

CHAPTER

# 10

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**Inpatient rehabilitation  
facility services**

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

- 10** The Congress should eliminate the update to the Medicare payment rates for inpatient rehabilitation facilities in fiscal year 2014.

**COMMISSIONER VOTES: YES 16 • NO 0 • NOT VOTING 0 • ABSENT 1**

## Inpatient rehabilitation facility services

### Chapter summary

Inpatient rehabilitation facilities (IRFs) provide intensive rehabilitation services to patients after an injury, illness, or surgery. Rehabilitation programs at IRFs are supervised by rehabilitation physicians and include services such as physical and occupational therapy, rehabilitation nursing, prosthetic and orthotic devices, and speech–language pathology. In 2011, 1,165 IRFs treated over 371,000 Medicare fee-for-service (FFS) beneficiaries. Between 2010 and 2011, Medicare FFS payments for IRFs increased from \$6.14 billion to \$6.46 billion. In 2011, the number of beneficiaries who received care at IRFs increased, as did the average payment per case.

### Assessment of payment adequacy

Our indicators of Medicare payment adequacy for IRFs, discussed below, are generally positive.

**Beneficiaries’ access to care**—Our measures of access to care suggest that beneficiaries generally maintained access to IRF services in 2011, with the number of cases and number of unique patients per 10,000 beneficiaries increasing.

- **Capacity and supply of providers**—The aggregate supply of IRFs declined slightly in 2011. While the total number of freestanding facilities increased slightly, the number of hospital-based facilities decreased by

### In this chapter

- Are Medicare payments adequate in 2013?
- How should Medicare payments change in 2014?

1.6 percent, for a total of 1,165 facilities in 2011. The number of rehabilitation beds declined moderately for both hospital-based and freestanding facilities (0.8 percent decline to about 35,250 beds), and the occupancy rate increased for both facility types (1.4 percent rise overall to 63.3 percent). While IRFs may offer the most intense program of rehabilitation services, they are not the sole providers of rehabilitation services in communities, with skilled nursing facilities (SNFs) and home health agencies as potential alternatives to beneficiaries with rehabilitation care needs. Despite the overall supply of IRF beds decreasing slightly, other measures such as low occupancy rates, growth in volume, and availability of other rehabilitation alternatives suggest that capacity remains adequate to meet demand.

- **Volume of services**—The volume of Medicare FFS beneficiaries treated in IRFs—as a measure of resources or services used—grew by about 3 percent in 2011.

**Quality of care**—Data suggest that quality of care across the IRF industry remained fairly stable between 2009 and 2010. Outcomes on a functional improvement measure increased from 26.7 points in 2009 to 27.4 points in 2010. Performance on two hospital readmission measures was roughly unchanged between 2009 and 2010; in 2010, the median rate of discharge to an acute care hospital was about 10 percent and the rate of hospital readmission within 30 days after discharge to the community was 12 percent. While performance decreased slightly on admission to a SNF within 30 days after discharge to the community (4.0 percent in 2010 compared with 3.6 percent in 2009), rates of discharge to the community improved moderately (71.1 percent in 2010 compared with 70.6 percent in 2009).

