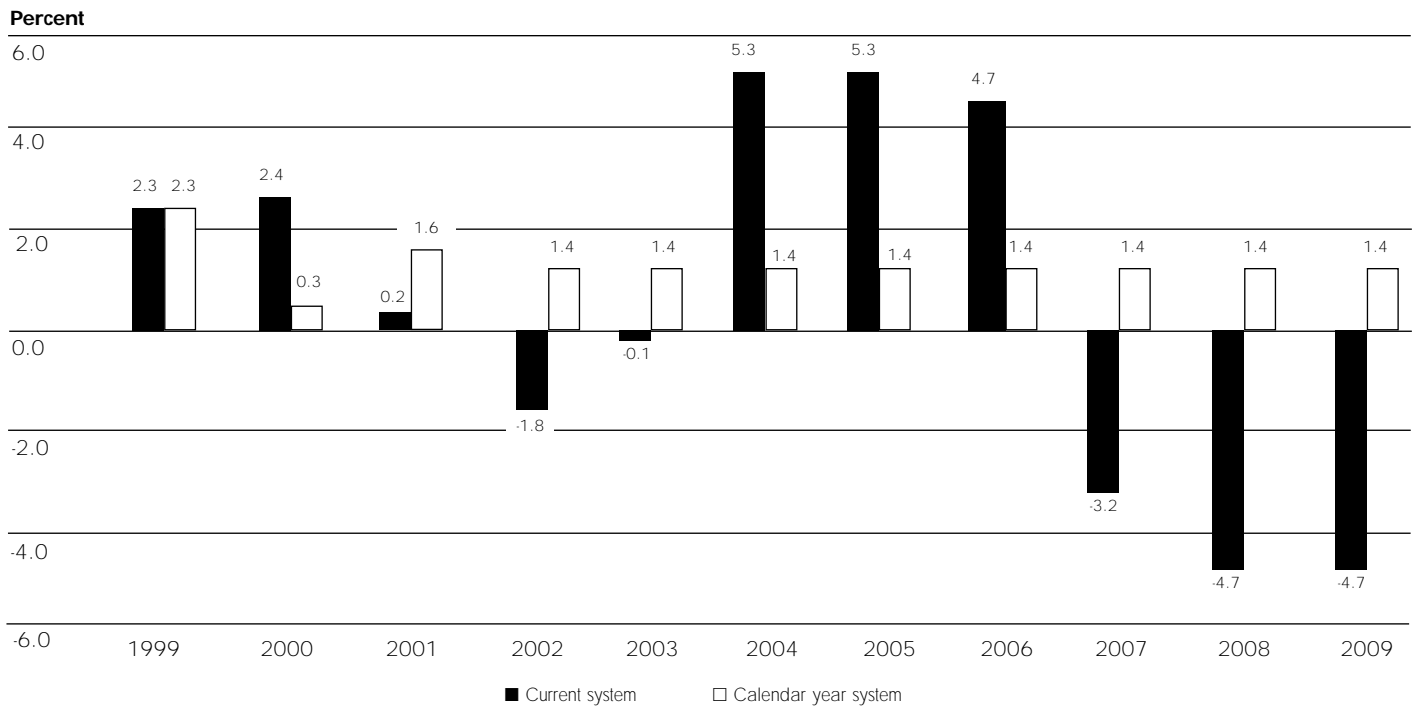
The Congress should require the Secretary to correct estimates used in SGR system calculations every year.

HCFA could reduce potential problems with SGR estimates by correcting the estimates as better data become available.

7 There is no beneficiary coinsurance for home health services or clinical laboratory services.

**FIGURE
7-2**

Simulated conversion factor updates under the current sustainable growth rate system and a calendar year SGR system



Source: MedPAC analysis of unpublished HCFA data.

For example, if fee-for-service enrollment actually declines by only 3.3 percent during FY 1999, instead of the 4.3 percent decline HCFA has projected, the FY 1999 SGR could be revised upward along with any allowed expenditure amounts calculated with that SGR. Since the SGR system is cumulative, the revisions would be reflected in subsequent conversion factor updates.

While HCFA understands the importance of this problem, the agency has concluded that it does not have the authority to correct SGR estimates as

better data become available. While the BBA calls for calculation of the SGR with the Secretary's estimate of changes in fee-for-service enrollment and other factors, the law does not include explicit provisions that allow later revision of the Secretary's estimates with better data.

If HCFA corrects projection errors in SGR system calculations, conversion factor updates will better reflect the factors that influence Medicare's expenditures for physicians' services. In the absence of these corrections, projection errors will be compounded

over time given the cumulative nature of the system. If the system is changed to a calendar year system, correcting projection errors will become even more important because a calendar year system will be more dependent on estimates than the current one.

This recommendation is consistent with one made by PPRC (PPRC 1997). It is also consistent with MedPAC's correction of forecast errors in the hospital market basket (see Chapter 3).

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C H A P T E R

8

Updating the Composite Rate for Outpatient Dialysis Services

R E C O M M E N D A T I O N

8A For fiscal year 2000, the composite rate for outpatient dialysis services should be increased by 2.4 to 2.9 percent. To help ensure that payment increases result in improvements in patient care, the Secretary should continue efforts to collect information on patient care and treatment patterns.

Updating the Composite Rate for Outpatient Dialysis Services

Dialysis facilities receive a prospective payment, called the composite rate, for each dialysis treatment they furnish. That rate has remained essentially unchanged since 1983. Even so, freestanding dialysis facilities have prospered because payments have historically been well above costs. In recent years, however, reported costs have risen in relation to the composite rate. The Medicare Payment Advisory Commission continues to be concerned that, without an increase in the payment, the quality of dialysis services may decline. Therefore, an update to the composite rate is recommended.

In this chapter

- Estimating input price change
 - Considering changes in dialysis services and how they are produced
 - Considering the adequacy of the composite rate
-

Medicare coverage of ESRD

End-stage renal disease (ESRD) is marked by the irreversible loss of kidney function.

Normally, the kidney removes waste products from blood and regulates the amount of water and certain chemicals (especially electrolytes, such as sodium and potassium) in the body. The kidney also activates the vitamin D needed for bone formation and produces erythropoietin, which stimulates red blood cell formation.

The 1972 amendments to the Social Security Act extended all Medicare Part A and Part B benefits to people with ESRD. ESRD patients are eligible if they are fully or currently insured under Social Security or Railroad Retirement programs, entitled to monthly benefits under Social Security or Railroad

Retirement programs, or are the spouse or dependent child of an eligible beneficiary. Medicare covers dialysis and kidney transplantation, as well as immunosuppressive drugs for up to three years after a transplant and the antianemia drug Epogen.

Benefits for dialysis patients generally begin three months after eligibility is established. (Benefits may begin in the first month of coverage if the beneficiary dialyzes at home.) For ESRD enrollees who are covered by employer-sponsored group health plans, all medical claims during the first 30 months of Medicare eligibility are paid first by the employer's plan. If the employer's plan does not pay in full, Medicare makes secondary payments up to its specified limits or the billed amount, whichever is lower.

But providers have faced rising costs in recent years. Although growth in the number of facilities suggests that the dialysis industry is still profitable, the Commission is concerned that facilities can no longer continue to provide dialysis services under the current payment rate without compromising the quality of patient care.

RECOMMENDATION 8A

For fiscal year 2000, the composite rate for outpatient dialysis services should be increased by 2.4 to 2.9 percent. To help ensure that payment increases result in improvements in patient care, the Secretary should continue efforts to collect information on patient care and treatment patterns.

The update framework for dialysis facilities comprises three components: a market basket index that measures input price changes; a performance target; and a scientific and technological advances allowance. The latter two reflect changes in dialysis services and how they are produced. In making its update recommendation, the Commission also considers the adequacy of the current payment rate.

Estimating input price change

The input price component of the composite rate update is based on the projected increase in the market basket index for dialysis facilities. The market basket index is intended to measure the effect of changes in input prices on the cost of producing a dialysis treatment. It is constructed by defining input categories that reflect the full range of goods and services that dialysis providers purchase. Four cost components—capital, labor, other direct costs, and overhead—were used in developing the market basket for fiscal year 2000, along with data from the unaudited 1996 cost reports for independent facilities.

Each component has a weight that represents its cost share or proportion of

Most patients with end-stage renal disease (ESRD) are treated with dialysis, furnished either in hospital-based or freestanding dialysis facilities or at home under the supervision of a local facility. Dialysis facilities receive a fixed, prospective amount for each dialysis treatment, regardless of how it is provided. The prospective payment, called the composite rate, covers the bundle of services, tests, drugs, and supplies routinely required for dialysis treatment. The base composite rate for hospital-based providers is \$126; for freestanding facilities, it is \$122.

Unlike Medicare payments to other types of providers, the composite rate has not been updated annually. Except for a \$2 decrease implemented in 1986 and a \$1 increase in 1991, the composite rate has remained unchanged since 1983.

The Omnibus Budget Reconciliation Act of 1990 required the Prospective Payment Assessment Commission to study the costs of and payments for dialysis services and recommend to the Congress an annual update to the payment rate for dialysis-

related facility services. That responsibility was passed to the Medicare Payment Advisory Commission (MedPAC) in the Balanced Budget Act of 1997. To determine its update recommendation, MedPAC estimates how much costs will increase in the coming year, using a framework similar to that used for the hospital inpatient update recommendations (see Chapter 3). MedPAC also considers other factors, including the adequacy of the composite rate, in making its update recommendations.

Historically, the composite rate was considered to be more than adequate, since Medicare's payments to freestanding providers for dialysis services were considerably higher than reported costs. Freestanding facilities prospered, aided by additional reductions in service costs. Between 1983 and 1987, for example, facilities changed their staffing patterns, increased their use of high flux and high efficiency dialyzers (which led to shortened dialysis sessions), stepped up dialyzer reuse, and successfully sought price discounts from suppliers (Project HOPE 1993).

total expenses. Because data are not available on actual changes in individual prices, the price change for each component is measured by a proxy, derived from the components of the Health Care Financing Administration's (HCFA) input price indexes for PPS hospitals, skilled nursing facilities, and home health agencies. These proxies were used because proxies specific to the dialysis industry are not available. Even if they were available, dialysis-specific price proxies might not be appropriate. Because of the sizable amount of vertical integration in the dialysis industry (that is, the owner of a dialysis facility often owns the laboratory that services the facility or the supplier that equips it), changes in a dialysis-specific price index may be influenced by corporate pricing strategies rather than market forces.