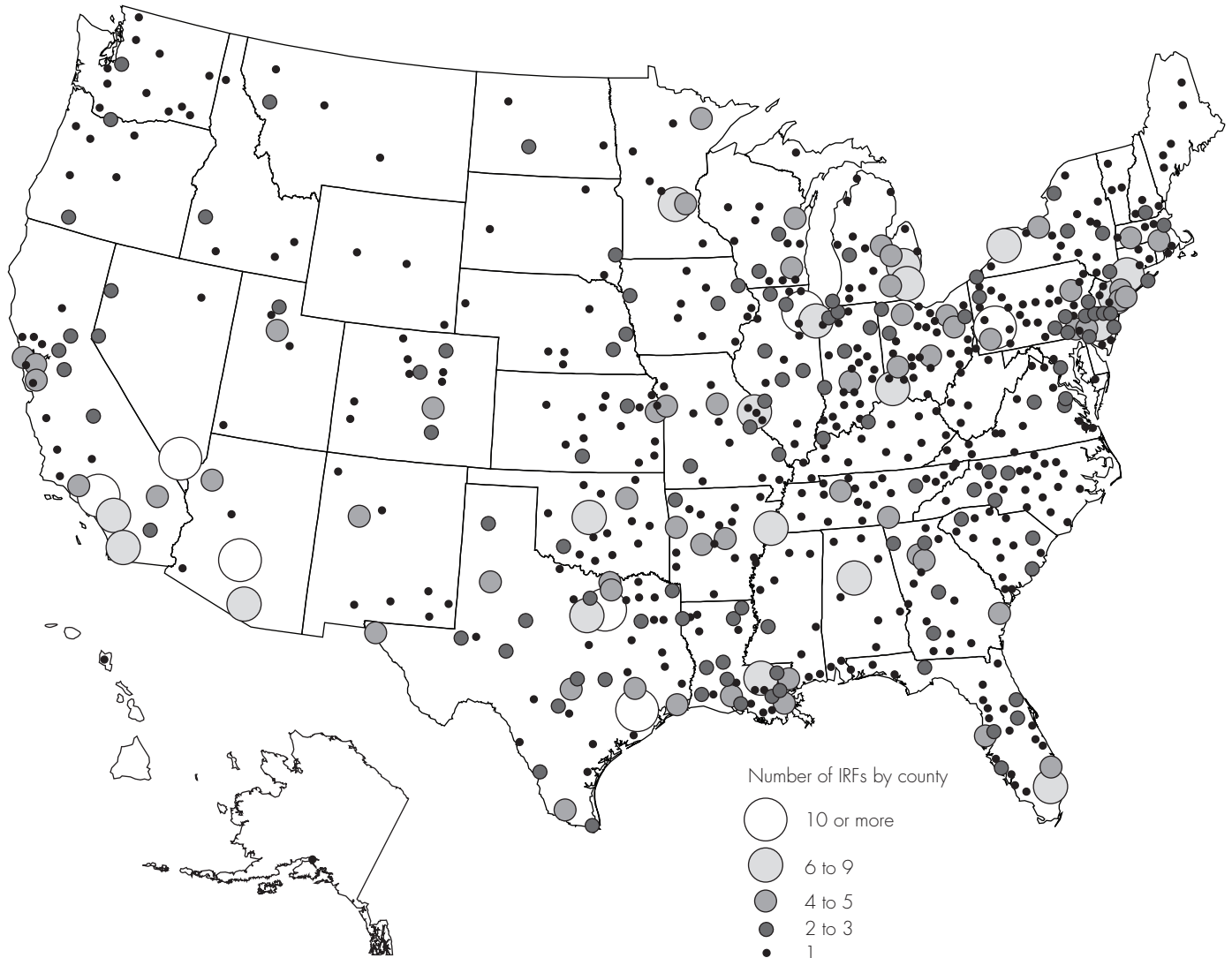
**Providers' access to capital**—Hospital-based IRF units access capital through their parent institutions, which have adequate access to capital. One major freestanding IRF chain that accounts for about 50 percent of freestanding IRF Medicare revenues and 23 percent of revenues for the entire IRF industry has good access to capital. We were not able to determine the ability of other freestanding facilities to raise capital.

**Medicare payments and providers' costs**—In 2011, Medicare payments per case to IRFs grew faster than costs per case; between 2010 and 2011, payments grew 2.5 percent compared with 1.6 percent for costs. The aggregate Medicare margin for IRFs in 2011 was 9.6 percent. We project a 2013 Medicare IRF margin of 8.5 percent.

On the basis of these indicators, the Commission believes IRFs can continue to provide Medicare beneficiaries with access to safe and effective rehabilitation care with no update to the payment rates in fiscal year 2014. ■

**FIGURE  
10-1**

**Geographic distribution of IRFs, 2011**



Note: IRF (inpatient rehabilitation facility).

Source: MedPAC analysis of 2011 Provider of Services files from CMS.

## Background

After an illness, injury, or surgery, some patients enter intensive rehabilitation programs at an inpatient rehabilitation facility (IRF) and receive services such as physical and occupational therapy and rehabilitation nursing in a coordinated, multidisciplinary manner. For these services to qualify for Medicare coverage, the care for IRF patients must be supervised by a rehabilitation physician, use an interdisciplinary approach to care, and

address a documented clinical need for therapy in at least two disciplines. IRFs may be specialized units within an acute care hospital or specialized freestanding hospital, which tend to be larger. Approximately 80 percent of facilities are hospital-based units and 20 percent are freestanding. However, hospital-based units accounted for only 55 percent of Medicare discharges to IRFs in 2011.

In 2011, there were 1,165 IRFs in the United States, representing about 35,250 beds, with at least one in every state and the District of Columbia (Figure 10-1). In

**TABLE  
10-1**

**Medicare FFS spending, volume, and utilization for IRFs, 2002–2011**

	2002	2004	2006	2008	2009	2010	2011	Average annual change			Annual change
								2002–2004	2004–2008	2008–2010	2010–2011
Total Medicare spending (in billions)	\$4.97	\$6.58	\$6.22	\$5.93	\$6.03	\$6.14	\$6.46	15.1%	-2.6%	1.7%	5.2%
Number of cases	446,000	495,000	404,633	356,000	364,000	359,000	371,288	5.3	-7.9	0.4	3.3
Unique patients per 10,000 FFS beneficiaries	115.7	123.0	102.2	91.5	93.0	91.1	92.7	3.1	-7.1	-0.2	1.8
Payment per case	\$11,127	\$13,290	\$15,380	\$16,646	\$16,552	\$17,085	\$17,398	9.3	5.8	1.3	1.8
ALOS (in days)	13.2	12.7	13.0	13.3	13.1	13.1	13.0	-2.3	1.3	-0.8	-0.8

Note: FFS (fee-for-service), IRF (inpatient rehabilitation facility), ALOS (average length of stay). With respect to unique FFS patients in a particular year, each IRF FFS patient is counted only once during that year, regardless of whether the person had multiple IRF admissions in that year. Previous analyses used data on total Medicare spending from the Office of the Actuary, rather than payment data from Medicare Provider Analysis and Review (MedPAR) files. Medicare hospital cost report data from CMS shows a 2.5 percent increase in average payment per case; source differences include accounting for settlements in the cost report data, slight time period differences, and completeness of data.