MedPAC's market basket analysis indicates that the prices dialysis facilities pay for their inputs will rise an estimated 2.2 percent between fiscal years 1999 and 2000.

Considering changes in dialysis services and how they are produced

The Commission attempts to reflect the influence of trends in the provision and production of dialysis services in its recommendation. These factors are represented in the performance target and in the scientific and technological advances allowance.

Using data from Medicare Cost Reports, MedPAC examined the trends in a number of performance indicators to estimate what productivity gains dialysis facilities can reasonably be expected to attain in the coming fiscal year. The Commission considered four factors: the number of total treatments (including hemodialysis and peritoneal dialysis) per full-time equivalent employee (FTE);

staff mix measured by the ratio of registered nurses (RNs) to all direct patient care staff (including RNs, licensed practical nurses, nursing assistants, and technicians); the number of in-facility hemodialysis treatments per station; and the average length of a hemodialysis session. Previous analyses indicated that providers had increased their productivity markedly on all of these measures. In recent years, however, productivity improvements have slowed, and 1996 data for freestanding facilities showed a decline in productivity. The reported number of treatments per FTE and per hemodialysis station fell, while the length of dialysis rose (MedPAC 1998). In light of these considerations, the Commission does not expect productivity gains to be realized in fiscal year 2000.

The scientific and technological advances allowance is intended to recognize the costs associated with facilities' adoption of quality-improving technologies. Broad industry trends in the use and cost of new dialysis technologies are examined. The Commission's assessment suggests that, while some relatively new technologies continue to diffuse, there is little evidence that any of these will have a substantial cost-increasing effect in fiscal year 2000. Facilities will, however, face some added costs due to the effect of year 2000 computer problems. MedPAC therefore believes that scientific and technological advances could contribute between 0.2 and 0.7 percentage point to dialysis facility costs in fiscal year 2000.

Considering the adequacy of the composite rate

MedPAC also considered the adequacy of the current payment rate. By some measures that rate would appear to be adequate. For example, there has been no

reduction in the rate of entry into the market. Between 1995 and 1996, the number of freestanding facilities grew by 9.7 percent, as the industry attempted to keep pace with a 10 percent annual increase in the number of dialysis beneficiaries (USRDS 1998). At the same time, however, reported costs have risen in relation to the composite rate. The Medicare payment to cost ratio for these providers, calculated with unaudited cost report data, fell from 1.03 in 1995 to 1.00 in 1996 (MedPAC 1998). Although it is difficult to assess the accuracy of cost report information because it has been many years since these facilities' cost reports have been audited, the Commission is increasingly concerned that the quality of patient care may suffer if the composite rate is not updated.

The Commission believes that any increase in the payment rate for dialysis services should be used to improve the quality of care provided to beneficiaries. To this end, MedPAC supports HCFA's efforts to monitor patient treatment. In 1998, HCFA began to require providers of hemodialysis to report the urea reduction ratio—a measure of dialysis adequacy—on a monthly basis for every patient. These data will enable HCFA to monitor patient care more closely and may allow for future analyses of the relationship between dialysis adequacy and use of health services.

In future reports, MedPAC plans to consider the appropriateness of Medicare's payments for dialysis services. The current payment methods discourage the provision of services that can enhance the quality of dialysis (such as more frequent sessions and dietician services), while at the same time creating incentives for providers to furnish drugs and laboratory tests that are not covered by the composite rate. Improvements in Medicare's payment policies could heighten the quality of care that ESRD patients receive, thereby increasing quality of life for many beneficiaries. ■

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A P P E N D I X

A

Determining Medicare+Choice Payment Rates

A

Determining Medicare+Choice Payment Rates

The Balanced Budget Act of 1997 (BBA) changed how Medicare pays managed care plans. Before BBA, Medicare set payments for managed care enrollees, in each county, at 95 percent of an estimate of what the program would have paid had these enrollees remained in the traditional fee-for-service program. Under this scheme, the Health Care Financing Administration (HCFA) updated payments for each county based on the estimated growth in Medicare fee-for-service spending per beneficiary in that county.

The BBA broke the direct link between the growth in county fee-for-service spending and Medicare managed care payments. Specifically, monthly payments are now the highest of:

- a floor—updated after 1998 based on nationwide growth in fee-for-service spending per capita, less specified statutory reductions for 1999 through 2002—beneath which payments cannot fall,
- a 2 percent increase from the prior year’s rate, or,
- a blend of local and national payment rates, only if a so-called budget-neutrality condition is met.

This appendix describes how Medicare determined the 1997 payment rates upon which future payments are based. It then discusses how HCFA calculates the floor and blended payments, and the

conditions under which they may be made.

How Medicare calculated the 1997 base rates

The 1997 base rates are the starting point for determining Medicare+Choice payment rates. From 1982 to 1997, HCFA calculated annual base rates separately for Part A and Part B for the elderly, disabled, and beneficiaries with end-stage renal disease. This process had several steps. First, for each county, HCFA estimated the average per person fee-for-service spending—the ratio of fee for service spending to the number of fee-for-service enrollees—based on spending data from the most recent five year period.

Second, for each county, HCFA standardized the average per person cost to account for differences in demographic characteristics (for example, age and sex) among counties. This standardization occurs by dividing the average per person cost by the demographic factor that measured these population differences. The result is the adjusted average per capita cost (AAPCC):

$$\text{AAPCC} = \frac{\text{average per person cost}}{\text{demographic factor}}$$

Finally, HCFA then multiplied the AAPCC by 95 percent to get each county’s payment rate:

$$1997 \text{ County Base Rate} = \text{AAPCC} \times .95.$$

Calculation of the floor

The BBA established a floor below which monthly U.S. county payment rates cannot fall. For 1998, the floor was \$367. For 1999 and subsequent years, HCFA is increasing the floor by its estimate of the current year’s national growth rate of Medicare fee-for-service spending (minus a statutory reduction of 0.5 percentage point through 2002). Because the estimated growth in fee-for-service spending per capita from 1998 to 1999 was 4.0 percent, HCFA increased the floor by 3.5 percent, to \$379.84, for 1999 ($\$367 \times 1.035 = \379.84).

Calculation of blended payment rates

Calculation of the blended payment amounts involves four steps. First, HCFA adjusts local rates by removing a certain percentage of the 1997 base payment rate that is attributable to fee-for-service spending for graduate medical education (GME) payments. Second, HCFA updates this adjusted local rate to the payment year. Third, national rates are adjusted to account for variation in input prices across counties. Finally, HCFA calculates the blended payment as a weighted average of the updated adjusted local and input price adjusted national rates. Table A-1 shows the local and national weights mandated by the BBA to determine the blended rate.

TABLE A-1

Blended rate formula

Year	Local percent	National percent
1998	90%	10%
1999	82	18
2000	74	26
2001	66	34
2002	58	42
2003 and after	50	50

Source: Balanced Budget Act of 1997.

Calculation of updated adjusted local rates

HCFA calculates local rates by removing from the 1997 base rate a percentage of the amount attributable to Medicare’s special payments to teaching hospitals and updating the result based on nationwide

growth in fee-for-service spending per capita. Table A-2 shows sample calculations of local 1999 rates for three counties.

Under the old payment system, a county whose residents used more care in teaching hospitals would have a higher payment rate than an otherwise similar county because of Medicare’s special payments to hospitals for GME. The Congress believed that Medicare managed care plans were less likely to use teaching hospitals to provide care and, when they did, paid them less than Medicare’s fee-for-service payments. Accordingly, the Congress decided in the BBA to pay teaching hospitals directly when they serve Medicare+Choice enrollees and to adjust the 1997 base payment rate for GME payments.

The BBA phases in this adjustment over five years: 20 percent of GME

payments were removed from the base in 1998, 40 percent are removed in 1999, and 100 percent of GME payments will be removed from local rates in 2002 and later years.

HCFA increases the adjusted 1997 base rates to the payment year based on nationwide growth in fee-for-service spending per capita minus specified statutory reductions of 0.8 percentage points for 1998 and 0.5 percentage points for 1999 through 2002. HCFA estimated national growth in fee-for-service spending per capita of Medicare to be 3.4 percent in 1998, so that adjusted local rates were increased by 2.6 percent for that year. For 1999, HCFA estimated national growth in fee-for-service spending per capita to be 4.0 percent; thus, adjusted local 1998 rates were increased by 3.5 percent. The adjustments include correcting past projection errors.

TABLE A-2

Calculation of local rates for selected counties, monthly payment per member, 1999

	Somerset, NJ	Orange, NC	San Francisco, CA
1997 Rate	\$438.91	\$452.84	\$525.90
Percent of spending attributed to GME	.0625	.14	.0724
GME carve-out proportion (40 percent of GME spending)	.4 x .0625 = .025	.4 x .14 = .056	.4 x .0724 = .0289
1997 rate x GME carve-out proportion	\$438.61 x .025 = \$10.97	\$452.84 x .056 = \$25.36	\$525.90 x .02896 = \$15.23
1997 adjusted local rate	\$438.91 - \$10.97 = \$427.94	\$452.84 - \$25.36 = \$427.48	\$525.90 - \$15.23 = \$510.67
1999 local rate	\$427.94 x 1.0188 ^a x 1.035 ^b = \$451.24	\$427.48 x 1.0188 ^a x 1.035 ^b = \$450.76	\$510.67 x 1.0188 ^a x 1.035 ^b = \$538.48

Note: The local rate is a component of the blended rate, as shown in Table A-3. Numbers may not sum to total due to rounding. GME (graduate medical education payments). BBA (Balanced Budget Act of 1997).

^a1+(1988 corrected per capita rate of growth in Medicare minus BBA update reduction) = 1+ (.040-.005)=1.035.

^b1+(1988 corrected per capita rate of growth in Medicare minus BBA update reduction)=1+(.040-.005)=1.035.

Source: MedPAC analysis of data from HCFA and the Balanced Budget Act of 1997.

**TABLE
A-3**

Calculation of national standardized Medicare+Choice rates for selected counties, monthly payment per member, 1999

	Somerset, NJ	Orange, NC	San Francisco, CA
1998 hospital wage index	1.1111	0.9818	1.4091
↓			
Part A hospital wage index adjustment	$(.7 \times 1.1111) + .3 = 1.08$	$(.7 \times 0.9818) + .3 = 0.99$	$(.7 \times 1.4091) + .3 = 1.29$
↓			
Input price adjusted Part A rate	$1.08 \times \$276.16^a = \297.64	$0.99 \times \$276.16^a = \272.64	$1.29 \times \$276.16^a = \355.24
1999 geographic adjustment factor	1.1028	0.9318	1.1484
↓			
Part B geographic adjustment factor proportion	$.66 \times 1.1028 = 0.73$	$.66 \times 0.9318 = 0.61$	$.66 \times 1.148 = 0.76$
Hospital wage index adjustment	$(.4 \times 1.11) + .6 = 1.04$	$(.4 \times 0.98) + .6 = 0.99$	$(.4 \times 1.41) + .6 = 1.16$
Part B hospital wage index adjustment	$(.34 \times 1.04) = 0.36$	$(.34 \times 0.99) = 0.34$	$(.34 \times 1.16) = 0.40$
↓			
Part B geographic adjustment factor proportion	$0.36 + 0.73 = 1.08$	$0.34 + 0.61 = 0.95$	$0.40 + 0.76 = 1.16$
↓			
Input price adjusted Part B rate	$1.08 \times \$205.46^b = \222.50	$0.95 \times \$205.46^b = \195.70	$1.16 \times \$205.46^b = \237.01
1999 national standardized Medicare+Choice rate = Part A + Part B	$\$297.64 + \$222.50 = \$520.14$	$\$272.64 + \$195.70 = \$468.35$	$\$355.24 + 237.01 = \592.26

Note: Numbers, particularly interim calculations, may not sum to total due to rounding.

^aMedicare Part A national weighted average rate.

^bMedicare Part B national weighted average rate.

Sources: MedPAC analysis of data from HCFA and the Balanced Budget Act of 1997.

Adjustment of national payment rates for variation in input prices

The BBA defines the national Medicare+Choice rate in general, mandates input price adjustment, provides the method for calculating input price adjustments for 1998, and gives HCFA the authority to apply these rules for 1999. The law does not specify the details of how to implement the input price adjustment for 2000 and beyond. Table A-3 shows sample calculations of the 1999 national Medicare+Choice rate for three counties.

In general, the national Medicare+Choice rate is a weighted combination of the national standardized payment rates for services under Medicare Parts A and B. The weights correspond to the contribution of each part to total spending. Specifically, the national Medicare+Choice rate is equal to:

$$\text{Part A} \times [(0.7 \times \text{HWI}) + 0.3] +$$

$$\text{Part B} \times [((0.66 \times \text{GAF}) + 0.34) \times ((0.4 \times \text{HWI}) + 0.6)]$$

where:

- Part A is the national weighted average of local Part A rates for the payment year,
- Part B is the national weighted average of local Part B rates for the payment year,
- HWI is the hospital wage index, which measures differences in hospital wages across metropolitan and statewide rural areas for the payment year, and
- GAF is the geographic adjustment factor, which measures differences in physicians' costs across physician payment areas for the payment year.

A separate update calculation is not necessary because the local Part A and Part B rates already incorporate growth in fee-for-service spending per capita.

Blending local and national rates

The blended payment for a county is a weighted average of the adjusted updated local rates and the input price adjusted national rate. As shown above in Table A-1, in 1999, local rates have an 82 percent weight, and the standardized national rate has an 18 percent weight. The weight assigned to local rates will decrease each year until 2003, when local and standardized national rates will each have a weight of 50 percent. Table A-4 shows what blended rates would have been for three selected counties had the budget-neutrality condition been satisfied.

Budget neutrality

Counties will receive blended payments only in years when the budget-neutrality condition is satisfied. This condition requires that total Medicare+Choice spending, including blended payments, equals what would be paid if only local rates had been used.

**TABLE
A-4**

Calculation of blended rates for selected counties, monthly payment per member, 1999

	Somerset, NJ	Orange, NC	San Francisco, CA
1999 local rate (from Table A-2)	\$451.24	\$450.76	\$538.48
↓			
Local portion (.82 x local rate)	.82 x \$451.24 = \$370.02	.82 x \$450.76 = \$369.62	.82 x \$538.48 = \$441.55
1999 national standardized Medicare+Choice rate (from Table A-3)	\$520.14	\$468.35	\$592.26
↓			
National portion (.18 x national rate)	.18 x \$520.14 = \$93.63	.18 x \$468.35 = \$84.30	.18 x \$592.26 = \$106.61
↓			
Blend	\$370.02+\$93.63 = \$463.64	\$369.62+\$84.30 = \$453.93	\$441.55+\$106.61 = \$548.16

Note: Numbers may not sum to total due to rounding.

Source: MedPAC analysis of data from HCFA and the Balanced Budget Act of 1997.

To satisfy the budget neutrality condition in a particular year, HCFA compares what projected total Medicare+Choice spending would be if county rates were based on the highest of the floor, minimum update, or blended rates, with what spending would be if payments were made on the basis of local rates only. If projected total spending on

the basis of blended payments, floors, and minimum increases was not equal to projected spending on the basis of local rates only, then HCFA multiplies the blended amounts by a factor (but not less than zero) so that the budget neutrality condition is satisfied.

In 1998 and 1999, spending based on the highest of the floor, minimum update,

or blended rates would have exceeded spending based only on local rates even with a budget-neutrality factor equal to zero. Consequently, no county received blended payment rates, and the payment rate for each county in those years was the greater of that county's prior year rate increased by 2 percent or the floor rate (\$367 in 1998 and \$379.84 in 1999). ■

A P P E N D I X

B

**Determining Risk Scores
under the Interim Risk Adjustment
System for Medicare+Choice**

Determining Risk Scores under the Interim Risk Adjustment System for Medicare+Choice

The interim system for risk adjustment of Medicare+Choice payments is a version of the principal inpatient diagnostic cost group (PIP-DCG) model. This appendix describes how risk scores will be determined under this system.

To determine risk scores under the interim system, the Health Care Financing Administration (HCFA) first created diagnostic cost groups (DCG) with a two-step process by grouping diagnoses using clinical criteria and then sorting the groups according to the expected costs to Medicare. In the first step, HCFA classified International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) codes into broader, clinically homogenous categories called DxGroups. In the second step, HCFA assigned fee-for-service beneficiaries to DxGroups based on the principal inpatient diagnoses for their 1995 hospital stays. HCFA calculated the mean 1996 total Medicare costs for the beneficiaries in each DxGroup. It placed beneficiaries in the DxGroup with the highest mean in the proper DCG, where a DCG is just a predetermined range of Medicare costs. These beneficiaries were removed from the sample, and the mean 1996 costs for the remaining DxGroups were recalculated. Of the remaining DxGroups, HCFA placed the beneficiaries in the DxGroup with the highest mean in

the proper DCG and removed them from the sample. It continued this process until all beneficiaries were in a DCG. As a rule, no DxGroup can be in a DCG below the base payment DCG, which includes beneficiaries with no inpatient diagnoses the previous year.

The next step in determining risk scores was to estimate the effect of fee-for-service beneficiaries' demographic characteristics and DCGs on annual 1996 Medicare spending. A beneficiary was assigned the DCG that corresponds to the most costly inpatient diagnosis, and its demographic characteristics were based on five variables: age; sex; Medicare eligible because of disability; eligible for Medicaid the previous year; or aged but previously eligible for Medicare because of disability.

The result was estimates of the expected additional costliness associated with each beneficiary's demographic characteristics and DCG. These estimates are additive, meaning that under the interim system, HCFA will calculate the expected total spending for Medicare+Choice enrollees by summing the amounts that each enrollee's demographic characteristics and DCG is expected to add to the enrollee's costliness. The data that will determine enrollee's demographic characteristics and DCGs, including inpatient diagnosis data, will be submitted by organizations. Finally,

enrollee's risk scores will be calculated as the ratio of expected total spending to the national average fee-for-service spending.

HCFA's adjustments to initial DCGs

In developing its PIP-DCG model, HCFA initially created more than 20 DCGs, but it was concerned "inconsistent or inappropriate reimbursements" could occur in some of the diagnosis groups (DxGroups) that comprise DCGs. In response, HCFA assigned a clinical panel to review the DxGroups. The panel considered some DxGroups to represent only minor or transitory diseases or disorders, rarely to be the main causes of inpatient stays, or to be vague or ambiguous. These DxGroups were reassigned to the base payment DCG where risk scores depend only on demographic characteristics. This process reduced the number of DCGs in the model to 15.

A second adjustment HCFA made to the initial DCGs to "ensure consistent and appropriate payment" was that all hospital stays of one day or less were assigned to the base payment DCG. HCFA reasoned that the majority of one-day stays were for diagnoses already in the base payment DCG, and short stays

are often associated with less serious and less costly cases, so this adjustment will have a small effect on payments for beneficiaries in the base payment DCG.

Data issues

HCFA also addressed two issues regarding the inpatient diagnosis data that

will be used to determine beneficiaries' risk scores. First, risk scores for new Medicare enrollees will be based only on demographic data instead of both inpatient diagnosis data and demographic data because inpatient diagnosis data will not be available for these beneficiaries.

A second data issue is that HCFA's initial payments to organizations in January 2000 will be based on inpatient

diagnosis data from July 1998 through June 1999. It has the option to make retroactive adjustments to these payments during 2000 when data from January 1999 through December 1999 become available, but a retroactive adjustment may cause financial problems for some organizations. Hence, HCFA has indicated it will use the July 1998 through June 1999 data throughout 2000. ■

A P P E N D I X

C

**Scientific and Technological
Advances for Inpatient Hospital Services**

Scientific and Technological Advances for Inpatient Hospital Services

Medicare Payment Advisory Commission (MedPAC) believes that hospitals should not be discouraged from adopting technologies that are necessary to maintain the high quality of care available to Medicare beneficiaries, solely because they increase costs. The Commission's hospital payment update framework, therefore, includes an allowance for scientific and technological advances that accounts for emerging technologies that are quality enhancing, but cost increasing. This allowance is intended to provide additional funds for anticipated changes in resource use due to the adoption of new technologies in the upcoming fiscal year. The allowance for scientific and technological advances represents MedPAC's best estimate of the incremental increase in costs for a given fiscal year that results from hospitals adopting new technologies or new applications of existing technologies (beyond that automatically reflected in the payments hospitals receive).