Source: MedPAC analysis of MedPAR data from CMS.

general, IRFs are concentrated in highly populated states that have large Medicare populations. Overall, 69 percent of beneficiaries live in a county that has at least one IRF: 31 percent of Medicare beneficiaries live in a county that does not have an IRF, while 25 percent of beneficiaries live in a county that has only one IRF, and 44 percent live in a county with two or more IRFs. However, IRFs are not the sole provider of rehabilitation services in communities; skilled nursing facilities (SNFs), home health agencies, comprehensive outpatient rehabilitation facilities, and independent therapy providers also furnish rehabilitation services. Given the number and distribution of these other rehabilitation therapy providers relative to IRFs, it is unlikely that many areas exist where IRFs are the only provider of rehabilitation therapy services available to Medicare beneficiaries.

In this chapter, our analysis includes only Medicare beneficiaries in the fee-for-service (FFS) program. Relatively few Medicare beneficiaries use IRF services, because to qualify for Medicare coverage, IRF patients must be able to tolerate and benefit from intensive rehabilitation therapy, which typically consists of at least three hours of therapy a day for at least five days a week.

Nevertheless, over 371,000 Medicare FFS beneficiaries received care in IRFs in 2011 (Table 10-1) with almost \$6.5 billion dollars in Medicare payments. Medicare is the principal payer for IRF services, accounting for 62 percent of total IRF discharges in 2011. Almost all IRF Medicare patients (95 percent) were admitted to an IRF directly from an acute care hospital in 2011. A small percentage of patients (2.4 percent) were admitted from a community setting, and the rest (2.6 percent) were admitted from other health care facilities, such as SNFs. Beneficiaries admitted to an IRF directly from the community must pay Medicare’s Part A inpatient hospital deductible, which is \$1,184 in 2013. With respect to patient demographics, most Medicare IRF patients in 2011 were White (81 percent) and female (58 percent), 10 percent were African American, and 4 percent were Hispanic. The demographic distribution of Medicare IRF patients is similar to the distribution in the general Medicare population (Medicare Payment Advisory Commission 2012a), although the proportion of Hispanic patients treated at IRFs is lower than in the general Medicare population (4 percent vs. 8 percent). Patients’ median age in 2011 was 77 years.

## Medicare IRF classification requirements and coverage criteria

To qualify as an IRF for Medicare payment, both freestanding and hospital-based facilities must meet the Medicare conditions of participation for acute care hospitals. They must also meet other classification criteria, which include:

- have a preadmission screening process to determine that each prospective patient is likely to benefit significantly from an intensive inpatient rehabilitation program;
- ensure that the patient receives close medical supervision and furnish—through qualified personnel—rehabilitation nursing, physical therapy and occupational therapy, and, as needed, speech–language pathology, social services, psychological (including neuropsychological) services, and orthotic and prosthetic devices;
- have a medical director of rehabilitation with training or experience in inpatient rehabilitation who provides services on a full-time basis for freestanding facilities, or at least 20 hours per week for hospital-based rehabilitation units;
- use a coordinated interdisciplinary team approach led by a rehabilitation physician that includes a rehabilitation nurse, a social worker or case manager, and a licensed therapist from each therapy discipline involved in treating the patient; and
- meet the compliance threshold, which specifies that no fewer than 60 percent of all patients admitted to the IRF must have at least 1 of 13 conditions, specified by CMS, as a primary diagnosis or comorbidity.<sup>1</sup>

The compliance threshold mandates that a certain proportion of patients in each IRF must have specific diagnoses identified by CMS as typically requiring intensive inpatient rehabilitation. The intent of the compliance threshold, as well as the other classification criteria, is to distinguish IRFs from acute care hospitals for payment purposes. If an IRF does not meet the compliance threshold, Medicare will pay for all its cases on the basis of the inpatient prospective payment system (PPS) rather than at IRF discharge rates. From 1984 through 2004, the compliance threshold required that 75 percent of an IRF’s cases have 1 of 10 diagnoses. In 2002, CMS suspended enforcement of the rule because of inconsistent enforcement patterns among Medicare’s fiscal