In the analysis presented below, we set forth the methods used to develop the fiscal year 2000 allowance for scientific and technological advances. We review the data sources and medical literature used to identify new and emerging technologies. And we set forth a detailed explanation of the technologies the Commission believes will emerge as important treatment options that will significantly affect

hospitals' costs while enhancing quality of care.

Current framework

The analysis for fiscal year 2000 builds on work previously undertaken by Prospective Payment Assessment Commission (ProPAC). Through fiscal year 1995, ProPAC hired an independent contractor (Abt Associates Inc. 1994) to conduct a comprehensive review of hospital technologies that included the following tasks:

- identify potential technologies in an extensive literature review,
- calculate the incremental per-case costs of the included new technologies, defined as the difference between the estimated total costs of using new technological methods and the estimated total costs of using existing treatment methods, and
- calculate the total impact on Medicare costs by multiplying the incremental costs per discharge and the estimated number of beneficiaries who are helped by the new technologies.

In subsequent years, ProPAC (and then MedPAC) used a qualitative approach to estimate the allowance for scientific and technological advances by evaluating technologies identified in previous analyses, examining broad industry trends,

having informal discussions with industry representatives, and reviewing the current medical literature.

To derive the fiscal year 2000 allowance, MedPAC used a qualitative approach that was similar to the fiscal years 1996 through 1999 updates. We reviewed the technologies included in the fiscal year 1999 update and evaluated changes in their overall use and costs predicted for fiscal year 2000. We conducted an extensive review of the medical literature to identify new technological advancements for this year's update. Finally, we included only those quality-enhancing technologies that met the following criteria:

- The technology was approved by the Food and Drug Administration (FDA).
- At least 5 percent of the relevant Medicare beneficiaries would receive the technology.
- No more than 75 percent would receive the technology.
- The application of the technology would result in substantially higher treatment costs.

We began our review by evaluating the broad categories that we identified as significant contributors to costs in the fiscal year 1995 through 1999 updates:

- information systems
- cardiovascular drugs and devices
- biotechnology, and

- radiology, imaging, and nuclear medicine.

In this year's analysis, we included a new category, "other devices and technological advancements," which provides information on technologies, such as biosensors and robotics not included in any of the other categories.

As in the analyses conducted for the fiscal year 1995 to 1999 updates, the Commission did not attempt to identify all cost-increasing technologies. Rather, we focused on the most significant ones from the perspective of cost and diffusion. We used numerous data sources to identify new technological advancements, including:

- peer-reviewed published literature identified by using Medline® (National Library of Medicine's database),
- federal and private organizations, such as the FDA, the Agency for Health Care Policy and Research, the Centers for Disease Control and Prevention, the American Medical Association, the American Hospital Association, and the American Public Health Association, and
- newsletters, newspapers, periodicals, and trade journals, such as *Business Week*, *Forbes*, *Time*, *Newsweek*, *Medicine and Health*, *Modern Healthcare*, *Hospital Technology Scanner*, *Hospitals and Health Networks*, *Yahoo News*, *Wall Street Journal*, *Washington Post*.

Scientific and technological advances in fiscal year 2000

The review of new and emerging technologies suggests that technological advances are slowing in areas that made important contributions in the past, such as cardiovascular procedures, devices, and drugs. However, substantial technological advances in hospital information systems, in general, and methods to address year 2000 computer problems, in particular, will likely contribute to hospital costs.

Information Systems

Hospital health care information systems play a significant role in the trend towards coordinated care delivery and include:

- financial systems
- pharmacy systems
- radiology systems
- patient-care systems
- laboratory systems, and
- clinical data repositories and related enabling software.

The Commission believes that information systems will continue to be the primary source of increased costs in fiscal year 2000 as they were in our fiscal year 1999 assessment. This assessment is based on the operating and capital costs required to address the year 2000 computer problem and continued investment in new, quality-enhancing information systems. The FDA Center for Devices and Radiological Health has also predicted that computer-related technology will experience significant development over the next five to ten years (Herman, Marlowe, Rudolph 1998).

Year 2000 computer problem

Hospitals depend heavily on computing technology and information systems to support their administrative and clinical operations. For hospital facilities, year 2000 malfunctions and service disruptions can come from both internal and external sources such as:

- administrative and clinical information systems
- medical devices
- health care suppliers and vendors of food services, medical supplies, and pharmaceuticals, and
- third-party payers.

Year 2000 malfunctions could potentially compromise patient care, interrupt core practice continuity, and create substantial liability exposure for hospitals. Clinical departments that are particularly dependent on automation

and susceptible to year 2000 malfunctions include the laboratory, radiology and emergency departments, and operating rooms. A broad spectrum of services may be affected from electronic data interchange for patient records, medical research, and billing to medical devices with embedded computer systems, such as pacemakers and life support systems.

Medical device malfunctions due to unaddressed millennium problems include:

- confusion when device results are displayed out of order,
- service disruption if a device indicates it needs maintenance when it does not,
- significant service disruption when the device shuts down and must be restarted, and
- significant service disruption when the device shuts down and will not restart or when the device appears to operate correctly yet produces incorrect results that are difficult to detect, such as dose calculations based on patient age.

The FDA has taken numerous actions to ensure that medical device manufacturers are aware of the year 2000 issue, such as establishing a product-specific database on the FDA world wide web site and convening seminars.

Hospital accounting departments may also be vulnerable to the year 2000 problem because they use numerous date fields, including patient birth date, insured birth date, date of admission/registration, certification and recertification dates, date of illness, procedure dates, payment dates, and claim submission dates.

Because hospitals rely heavily on outside vendors for numerous medical and nonmedical goods and services, such as pharmaceutical agents, food, and linens, they are developing contingency plans to address potential disruptions from vendors and suppliers who are not year 2000 compliant.

Finally, hospitals may be affected by the preparations of its third-party payers, such as the Health Care Financing Administration (HCFA) and its contractors, for the year 2000. The General Accounting Office (GAO) reported that it is highly unlikely that all Medicare systems will be compliant to ensure the delivery of uninterrupted benefits and services into the year 2000 (GAO 1998). Hospitals are concerned that poor communication with HCFA and Medicare's fiscal intermediaries will affect their accounting and electronic data interchange systems and cause delays in receiving operating revenues.

To prepare and address potential year 2000 failures, hospitals are conducting many of the tasks set forth in Table C-1. The Commission is concerned about a differential effect on small rural and inner-city hospitals that may lack the necessary project management, technical, and financial resources for year 2000 preparation. Numerous sources have noted a significant shortage of qualified personnel, particularly biomedical engineers who can assist in developing hardware and software solutions.

Based on the findings of an informal survey conducted by the American Hospital Association (AHA), most hospitals have started addressing year 2000 problems (AHA 1998). Nearly nine percent of survey respondents projected completing their year 2000 solutions by 1998, 81

percent of respondents projected 1999, and 9 percent of respondents projected 2000. Less than one percent of respondents reported that they would not complete their year 2000 solutions by 2000.

Operating and capital expenses devoted to address health care systems' millennium problems are substantial. Organizations have budgeted an average of \$8.5 million for capital and \$7 million for operations to solve millennium problems in 1998 (Morrissey 1998). To address millennium problems during 1998 to 2000, average capital and operating budgets are forecasted to be \$17 million and \$12.5 million, respectively.

Development of other information systems

In addition to devoting resources to address the millennium problem, hospitals will continue to invest in new information systems during the next fiscal year. Hospitals are investing more resources in information systems, particularly telemedicine, clinical data repositories, and multisite integrated data networks.

The FDA has predicted that the use of telemedicine—the electronic delivery of health care information and services—will significantly increase over the next five years. Telemedicine is becoming an important technology for rural hospitals. For example, it has been used to deliver

consulting services from large teaching hospitals to rural community hospitals. Additionally, rural hospitals use telemedicine to monitor their patients in their homes, resulting in enhanced quality of life for patients. The 1996 Telecommunications Act and the rules implemented by the Federal Communications Commission should enable telemedicine to continue to diffuse, especially in rural settings. Under the Act, rural-based local health care hospitals can receive discounts on their telecommunications rate changes to equalize disparities in the rural-urban payment rates.

Hospitals will continue to develop clinical data repositories—also referred to as electronic medical records. Clinical data repositories capture clinical data from many sources, store the information consistently, and present the results in tabular and graphical formats.

These repositories are being developed on multisite integrated networks to permit easy transfer of data through a secure data connection across multiple providers within a health care system, including hospitals, physicians, laboratories, and insurers. These networks, also referred to as medical intranets, are sophisticated systems that use a private network to provide access to a single source of clinical and administrative data. These networks are designed to support clinical decisionmaking, provide medical reference information, and support clinical research. Hospitals are replacing information systems developed more than 10 years ago without these functional capabilities.

Other new computerization projects predicted to experience growth in the upcoming year include scheduling, point of care, and quality/risk management systems.

MedPAC will continue to monitor these and other developments in information systems, including integrating diagnostic imaging results into clinical data repository systems, voice recognition systems, and wireless information devices.

TABLE C-1 Recommended year 2000 action plan

Tasks
1. Identify relevant systems, including: <ul style="list-style-type: none"> • systems used to input, store, analyze, and report dates; subsystems, operating systems and other utility software used to sort, archive, restore, report, or generate dates, and • active, historical, and archival files that store dates; internal and external interfaces that pass date information, including the electronic transmission of insurance data to payers.
2. Contact outside vendors and suppliers to determine their plans for year 2000 compliance.
3. Define solutions, including developing a conversion plan for active and historical files and developing contingency plans for year 2000 internal and external malfunctions.
4. Make corrections to hardware, software, and data.
5. Test software, data, and interfaces to ensure dates are consistent.
6. Monitor all output to ensure successful resolution.

Source: Romzek P J. Are your information systems ready for the year 2000? *Healthcare Financial Management*. January 1998, p. 500-555.

Cardiovascular drugs, devices, and techniques

MedPAC believes that two new anticoagulants (eptifibatide and tirofiban hydrochloride), used for the treatment of patients with acute coronary syndromes and approved by the FDA in May 1998, will result in significant hospital cost increases. These agents, also called glycoprotein IIb/IIIa inhibitors, represent a new family of anticlotting medications developed to help prevent heart attack and stroke. The estimated costs per episode of patient care associated with these anticoagulants range from \$200 to \$1,200 (Hensley 1998a).

Other recent cardiovascular device advancements that will lead to increased hospital costs include a laser treatment—transmyocardial revascularization—approved by the FDA in August 1998 to treat patients with coronary heart disease. The acquisition cost for this latest high-tech laser is reported to range from \$200,000 to \$400,000 (Hensley 1998b).

Another recent cardiovascular advancement is the approval of the first of a new class of commercially available blood-derived products—fibrin sealants—that are applied topically to help control bleeding. Fibrin sealants are used to stop oozing from small, sometimes inaccessible, blood vessels during surgery when conventional surgical techniques are not feasible. This product is effective for use in cardiopulmonary bypass and colostomy operations and also in traumatic injury to the spleen.

Additionally, new cardiovascular-related devices have been developed that assist in sealing arterial punctures following cardiovascular procedures, such as angiograms and angioplasties. These arterial wound closure devices include a collagen protein plug that expands to fill the wound and another device that fits inside the hole left by a catheter.

The Commission will monitor the use of these drugs and treatments as well as other new developments, including the escalating trend toward microprocessor-based intelligent devices, such as cardiac

implants and robotics, and minimally invasive cardiovascular surgery. Two examples of applications of these new technologies are:

- coronary bypass surgery, which was recently conducted using a minimally invasive, experimental device in which robotic arms were manipulated by the surgeon, and
- direct access minimally invasive mitral valve surgery, which was found to be efficacious and resulted in accelerated recovery and pain reduction.

Biotechnology

Advances in molecular medicine continue, including genetic diagnostics, genetic therapy, and tissue-engineered devices. Recent developments include use of biological markers to identify disease conditions, such as thrombogenesis during acute coronary syndromes, and use of prognostic antibodies to detect the spread of prostate and gastric cancers. Monoclonal antibodies are being used to manage various cancers, including non-Hodgkin's lymphoma, colorectal, breast, and small-cell lung. The Commission believes that these important biotechnological advances are used to treat relatively small patient populations and will account for modest hospital cost increases.

Several biotechnologies were approved by the FDA in 1998 for chronic disease conditions. A new genetically engineered protein (etanercept) reduces the symptoms of moderate to severe, active rheumatoid arthritis. A monoclonal antibody (infliximab), manufactured using cells containing human and mouse antibody genes, is the first approved treatment for Crohn's disease. Rituximab is the first biotechnology product to treat patients who have low-grade B-cell non-Hodgkin's lymphoma and who have not responded to chemotherapy or other standard treatments. Daclizumab is the first monoclonal antibody to help prevent acute kidney transplant rejection and is used with a standard course of immunosuppressive therapy to help prevent kidney rejection.

The Commission will monitor these and other advancements in genetic diagnosis and tissue-engineered devices during the next several years.

Radiology, imaging, and nuclear medicine

The past three decades have seen an enormous growth in the field of radiology, imaging, and nuclear medicine. During the upcoming fiscal year, we anticipate continued advances in this area, especially improvements and further applications for magnetic resonance imaging, positron emission tomography, ultrasound, and computed tomography. MedPAC believes that the diffusion of these advances will have a modest impact on hospital costs in fiscal year 2000.

Recent advances in the area of imaging include solid-state systems that combine ultrasound with balloon and stent placement; combined imaging atherectomy devices; high frequency imaging; improved methods for characterizing tissue; and three-dimensional reconstruction techniques.

A new generation of computed tomography scanners will soon be available that are faster than previous devices and provide improved clarity. This newer technology may result in expanding the use of computed tomography scanners in trauma, vascular, and cardiac scanning.

Technical developments have increased the speed and versatility of magnetic resonance imaging, including imaging for many cardiac conditions. High-speed magnetic resonance methods are capable of imaging the entire brain with a temporal resolution of a few seconds. Additionally, new contrast agents are being developed to better image the liver during magnetic resonance imaging.

Recent advances have occurred in ultrasound devices and ultrasound imaging drugs. A new ultrasound device has been developed to diagnose osteoporosis and assess the risk of bone fracture. In January 1998, the FDA approved a contrast agent-injectable solution of microscopic gas bubbles that

brighten ultrasound images when sonar-like waves hit them.

Recent developments and advances in contrast echocardiography have improved the diagnosis and evaluation of cardiac structures and function. The new developments in acoustic instrumentation with new contrast agents have improved studies previously obtained by standard two-dimensional echocardiography.

Nuclear medicine advances include improving imaging resolution and increasing sensitivity and quantitative accuracy. Positron emission tomography and single photon emission computed tomography are being used for new applications, such as determining the presence and severity of segmental and diffuse coronary artery disease. The range of biology studied with positron emission tomography radiopharmaceuticals has greatly expanded, involving more sophisticated tracers and more sophisticated data analysis. Improvements in nuclear scanning have improved visualization of various neuropsychiatric disorders, for example.

In the future, the Commission expects functional and multimodality imaging to continue developing and improving. We will monitor advances being made with augmented reality systems—a display technique that combines supplemental information with

the real-world environment. These diagnostic imaging systems are expected to be used in pre-operative planning and pre-operative and intra-operative data visualization. Additionally, we will monitor advances in existing technology, including improvements in imaging resolution and increased sensitivity.

Other devices and technologies

A variety of other devices and technologies have recently been developed, and MedPAC anticipates that these devices will have a small impact on hospital costs in the coming fiscal year. These technologies include microprocessor-based intelligent devices, drug delivery devices, robotic aides, and laser treatment systems.

Based on a review of the literature and the findings of the FDA expert panel, we anticipate an escalating trend toward microprocessor-based intelligent devices used in hospitals. These technologies include cardiac and drug-delivery implants and robotics used during minimally invasive cardiovascular and neurosurgery surgery. For example, during 1998, the FDA approved the use of a monitor that measures the brain's response to anesthesia to ensure patients are completely unconscious during surgery. The Commission anticipates

continued advances in both minimally invasive cardiovascular surgery and invasive neurosurgery. Additionally, we expect continuing advances in endoscopic procedures including fiber optic laser surgery, miniaturized robotic and other devices. For example, in January 1998, the FDA approved a new laser treatment for men with benign prostatic hyperplasia. Substantial developments are anticipated for microminiaturized devices in the next ten years.

We also anticipate continued advances in the development of combination device and drug products, such as:

- devices designed for implanted delivery of drugs, including intelligent devices with biosensors to monitor concentrations in body fluids and make adjustments in delivery rates, and
- drug-impregnated devices, in which drug delivery is an adjunct to the device function, such as cardiac implants with antithrombogenic drugs.

Finally, the Commission anticipates advances in the development of robotic aides over the next 10 years. These advances may lead to diffusion of telesurgery and the use of nontraditional settings as surgical sites. ■

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A P P E N D I X

D

**Analysis of Hospital Productivity
and Product Change**

Analysis of Hospital Productivity and Product Change

This appendix analyzes hospitals' productivity in delivering inpatient care and how the content of inpatient stays has changed over the past 10 years. Generally the output, or product, of inpatient care is thought of as completed stays, best measured as the number of case-mix adjusted discharges. In recent years, however, the service content of the average hospital discharge has changed markedly as lengths of stay dropped sharply, especially for diagnoses associated with extensive use of post-acute care.

As discussed in Chapter 3, the Medicare Payment Advisory Commission's (MedPAC) framework for updating payments under Medicare's prospective payment system (PPS) includes adjustments for productivity improvement and site-of-care substitution. We developed this analysis to help inform our decisions on an appropriate level or range for each of these factors.

The model includes a direct measure of productivity. However, the results of applying that measure to hospitals covered by PPS over time have to be interpreted cautiously because the concept of productivity requires measuring the inputs used to produce a constant product. In practice, holding quality or other aspects of the hospital product constant while measuring changes in input use is not possible. We do consider the potential effect on quality of care, however, in quantifying the

productivity adjustment and formulating an overall update recommendation.

We are not able to measure site-of-care substitution directly; rather, our analysis quantifies the broader concept of hospital product change. All declines in length of stay are measured as product change—whether resulting from acute-care costs being shifted to other providers or from technological innovations that simply shorten the time requirements of inpatient care. This requires us to make a judgment on what proportion of the measured product change represents site-of-care substitution.

The analysis has three components. The first tracks the change in inpatient costs per discharge and average length of stay for both Medicare and all patients. These data exhibit the important role that length of stay declines have played in bringing about the unusually low cost growth of the 1992–1996 period. The next section describes our broader model of the factors contributing to changes in hospital input use. For 1992 to 1996, this model provides two important estimates:

- the net impact of the large drop in length of stay from 1992 to 1996—cut inflation-adjusted costs by 2.4 percent per year, and
- the combined impact of the drop in length of stay and gains in productivity—reduced real costs by 2.7 percent a year.