intermediaries. In 2004, CMS revised the compliance threshold policy and enforcement in several ways: first, by increasing the number of conditions that count toward the threshold to 13 (by redefining the arthritis conditions that counted);<sup>2</sup> second, by clarifying that only a subset of patients with major joint replacement—a condition that was commonly treated in IRFs—counted toward the compliance threshold; and third, by enforcing IRFs’ compliance with the threshold consistently. The combination of not allowing most major joint replacement patients to count toward the threshold and renewed enforcement of the threshold resulted in a substantial decline in the volume of Medicare patients treated in IRFs after 2004. As volume declined, occupancy rates and the number of rehabilitation beds fell as well. Case-mix severity increased, however, as the IRF patient population shifted from less severe hip and knee patients to patients with more severe disorders who counted toward the threshold. Growth in cost per case increased as well—a function of greater patient severity (i.e., higher case-mix weight) and of the facilities’ fixed costs spread across fewer patients.

The compliance threshold, originally set at 75 percent, was permanently capped at 60 percent in 2007 by the Medicare, Medicaid, and SCHIP Extension Act of 2007 (MMSEA). At that point, the industry was largely operating at 60 percent compliance. Since then, the industry has begun to stabilize in response to the compliance threshold. Although IRFs’ efforts to meet the compliance threshold since 2004 had a significant impact on IRF volume, the decline was consistent with the underlying reason for the compliance threshold—to direct only the most clinically appropriate types of cases to this intensive, costly setting.

Determining compliance can be complex. A case is first evaluated for compliance based on the impairment group code, a category that describes the primary reason for admission that is later used to assign a case to a case-mix group (CMG) for payment. If compliance cannot be determined based on the impairment group code, the case is evaluated for compliance based on the patient’s International Classification of Diseases, Ninth Revision, Clinical Modification (ICD–9–CM) codes (a billing system that classifies diseases and injuries). Guidelines list approximately 1,300 codes that could qualify a case as being associated with a compliant condition, and compliance is presumed if the ICD–9–CM code applies to either the “primary” impairment for which a patient is receiving rehabilitation or to a patient comorbidity.

Medicare applies additional criteria that govern whether IRF services are covered for an individual Medicare beneficiary. Revised coverage criteria, which became effective in January 2010, clarified which patients are appropriate to be treated in an IRF, when therapy must begin, and how and when beneficiaries are evaluated. Specifically:

- The patient requires therapy in at least two modalities, one of which must be physical or occupational therapy.
- The patient generally requires and can reasonably be expected to benefit from intensive rehabilitation therapy that most typically consists of at least three hours of therapy a day at least five days a week.
- An IRF admission for the purpose of assessing whether a patient is appropriate for IRF care is no longer covered and therapy must begin within 36 hours from midnight of the day of admission.
- The patient is sufficiently medically stable at the time of the IRF admission to be able to actively participate in intensive therapy.
- The patient requires supervision by a rehabilitation physician. This requirement is satisfied by physician face-to-face visits with a patient at least three days a week.

Revised process and documentation requirements were also effective January 2010 that addressed the timing and requirements for rehabilitation physician involvement in preadmission screening, postadmission evaluation, development of individualized care plans, and interdisciplinary team meetings.

### **IRF prospective payment system**

Before January 2002, IRFs were paid on the basis of their average costs per discharge, up to an annually adjusted facility-specific limit. Pursuant to the Balanced Budget Act of 1997, IRFs began to be paid in 2002 under a PPS based on per discharge rates that vary according to rehabilitation needs, area wages, and certain facility characteristics. As of fiscal year 2004, all IRFs were paid under the IRF PPS. Under the PPS, Medicare patients are assigned to one of 92 CMGs that are organized by clinical condition and expected resource needs. In 87 of these groups, patients are assigned based on the primary reason for intensive rehabilitation care (e.g., a stroke or burns) and their age and levels of functional and cognitive impairments. In each

CMG, patients are further categorized into one of four payment tiers based on certain comorbidities they may have that can increase the cost of care relative to the costs of caring for an average beneficiary in that CMG. Each CMG has its own payment rate, and each tier has an adjustment that reflects the costliness of that tier's patients relative to others in the CMG. The other five CMGs are for patients discharged before the fourth day and for those who die in the facility. IRFs receive lower payments for patients who are discharged to another facility when the length of stay is less than that typically provided to patients with the same condition. For high-cost outliers, IRFs receive the regular CMG payment rate plus 80 percent of their costs above a fixed-loss threshold. For more information on Medicare's IRF payment system, see the Commission's IRF Payment Basics document at [http://medpac.gov/documents/MedPAC\\_Payment\\_Basics\\_12\\_IRF.pdf](http://medpac.gov/documents/MedPAC_Payment_Basics_12_IRF.pdf).

### **FFS Medicare spending trends for IRFs**

In 2011, FFS spending on IRFs increased by over 5 percent to \$6.46 billion, the highest level since 2006. Aggregate expenditures for IRF services in the Medicare FFS program grew after implementation of the PPS in 2002, when these expenditures totaled nearly \$5 billion; between 2002 and 2004, they grew at an average annual rate of 15.1 percent to about \$6.6 billion (Table 10-1, p. 218). Between 2005 and 2008, however, aggregate FFS expenditures for IRFs fell, as more beneficiaries enrolled in Medicare Advantage (MA) plans and as facilities adjusted to meet the compliance threshold that CMS reinstated in 2004. FFS expenditures also fell when CMS reduced IRF payments in 2006 and 2007 by 1.9 percent and 2.6 percent, respectively, to adjust for changes in IRF coding practices that CMS analyses determined did not reflect real changes in IRF patients' severity of illness. Aggregate FFS expenditures for IRF services increased in 2009 and 2010.

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### **Are Medicare payments adequate in 2013?**

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To assess whether payments for fiscal year 2013 are adequate to cover the costs that efficient providers incur and how much payments should change in fiscal year 2014, we examine several indicators of payment adequacy. Specifically, we assess beneficiaries' access to care by examining the supply and capacity of IRF providers and changes over time in the volume of services provided,



**TABLE  
10-2**

**Supply of hospital-based and nonprofit IRFs continued to decline in 2011, with total supply declining modestly**

Type of IRF	2004	2005	2006	2008	2009	2010	2011	Average annual change		Annual change
								2004–2008	2008–2010	2010–2011
All IRFs	1,221	1,235	1,225	1,202	1,196	1,179	1,165	-0.4%	-1.0%	-1.2%
Urban	1,024	1,027	1,018	1,001	992	981	972	-0.6	-1.0	-0.9
Rural	197	208	207	201	204	198	193	0.5	-0.7	-2.5
Freestanding	217	217	217	221	225	233	234	0.5	2.7	0.4
Hospital based	1,004	1,018	1,008	981	971	946	931	-0.6	-1.8	-1.6
Nonprofit	768	768	758	738	732	729	711	-1.0	-0.6	-2.5
For profit	292	305	299	291	295	294	294	-0.1	0.5	0.0
Government	161	162	168	173	169	156	158	1.8	-5.0	1.3

Note: IRF (inpatient rehabilitation facility). For all years, the rural/urban breakdown is by Core-Based Statistical Area (CBSA) definition. For 2011, two facilities are missing ownership data in the source file.

Source: MedPAC analysis of 2011 fourth quarter Provider of Services files from CMS.

quality of care, providers’ access to capital, and the aggregate relationship between Medicare’s payments and IRF providers’ costs. Our analysis this year indicates that the Medicare payment adequacy indicators for IRFs are generally positive.

**Beneficiaries’ access to care: IRF supply and service volume suggest sufficient access**

We have no direct indicator of beneficiaries’ access to care because no surveys exist that are specific to this small portion of the Medicare population. We also are not able to determine the necessity of providing rehabilitation services in the more therapy-intensive IRF setting rather than another post-acute care setting for particular beneficiaries. However, our analysis of IRF supply and volume suggests that capacity remains adequate to meet demand.

**Capacity and supply: Number of IRFs, occupancy rates, and number of rehabilitation beds suggest adequate capacity**

The supply of IRFs has been declining since 2005, and the industry shrank by a net of 14 facilities between 2010 and 2011 (Table 10-2). Although 80 percent of IRFs are still hospital based, 2011 continued a trend of hospital-based facilities leaving the market and the number of freestanding facilities slowly increasing. Between 2006

and 2010, the number of freestanding IRFs increased by an average of 1.8 percent each year, and in 2011, there was a net increase of one facility. The number of nonprofit IRFs declined by 18 between 2010 and 2011 (a 2.5 percent decrease), the net result of a loss of two freestanding nonprofit IRFs and 16 hospital-based nonprofit IRFs. The number of for-profit IRFs remained the same between 2010 and 2011—the net result of a loss of one hospital-based for-profit IRF and a gain of one freestanding for-profit IRF. The supply of IRFs increased slightly after implementation of the IRF PPS in 2002 and peaked at 1,235 facilities in 2005.

Occupancy rates provide another view of IRFs’ capacity to serve patients, and they indicate that capacity is adequate to handle current demand and can likely accommodate future increases (Table 10-3, p. 222). Occupancy rates increased from 62.4 percent in 2010 to 63.3 percent in 2011. In 2011, occupancy rates were higher for freestanding IRFs (68.3 percent) than for hospital-based IRFs (59.8 percent) and higher for IRFs in urban areas than in rural areas (64.5 percent and 49.6 percent, respectively). From 2002 through 2007, occupancy rates fell, with the decline accelerating in 2004 due to renewed enforcement of the compliance threshold. In 2008, occupancy rates began to rise again and increased overall since then by 1.2 percentage points as of 2011.