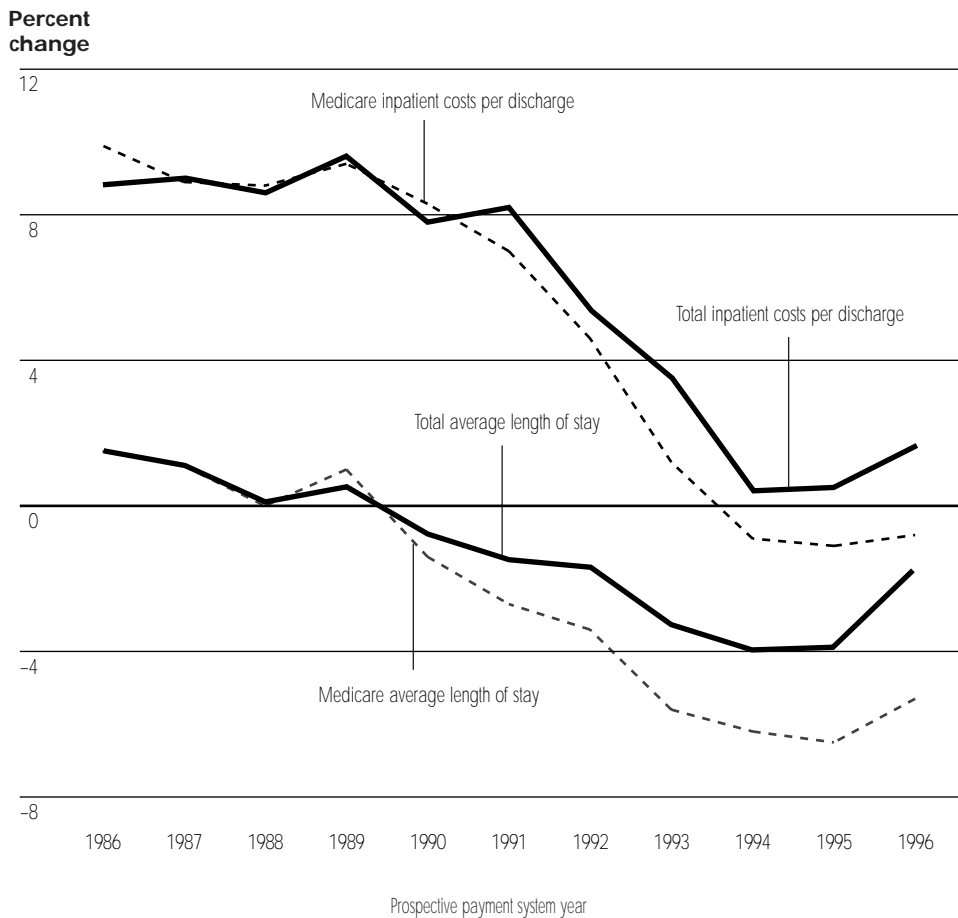
Medicare data are available only through 1996, but the final analysis presents “leading indicators” that suggest a somewhat different pattern for Medicare costs and length of stay in 1997 and 1998. It appears that the annual changes in Medicare costs per discharge will continue to be negative, and that factors other than declining lengths of stay are beginning to play a more critical role. The last section of the appendix provides information on the data sources and methods for our analysis.

Trends in inpatient costs per discharge and average length of stay

The annual increase in inpatient costs per discharge for all patients has fallen dramatically over the decade ending in 1996, and the trend in length of stay has followed a remarkably similar downward trajectory (see Figure D-1). The average length of stay held roughly constant during the late 1980s, when cost growth hovered around 9 percent. Length of stay began to fall in the early 1990s, and the annual decline reached 4 percent in both 1994 and 1995. Consistently, the rate of growth in per case costs began dropping in 1990 and reached an all-time low of only 0.4 percent in both 1994 and 1995. The trend turned around slightly in 1996—the decline in length of stay was somewhat smaller at 1.8 percent. Again

**FIGURE
D-1**

Annual change in inpatient costs per discharge and average length of stay, Medicare and total, 1986-1996



Note: The total inpatient costs per discharge and average length of stay data cover all inpatient services. This includes services delivered in both acute and other inpatient units (for example, hospital-based skilled nursing, transitional care), and care provided to patients covered by all payers as well as to uninsured patients. Both total and Medicare costs exclude graduate medical expenses. Prospective payment system years correspond roughly to federal fiscal years.

Source: MedPAC analysis of Medicare Cost Report data from HCFA.

following suit, cost inflation rose slightly to 1.5 percent.¹ The strong association between these rates of change provides compelling evidence that falling lengths of stay have been instrumental in bringing about the slower cost growth.

The growth in PPS costs per discharge mirrored that of all-payer costs through 1990 but has been lower in every year since. Beginning in 1994, PPS per case costs actually decreased for three straight years. Once again, average length of stay appears to be the dominant factor in this pattern. In each year from 1990

forward, the drop in PPS length of stay has been greater than that for all payers. At the low point in the cost trend—1994 and 1995—PPS length of stay was falling at a rate of more than 6 percent a year, compared to 4 percent overall.

The difference between the annual changes in per case costs and average length of stay has narrowed over time, however. In 1991, for example, all-payer costs increased by 8.2 percent while length of stay declined 1.5 percent—a difference of almost 10 percentage points. By 1995, cost inflation was down to 0.4 percent

while length of stay declined by 3.9 percent—a gap of only about 4 percentage points. This trend suggests that cost-reducing factors other than length of stay have come into play. One of these is lower inflation in the general economy, and another is dramatically lower growth in hospital wage levels relative to other industries (Bureau of Labor Statistics 1998). A key question, addressed below, is the extent to which productivity improvement has also played a role.

Expanded model of hospital input use

We have developed a model that sheds light on the influence of hospital product change and the inputs, or resources, required to produce a given product. In the following sections, we briefly describe the model and its relationship to our framework for PPS payment updates and then present the results of the model applied to the period of 1986 to 1996.

Overview of the model

This analysis is based on the equation shown in Table D-1. Hospitals' overall performance is measured as the inputs required to produce each unit of hospital output, or completed stay. Inputs (such as staff hours, food, and medical supplies) are measured as real costs (adjusted for inflation in the prices of hospital inputs). Completed stays are measured as discharges adjusted for real changes in case mix (that is, changes reflecting patient resource needs rather than coding improvements).

The discharge is the ultimate measure of hospital output in the context of PPS, as reflected in the decision to use it as the unit of payment. As discussed above, however, length of stay has been a major factor in the recent slowdown in costs per discharge. To focus on this important factor, we included length of stay as a separate component in the model.

Each hospital stay comprises a set of

¹ Due to changes in the format of the Medicare Cost Report in fiscal year 1996, an alternate method had to be used for calculating 1995-1996 changes. Consequently, these values are probably not as accurate as those of previous years. See the last section of the appendix for further information.

**TABLE
D-1**

Average annual change in variables related to productivity growth and change in inpatient hospital product, 1985–1996

Years	Real input use per discharge ^a	=	Length of stay ^b	+	Service intensity ^c	+	Real input use per service unit ^c
	Change in:		Change in:		Change in:		Change in:
	Inputs Discharges		Days Discharges		Services Days		Inputs Services
1985 to 1989	2.5%		0.8%		2.2%		- 0.3%
1989 to 1992	1.3		- 1.3		1.4		1.3
1992 to 1996	- 2.7		- 3.3		0.9		- 0.3

Note: The change in real input use per discharge approximates the sum of the changes in length of stay, service intensity, and real input use per service unit. The relationship is not exact due to rounding and small interactive effects. See the last section of this appendix for additional information on data and methods.

^a Real input use is measured as inpatient costs per discharge adjusted for price inflation as measured by the hospital market basket. The discharge measure is adjusted for real changes in case mix.

^b The patient day and discharge measures used in calculating length of stay are both adjusted for real case-mix change.

^c Services (for example, days of nursing care, surgeries, lab tests) are measured as total inpatient charges adjusted for inflation in service prices as measured by the hospitals and related institutions component of the consumer price index (CPI).

Source: MedPAC analysis of Medicare Cost Report and market basket data from the HCFA, case-mix data from the National Discharge Abstract Survey, and CPI data from the Bureau of Labor Statistics.

When the annual change in this measure is disaggregated into the three components described above—length of stay, service intensity per day, and intermediate input use—three distinct periods emerge in hospitals’ transition from a high cost-growth to a low cost-growth industry.

In the first period (1985 through 1989), real input use rose by 2.5 percent per year. Two of the three factors in the model contributed to this outcome: length of stay edged up (0.8 percent a year) while intensity per day accelerated substantially (2.2 percent a year). Most striking is the intensity increase, which may be linked at least partly to the widespread implementation of such expensive diagnostic procedures as computed tomography and magnetic resonance imaging scans. The increases in length of stay and intensity were partially offset by a 0.3 percent annual decline in the real inputs used per unit of services.

The second and third periods (1989 through 1992 and 1992 to 1996) contrast sharply. Real input use per case went up at the more modest rates of 1.3 percent per year in the second period, but then declined by a striking 2.7 percent annually in the third. The most important variable in this performance difference appears to be length of stay reduction, which was modest through 1992 (-1.3 percent per year) but very large thereafter (-3.3 percent a year). The real inputs used in producing services also played a role, however, rising by 1.3 percent per year before 1992 but declining 0.3 percent a year after that.

That input use per unit of output decreased only slightly from 1992 to 1996 may seem surprising when the industry’s overall cost growth was the lowest observed in nearly a quarter century. “Diminishing returns to scale” may be the driving factor in this difference. The overall service content of hospital admissions (combining the length of stay and intensity terms) dropped by 2.4 percent a year after 1992 (see Table D-2). With the number of discharges holding fairly steady, this meant that the overall quantity of services hospitals produced fell, and it is difficult to reduce input use per unit of output in the face of declining output.

services (for example, nursing care, x-rays, and surgeries). The intensity of care provided in the hospital can be represented as the volume of services per day. Hospitals’ productivity (unadjusted for quality change) would be measured as the inputs required to produce each unit of services. The production of a hospital discharge, then, can be viewed as combining three components: days per discharge, services per day, and inputs per unit of services. These factors are not independent, however. When the number of days in a patient’s stay is reduced and the costs of many services (particularly surgery) are unchanged, the measured intensity of services per day will inevitably increase. Netting the decrease in length of stay and the increase in intensity provides a more accurate indicator of the overall change in hospital product than the change in length of stay alone.

We rely primarily on the measure of real input use per service unit as context for developing our adjustment for productivity improvement. But two important caveats must be kept in mind.

First, when hospitals are able to cut patient stays without a corresponding increase in the use of other Medicare-

covered services, the resulting product change might be considered a form of productivity improvement. This would occur, for example, when an endoscopic surgical technique allows patients to be discharged earlier—and at the same level of functioning as previously. In our model, this phenomenon is measured as product change rather than productivity improvement, thus understating hospitals’ true productivity gains.

Second, our update framework contains a separate allowance for the increased costs hospitals will incur in implementing new quality-enhancing technologies. Prospectively, the scientific and technological advancement allowance and the productivity adjustment can be considered separately—the first positive and second negative. But when the results are measured retroactively using our model, the service-level input use term will capture the effects of both factors.

Results

Although the rate of change in real input use per discharge has varied considerably from year to year, the general trend has been toward slower growth over time.