**TABLE  
10-3**

**IRF occupancy rates rose slightly in 2011**

Occupancy rates	2004	2006	2008	2009	2010	2011	Average annual change		Annual change
							2004–2008	2008–2010	2010–2011
All IRFs	67.8%	61.9%	62.1%	62.9%	62.4%	63.3%	-2.2%	0.2%	1.4%
Urban	69.0	63.0	63.4	64.0	63.6	64.5	-2.1	0.2	1.4
Rural	56.1	50.7	49.4	50.9	49.7	49.6	-3.1	0.3	-0.2
Hospital based	65.7	60.4	59.8	60.2	59.4	59.8	-2.3	-0.3	0.7
Freestanding	71.9	64.7	66.1	67.3	67.2	68.3	-2.1	0.8	1.6
Nonprofit	68.2	63.4	63.2	63.6	62.6	63.4	-1.9	-0.5	1.3
For profit	68.2	60.2	60.9	62.2	62.9	63.7	-2.8	1.6	1.3
Government	65.0	60.1	60.9	61.5	60.1	60.7	-1.6	-0.7	1.0
Number of beds									
1 to 10	55.2	49.5	51.6	49.6	49.9	51.6	-1.7	-1.7	3.4
11 to 21	63.2	58.7	57.5	57.5	56.3	56.5	-2.3	-1.0	0.4
22 to 59	68.1	61.5	61.2	62.7	62.8	63.2	-2.6	1.3	0.6
60 or more	71.1	65.4	66.8	67.3	66.6	67.6	-1.5	-0.1	1.5

Note: IRF (inpatient rehabilitation facility). Occupancy rate calculated based on total patient days divided by bed days available during the hospitals' cost reporting period.

Source: MedPAC analysis of Medicare hospital cost report data from CMS.

The total number of rehabilitation beds nationwide is another measure of IRF capacity. After increasing between 2002 and 2003, the number of IRF beds declined after 2004, as the industry adjusted to a decrease in the volume of cases due to renewed enforcement of the compliance threshold. Between 2004 and 2011, the number of beds declined by an average of 0.8 percent each year (Table 10-4). The decline in IRF beds from 2010 to 2011 was the result of a 1.1 percent decrease in hospital-based IRF beds and a 0.2 percent decrease in freestanding IRF beds.

**Volume of services: Volume of FFS patients in IRFs increased in 2011**

We measure patient volume as the total number of FFS IRF cases and the number of unique FFS IRF patients per 10,000 FFS beneficiaries. The latter measure removes the effect of changes in MA enrollment and allows us to examine the prevalence of IRF use among Medicare FFS enrollees. This measure counts each user only once per year, regardless of whether the patient had multiple IRF admissions. Between 2002 and 2004, the number of cases and the number of patients per 10,000 FFS beneficiaries

grew, with the number of cases increasing by an annual average of 5.3 percent (Table 10-1, p. 218). However, volume declined substantially after 2004, as providers adjusted to renewed enforcement of the compliance threshold. From 2004 through 2008, the number of cases declined by an average of 7.9 percent each year; during the same period, the number of unique patients per 10,000 FFS beneficiaries declined by an annual average of 7.1 percent.

In 2008, the volume decline began to level off, coinciding with actions taken by the Congress in late 2007 to permanently cap the compliance threshold at 60 percent. Volume increased in 2009 but declined slightly in 2010. This decline may have been due, in part, to revised coverage criteria that went into effect in January 2010. The revised coverage criteria did not change but more clearly delineated which Medicare beneficiaries are appropriate for IRFs, potentially leading to different admission decisions for patients who would otherwise have been admitted before 2010. However, this decline did not continue in 2011: The number of cases grew by 3.3

**TABLE  
10-4**

**Number of IRF beds decreased slightly in 2011**

Type of bed	2004	2006	2008	2009	2010	2011	Average annual change		Annual change
							2004-2008	2008-2010	2010-2011
All IRFs	37,393	36,617	35,758	35,817	35,521	35,249	-1.1%	-0.3%	-0.8%
Hospital based	23,742	23,757	22,666	22,317	21,948	21,698	-1.2	-1.6	-1.1
Freestanding	13,650	12,861	13,092	13,500	13,573	13,551	-1.0	1.8	-0.2

Note: IRF (inpatient rehabilitation facility). Counts exclude data from Maryland, non-U.S. hospitals, and outliers. Number of beds is calculated by taking the total number of available bed days for all patients (not specific to Medicare) divided by the total number of days in the cost reporting period.

Source: MedPAC analysis of hospital cost report data and 2011 fourth quarter Provider of Services files from CMS.

percent and the number of unique patients per 10,000 FFS beneficiaries grew by 1.8 percent, both slightly higher than the growth in 2009.

**Changes in admission patterns and case mix**

If patients who need intensive rehabilitation services are able to obtain appropriate care in other settings, limitations to IRF availability due to the compliance threshold may not constitute an access problem. We analyzed changes in posthospital discharge destinations for patients likely

to need rehabilitation from 2004 through 2011. We found that among stroke cases, the share of hospital patients discharged to IRFs and other settings remained largely unchanged (Table 10-5). In contrast, for hip and knee replacement cases, a condition for which CMS has limited the types of cases that count toward the compliance threshold, the relative share of hospital patients discharged to IRFs declined by more than half between 2004 and 2011. Over the same period, the share of patients with hip and knee replacements discharged to SNFs and home

**TABLE  
10-5**

**Share of hospital discharges to IRFs has declined since 2004 for hip and knee replacements but remained stable for stroke**

Condition	Discharge destination	Percent of hospital discharges					Percentage point change in share of hospital discharges
		2004	2006	2008	2010	2011	2004-2011
Major joint replacement/hip and knee replacement	IRF	28%	20%	14%	12%	12%	-16
	SNF/swing bed	33	35	36	38	38	5
	Home health	21	27	30	32	31	10
	All other settings	18	18	19	19	19	1
Stroke	IRF	18	19	19	19	19	1
	SNF/swing bed	27	26	25	26	25	-2
	Home health	11	12	12	12	12	1
	All other settings	45	44	44	44	44	-1

Note: IRF (inpatient rehabilitation facility), SNF (skilled nursing facility). "All other settings" includes outpatient care, other inpatient facilities, and home. Discharge destination totals may not equal 100 percent due to rounding.

Source: MedPAC analysis of hospital inpatient Medicare claims data from CMS.

**TABLE  
10-6****Compliance rate of Medicare IRF cases continued to meet 60 percent threshold in 2012**

	2004	2005	2006	2010	2011	2012
Estimated compliance rate of Medicare IRF cases	45.1%	55.6%	60.5%	61.6%	61.2%	60.3%

Note: IRF (inpatient rehabilitation facility). The data for 2012 are limited to discharges that occurred between January and June 2012. The compliance rate is the aggregate percent of IRF cases that fall into 1 of 13 CMS-specified conditions. As of July 2007, 60 percent of a facility's cases must fall into one of these conditions for Medicare to pay the facility as an IRF.

Source: MedPAC analysis of 2004 to 2012 data from eRehabData®.

health agencies grew by the same proportion that the IRF discharges declined, suggesting that these beneficiaries were able to obtain rehabilitation care in other settings.

The mix of Medicare patients treated by IRFs has also changed since 2004, as IRFs admitted a higher percentage of patients with diagnoses that met the revised compliance threshold. The percentage of IRF cases with 1 of the 13 specified conditions has increased, according to our analysis of proprietary data for a sample of IRFs (Table 10-6).<sup>3</sup> In the first three years of renewed enforcement of the revised compliance threshold (2004–2006), the aggregate percentage of Medicare cases meeting the threshold increased rapidly from 45.1 percent to 60.5 percent. However, when MMSEA capped the compliance threshold permanently at 60 percent in 2007, the increase

in the compliance rate began to level off. The rate of compliance with the 60 percent threshold has been decreasing slightly since 2009 (62 percent); in 2011 and the first six months of 2012, the compliance rates were about 61 percent and 60 percent, respectively.

After 2004, the average case mix of IRF patients increased in severity most years, both for patients who counted toward the compliance threshold and for those who did not. On average, the cases that did not count toward the compliance threshold (noncompliant cases) were less complex than those that did (compliant cases), according to our analysis of proprietary data from eRehabData®. In 2004, the average relative payment weight for compliant cases was about 1.28, compared with about 0.90 for noncompliant cases. In 2012, the average relative payment

**TABLE  
10-7****IRF patient mix has changed, 2004–2012**

Type of case	Percent of IRF Medicare FFS cases						Percentage point change		
	2004	2006	2008	2010	2011	2012*	2004–2008	2008–2011	2011–2012
Stroke	16.6%	20.4%	20.4%	20.1%	19.6%	19.5%	3.9	–0.8	–0.1
Fracture of the lower extremity	13.1	16.1	16.0	14.3	13.8	13.2	3.0	–2.2	–0.6
Major joint replacement of the lower extremity	24.0	17.8	13.1	11.5	10.7	10.1	–10.9	–2.5	–0.6
Debility	6.1	6.2	9.1	10.0	10.3	9.9	3.0	1.2	–0.5
Neurological disorders	5.2	7.0	8.0	9.8	10.3	11.3	2.8	2.3	1.0
Brain injury	3.9	6.0	7.0	7.3	7.6	7.7	3.0	0.6	0.1
Other orthopedic conditions	5.1	5.2	6.1	6.7	7.1	7.5	0.9	1.1	0.4
Cardiac conditions	5.3	4.0	4.7	4.9	5.1	5.4	–0.6	0.5	0.3
Spinal cord injury	4.2	4.6	4.3	4.3	4.5	4.5	0.1	0.1	0.1
Other	16.4	12.8	11.3	11.1	11.0	10.9	–5.1	–0.4	–0.1

Note: IRF (inpatient rehabilitation facility), FFS (fee-for-service). "Other" includes conditions such as amputations, major multiple trauma, and pain syndrome. Numbers may not sum to 100 percent due to rounding.