**T A B L E
D - 2**

Average annual change in the components of inpatient hospital product, 1985-1996

Years	Hospital product	=	Length of stay ^a	+	Service intensity ^b
	Change in: Services Discharges		Change in: Days Discharges		Change in: Services Days
1985 to 1989	2.9%		0.8%		2.2%
1989 to 1992	0.2		- 1.3		1.5
1992 to 1996	- 2.4		- 3.3		0.9

Note: The net change in inpatient hospital product approximates the sum of the changes in length of stay and service intensity. The relationship is not exact due to rounding and small interactive effects.

^a The patient day and discharge measures used in calculating length of stay are both adjusted for real case-mix change.

^b Services (for example, days of nursing care, surgeries, lab tests) are measured as total inpatient charges adjusted for inflation in service prices as measured by the hospitals and related institutions component of the consumer price index (CPI).

Source: MedPAC analysis of Medicare Cost Report and market basket data from HCFA, case-mix data from the National Discharge Abstract Survey, and CPI data from the Bureau of Labor Statistics.

Prospective payment system years

The study is based on “PPS years,” a convention HCFA introduced when PPS was implemented in 1984. Each year includes cost reports filed for hospital fiscal years beginning at any time during a particular federal fiscal year. This means that a PPS year will bridge two federal fiscal years. Previous analysis has shown that the discharges represented in PPS year data are about equally split between the two applicable federal years. For example, the 1995 PPS year includes data for hospital fiscal years beginning as early as October 1994 and ending as late as September 1996. The price index data used in developing our inputs and services measures had to be recalculated to match HCFA’s data organized according to these PPS years.

Inputs

Inputs are items used in producing patient care (for example, staff time, food, supplies, equipment). These items are valued at their real cost to the hospital; that is, their actual cost adjusted for price inflation. The cost measure is total inpatient costs, which include services delivered in both acute and other inpatient units (such as hospital-based skilled nursing or transitional care) and care provided to patients covered by any payment source. Direct graduate medical education expenses were excluded because they are devoted primarily to producing education rather than to patient care. This new measure, which MedPAC staff developed last year, avoids the need to rely on a measure that reflects outpatient as well as inpatient costs.

The price adjustment is based on HCFA’s market basket index, which measures inflation for the inputs hospitals use in producing inpatient services through a series of price proxies. The version of the market basket used in PPS payment policy reflects a combination of wage increases for hospital workers and workers in other industries. For purposes of this study, MedPAC staff modified the market basket to reflect hospital wages exclusively.

Recent changes in costs per discharge and length of stay

The data needed to quantify the real input use model are available only through 1996 because they are dependent on the availability of Medicare Cost Reports. However, the American Hospital Association’s (AHA) National Hospital Panel Survey is useful in assessing more recent developments, despite differences in the construct of the measures used.

The AHA data suggest the industry’s performance in fiscal 1997 and 1998 may have changed in two important ways (see Figure D-2). First, the annual growth in total expenses per adjusted admission has fallen to a new low—just 0.2 percent in both years. At the same time, the decline in length of stay for patients over age 65, although still substantial, was less than half the drop of recent years—only 3.1 percent in 1997 and 2.0 percent in 1998.²

These changes suggest that factors other than length of stay could now be playing a more prominent role in holding down costs. Reduced input use per discharge appears to have been the primary factor; a measure of labor input

use (adjusted admissions per full-time equivalent employee) reached the highest level ever recorded in 1997, and then rose again in 1998 (AHA 1998).

Data and methods for measuring input use and product change

This summary of methodology documents the sample and data source used in quantifying our model of hospital input use and defines the time periods involved. The final sections explain the approach used in developing each of the primary variables (inputs, discharges, patient days, and services).

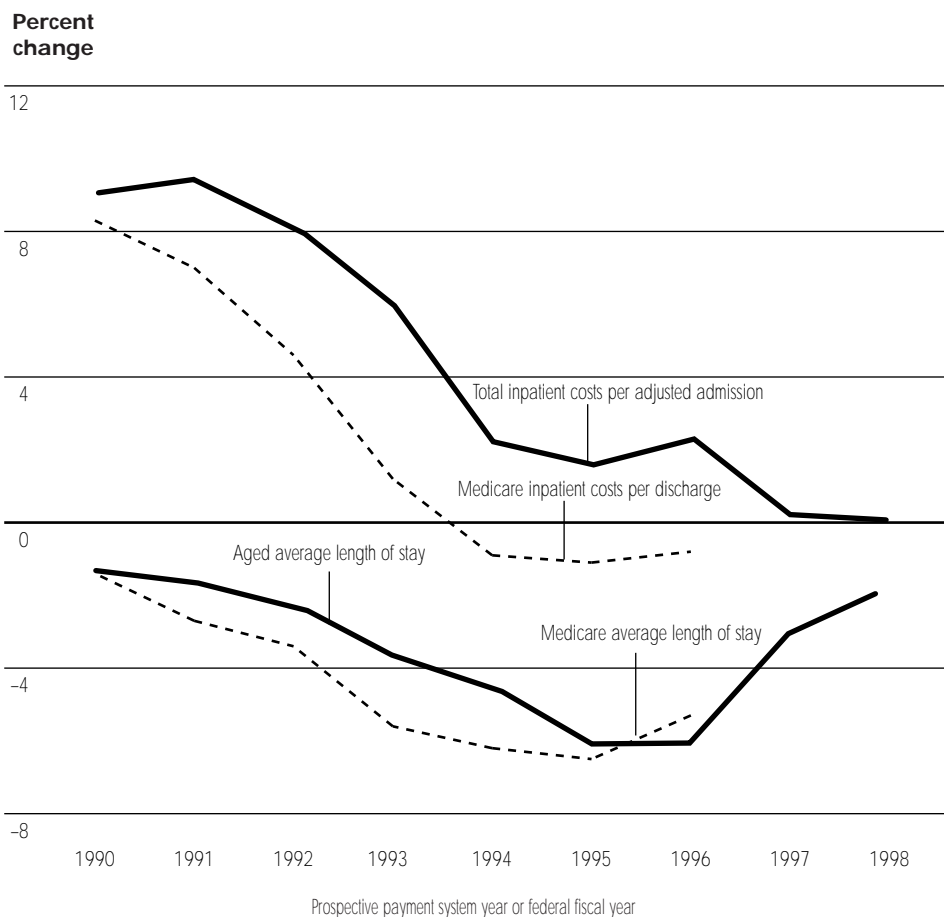
Sample and data source

All four of the terms in the equation (shown in Table D-1) are based on the same sample of hospitals and use data from the Health Care Financing Administration’s (HCFA) Medicare Cost Report file. A two-year cohort was identified for each measurement of annual change. Each cohort included all hospitals eligible for payment under PPS for which the required data (passing MedPAC edit checks) were available in both years.

2 While the reduced rate of decline in length of stay shown in Figure D-2 is for the aged population, the same phenomenon is seen in the length of stay for all patients.

**FIGURE
D-2**

Annual change in costs per discharge and average length of stay through 1998



Note: The total expenses per adjusted admission and aged length of stay data (from the American Hospital Association) are based on community hospitals (which include some facilities excluded from prospective payment) and government fiscal years. The Medicare inpatient costs per discharge and Medicare length of stay data (from HCFA) are based only on hospitals paid under prospective payment and on prospective payment system years.

Source: MedPAC analysis of data from the American Hospital Association's National Panel Survey and Medicare Cost Report data from HCFA.

Discharges

This is a count of all discharges from PPS hospitals' acute care and long-term care units, adjusted for real changes in case mix. Unfortunately, a comparable discharge variable could not be constructed for 1996 due to a change in the format of the Medicare Cost Report. Consequently, the change in discharges had to be estimated using data from the AHA's Annual Survey of Hospitals. While the AHA's measure is identical, some degree of bias resulted from differences in the sample of hospitals available from the annual survey and cost report files.

The case-mix adjustment is based on

all payers' data from a sample of about 400 hospitals from the National Hospital Discharge Survey. The survey aggregates acute care discharges by DRG, and then we applied Medicare's DRG weights (which are recalibrated annually) to create yearly case-mix index values.

The last step estimated the portion of the annual case-mix index change that was real; that is, reflecting changes in patient resource requirements rather than improvement in DRG coding or medical records documentation. This determination drew on past estimates of the proportion of Medicare case-mix index change that was real, which were informed by a RAND recoding study funded by HCFA and the

Prospective Payment Assessment Commission (ProPAC). Generally, ProPAC's work found that the proportionate effect of improved coding and medical records documentation has been most pronounced following changes in the structure of DRGs and has declined over time. The current analysis found that real case-mix change for all patients has followed a more stable path than that for Medicare patients alone.

Patient Days

Like the discharge measure, the patient days variable reflects all patients in the acute care and long-term care units of PPS hospitals, adjusted for real case-mix change.

Services

The services measure reflects all units of service for which a charge is applied. This includes days of room and board and nursing care, as well as various ancillary services (for example, surgery, X-rays, physical therapy procedures). MedPAC's measure is calculated as total charges adjusted for inflation in service prices. The increase in a hospital's total charges from one year to the next will generally reflect three types of changes:

- providing a greater number of services,
- substituting more costly services (for instance, an MRI exam in place of a traditional X-ray), and
- raising service prices.

Once the effect of price increases has been removed, the measure will reflect change in the other two factors, which together determine the hospital's total volume of services.

The Hospitals and Related Institutions component of the CPI, which is published by the Bureau of Labor Statistics (BLS), was used for the price adjustment. The hospital CPI is based on a sample of service units in about 350 hospitals, with the data taken from each hospital's price master. While BLS's decision to base the hospital CPI on charges is well suited for the purposes of this study, a charge-based index does a poor job of measuring inflation in the cost of hospital care. A new method was implemented effective January 1, 1997.

References

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A P P E N D I X

E

**Simulation of Conversion
Factor Updates for
Physicians' Services**

Simulation of Conversion Factor Updates for Physicians' Services

The Commission's simulations of conversion factor updates for 2000 through 2009, discussed in Chapter 7, are based on unpublished quarterly data from the Health Care Financing Administration (HCFA) on Medicare's actual expenditures for physicians' services. The data were available for the second quarter of calendar year 1996 through the first quarter of calendar year 1998.

To simulate future conversion factor updates, assumptions were necessary about the two determinants of those updates: the Medicare Economic Index (MEI) and the sustainable growth rate (SGR) system's update adjustment factor.

Medicare Economic Index

The MEI was assumed to increase by a constant 2.3 percent per year. This rate was used by HCFA to calculate the conversion factor update for 1999.

Update adjustment factor

The update adjustment factor is determined

Calculation of update adjustment factor for 1999

$$\begin{aligned} \text{Update adjustment factor} &= \frac{(\text{Allowed spending, 1997-1999}) - (\text{Actual spending, 1997-1998})}{\text{Estimated actual spending, 1999}} \\ &= \frac{(\text{Allowed spending, 1999}) + (\text{Allowed spending, 1997-1998}) - (\text{Actual spending, 1997-1998})}{\text{Estimated actual spending, 1999}} \\ &= \frac{(\text{Allowed spending, 1999}) - (\text{Excess spending, 1997-1998})}{\text{Estimated actual spending, 1999}} \end{aligned}$$

by the difference between allowed expenditures and actual expenditures. Allowed expenditures are baseline 1997, expenditures, projected forward by the SGR. As specified in the Balanced Budget Act of 1997 (BBA), estimated actual spending in the update adjustment factor is actual spending for the preceding year, which ends on March 31, increased by the SGR.¹ If allowed and estimated actual spending for a year are equal and there was no excess spending in previous years, the update adjustment factor equals one.

In the Commission's simulations, allowed spending was determined by an assumed constant SGR of -0.3 percent, which is the SGR for fiscal year 1999. It includes an increase in physicians' fees of 2.1 percent, a decrease in

Medicare fee-for-service enrollment of 4.3 percent, an increase in real gross domestic product (GDP) per capita of 1.3 percent, and an increase due to law and regulations of 0.7 percent.

To simulate a calendar year SGR system, actual expenditures during the year before implementation of a conversion factor update had to be estimated. Those estimates were based on four factors:

- the applicable conversion factor update,
- a decrease in Medicare fee-for-service enrollment of 4.3 percent,
- an increase in volume and intensity of services per beneficiary of 2 percent, and

¹ In the case of the update adjustment factor for 1999, estimated actual spending in 1999 equals actual spending for the year ending March 31, 1998, increased by the SGR for fiscal year 1998.

- an increase due to law and regulations of 0.7 percent.

The assumptions about the decreases in fee-for-service enrollment and the increases in spending due to law and regulations are the same as the SGR assumptions. The assumed increase in volume and intensity of services is the same as the actual increase in volume and intensity that occurred from 1992 through 1996.

The simulation of a calendar year SGR system represented a minimal modification of the current system. As discussed in Chapter 7, further Commission work could lead to an alternative simulation methodology.

Simulation results

The simulations show that a calendar year SGR system can reduce oscillation in conversion factor updates (see Table E-1). Given the assumptions used in these simulations, under the current system, conversion factor updates would oscillate between a maximum of 5.3 percent and a minimum of -4.7 percent from 2004 through 2009. The simulated calendar year system does not exhibit such oscillation.

The simulations also show the effects

of the transition to a calendar year system. Assuming a calendar year system is implemented in time for the 2000 conversion factor update, the simulated update for that year would be 0.3 percent (see Table E-1). In contrast, continuation of the current system would lead to an update of 2.4 percent in 2000, according to the simulations. This difference reflects a one-time change in the update adjustment factor due to elimination of the mismatch of time periods that would otherwise occur.

While a calendar year system could lead to a lower conversion factor update in 2000, the simulations suggest that the advantage for physicians of continuation of the current system may be short lived. Lower updates would occur in 2001, 2002, and 2003 under the current system than under a calendar year system, according to the simulations. The current system's lower updates during this period would be followed by the oscillation in updates discussed earlier.

Sensitivity analysis

To examine the effects of elimination of time lags on conversion factor updates further, the Commission also conducted a sensitivity analysis. Two alternative

patterns of volume growth were considered.

The first alternative was an increase in volume growth from 2.0 percent to 3.6 percent per year, starting in 2001. As discussed in Chapter 7, HCFA actuaries are projecting such an increase in volume growth due to aging of the beneficiary population and other factors. This alternative provided a perspective on the behavior of a calendar year SGR system in addition to one in which a constant 2.0 percent annual increase in volume growth was assumed.

The analysis did not show oscillation in conversion factor updates after the volume growth rate was increased (see Table E-2). Negative conversion factor updates would begin, however, in 2003, after the system recognized the increase in volume growth occurring in 2001.

The second alternative considered in the sensitivity analysis assumed a high level of volume growth in 2000 of 9.3 percent, instead of a constant 2 percent rate. As discussed in Chapter 7, volume growth of 9.3 percent was the highest rate of volume growth observed from 1985 to 1991. Since a year of high volume growth would lead to a large negative update adjustment factor afterward, this "one bad

TABLE E-1

Results of simulation of conversion factor updates, 2000-2009

Year	Current sustainable growth rate system					Calendar year sustainable growth rate system				
	Allowed spending	Excess spending	Estimated actual spending	Update adjustment factor	Conversion factor update	Allowed spending	Excess spending	Estimated actual spending	Update adjustment factor	Conversion factor update
2000	\$400	(\$2)	\$401	0.1%	2.4%	\$399	\$4	\$403	-2.0%	0.3%
2001	399	3	404	-2.0	0.2	398	3	397	-0.7	1.6
2002	397	10	404	-4.1	-1.8	397	3	397	-0.9	1.4
2003	396	10	396	-2.4	-0.1	395	3	395	-0.9	1.4
2004	395	(2)	384	3.4	5.3	394	3	394	-0.9	1.4
2005	394	(14)	382	6.9	5.3	393	3	393	-0.9	1.4
2006	393	(12)	395	2.3	4.7	392	3	392	-0.9	1.4
2007	392	5	408	-5.4	-3.2	391	3	391	-0.9	1.4
2008	390	27	412	-11.9	-4.7	389	3	389	-0.9	1.4
2009	389	29	391	-7.7	-4.7	388	3	388	-0.9	1.4

Note: Spending amounts are a multiple of unpublished spending amounts from HCFA.

Source: MedPAC analysis.

TABLE E-2

Sensitivity analysis of a calendar year sustainable growth rate system, 2000-2009

Volume growth of 2.0 percent in 2000 and volume growth of 3.6 percent in 2001-2009

Year	Allowed spending	Excess spending	Estimated actual spending	Update adjustment factor	Conversion factor update
2000	\$399	\$4	\$403	- 2.0%	0.3%
2001	398	3	398	- 0.7	1.6
2002	397	3	397	- 0.9	1.4
2003	395	16	402	- 5.5	- 3.3
2004	394	16	388	- 2.3	- 0.1
2005	393	15	387	- 2.3	- 0.1
2006	392	15	386	- 2.4	- 0.1
2007	391	15	385	- 2.4	- 0.1
2008	389	15	383	- 2.4	- 0.1
2009	388	15	382	- 2.4	- 0.1

Note: Spending amounts are a multiple of unpublished spending amounts from HCFA.

Source: MedPAC analysis.

relatively high volume growth. This overcompensation is due to use of the high-volume-growth year's spending to estimate spending in subsequent years. If volume growth actually returns to trend during those subsequent years, estimated spending will be too high, causing unnecessarily low conversion factor updates. Once the system recognizes that earlier updates were too low, it will produce much higher updates. This cycle of errors and correction of errors leads to oscillation in the updates.

To examine the role of the limits on the conversion factor updates, the sensitivity analysis also considered one year of high volume growth (9.3 percent) in 2000 and no limits on the updates (see Table E-3). The analysis showed that removal of the limits would not eliminate oscillation in conversion factor updates. The oscillation would occur over fewer years, however. The absence of limits could also lead to large changes in the conversion factor.

As discussed in Chapter 7, a calendar year SGR system, other than the one simulated here, may be possible that does not lead to oscillation in conversion factor updates even in years after the volume of services has grown at a relatively high rate.

year" alternative was expected to trigger the lower limit on the conversion factor update. That limit is MEI minus 7 percentage points. Analysis of this alternative was intended to show the effects of the limit on the conversion factor update in a calendar year SGR system.

The results of analysis of this second alternative showed, as expected, that the lower limit of the conversion factor would

be reached, starting in 2002, as the system recognizes the high rate of volume growth in 2000 (see Table E-3). More important, the analysis also showed oscillation in the conversion factor updates, from a minimum of -4.7 percent to a maximum of 5.3 percent, starting in 2002. Such oscillation means that a calendar year system, of the type simulated, would tend to overcompensate for one year of

TABLE E-3

Sensitivity analysis of a calendar year sustainable growth rate system and a one-time increase in the volume of services, 2000-2009

Volume growth of 9.3 percent in 2000 and volume growth of 2.0 percent in 2001-2009

Volume growth of 9.3 percent in 2000, volume growth of 2.0 percent in 2001-2009 and no conversion factor update limits

Year	Volume growth of 9.3 percent in 2000 and volume growth of 2.0 percent in 2001-2009					Volume growth of 9.3 percent in 2000, volume growth of 2.0 percent in 2001-2009 and no conversion factor update limits				
	Allowed spending	Excess spending	Estimated actual spending	Update adjustment factor	Conversion factor update	Allowed spending	Excess spending	Estimated actual spending	Update adjustment factor	Conversion factor update
2000	\$399	\$4	\$403	- 2.0%	0.3%	\$399	\$4	\$403	- 2.0%	0.3%
2001	398	3	397	- 0.7	1.6	398	3	397	- 0.7	1.6
2002	397	60	425	- 20.9	- 4.7	397	60	425	- 20.9	- 19.1
2003	395	63	398	- 16.5	- 4.7	395	3	338	16.1	18.8
2004	394	42	373	- 5.5	- 3.3	394	3	395	- 1.0	1.3
2005	393	3	354	10.0	5.3	393	3	392	- 0.9	1.4
2006	392	(22)	367	12.8	5.3	392	3	392	- 0.9	1.4
2007	391	(33)	380	11.6	5.3	391	3	391	- 0.9	1.4
2008	389	(29)	393	6.6	5.3	389	3	389	- 0.9	1.4
2009	388	(11)	407	- 1.9	0.4	388	3	388	- 0.9	1.4

Note: Spending amounts are a multiple of unpublished spending amounts for HCFA.

Source: MedPAC analysis.