\*Data are for the first six months of 2012.

Source: MedPAC analysis of Inpatient Rehabilitation Facility–Patient Assessment Instruments from CMS for 2004–2011, and January 1 through June 30, 2012.

weight for compliant cases was 1.39, compared with 1.10 for noncompliant cases.

As IRFs have adjusted their patient admission patterns to meet the revised compliance threshold, the average residual case-mix severity of the Medicare FFS IRF population has increased; the largest increases in case mix occurred during the first three years of renewed enforcement of the revised compliance threshold. The average annual increase in case mix was 4.5 percent from 2005 to 2007.<sup>4</sup> After the compliance threshold was capped at 60 percent in 2007, the increase in patient severity slowed and case mix increased in 2008 and 2009 by about 2 percent in each year. The increase in patient severity slowed further between 2010 and 2011, with an increase of 0.3 percent (case mix of 1.29 in 2011) and an increase of 1.1 percent between 2011 and the first six months of 2012 (a case mix of 1.30 in 2012). In addition, the average length of stay for Medicare FFS IRF patients in 2011 was 13 days, which has changed little since 2009 (Table 10-1, p. 218). The stability in the average length of stay may reflect IRFs' increasing experience with managing their current patient mix.

The change in case mix over time is reflected in the shifting pattern of diagnoses admitted to IRFs among Medicare cases since 2004 (Table 10-7). The share of major joint replacements of the lower extremity fell by 13.9 percentage points between 2004 and the first half of 2012, consistent with the more limited definition of eligible joint replacement cases that count toward the revised compliance threshold implemented in 2004. During the same period, the percentage of IRF patients with conditions included in the compliance threshold increased, such as stroke, brain injury, and neurological disorders. Since 2004, the shares of debility cases and other orthopedic conditions also increased by 3.8 percentage points and 2.4 percentage points, respectively. The growth in debility cases and other orthopedic conditions is more surprising, because neither is among the 13 conditions included in the compliance threshold.

Between 2011 and the first half of 2012, the distribution of case type remained relatively stable. The share of neurological disorders increased by 1.0 percentage point. Other case types changed by less than 1.0 percentage point. Debility decreased slightly. The shares of fracture and major joint replacement of the lower extremity both decreased slightly, although other orthopedic conditions increased slightly.

**TABLE  
10-8**

**Top 10 types of cases  
in hospital-based and  
freestanding IRFs, 2011**

Type of case	Type of IRF	
	Hospital based	Freestanding
Stroke	21%	16%
Fracture of the lower extremity	14	12
Major joint replacement of the lower extremity	11	10
Neurological disorders	7	13
Brain injury	8	7
Other orthopedic conditions	5	9
Cardiac conditions	5	5
Spinal cord injury	5	4
Miscellaneous	12	13
Short-stay patients*	4	4

Note: IRF (inpatient rehabilitation facility).  
\*The short-stay category includes patients who expired while in the IRF.

Source: MedPAC analysis of 2011 Medicare claims data.

Hospital-based and freestanding IRFs have relatively similar Medicare patient populations (Table 10-8). In 2011, the top 10 types of cases were the same for both facility types, and they accounted for 92 percent and 93 percent of cases in hospital-based IRFs and freestanding IRFs, respectively. Some of these conditions do not count toward the compliance threshold (miscellaneous, major joint replacement of the lower extremity, other orthopedic conditions, and cardiac conditions). Although the 10 most common conditions were the same for hospital-based IRFs and freestanding IRFs, the distribution of those cases differed somewhat. Stroke patients constituted a smaller share of freestanding IRF cases than of hospital-based IRF cases (16 percent and 21 percent, respectively), while patients with neurological disorders constituted a larger share of freestanding IRF cases than of hospital-based IRF cases (13 percent and 7 percent, respectively). Other orthopedic conditions, which do not count toward the compliance threshold, also accounted for a larger share of total cases in freestanding IRFs than in hospital-based IRFs (9 percent and 5 percent, respectively).

In addition to case type, the tier level within each CMG reflects another measure of patient severity. Tier 1 reflects

**TABLE  
10-9**

**Distribution of IRF cases by case-mix group tier, 2011**

Tier	Type of IRF	
	Hospital based	Freestanding
1	4%	4%
2	7	9
3	26	28
4 (no comorbidities)	62	59

Note: IRF (inpatient rehabilitation facility). IRF patients are classified into 92 case-mix groups, and within 87 of these groups, patients are further categorized into one of four tiers based on the presence of certain comorbidities. Numbers may not sum to 100 percent due to rounding.

Source: MedPAC analysis of 2011 Medicare claims data.

the costliest patients (i.e., it has the highest relative weight); the tiers descend in costliness through tier 4, which reflects the least costly patients—those who do not have any of the comorbidities identified to increase the cost of care. The distribution of Medicare IRF cases by tier is fairly consistent for hospital-based IRFs and freestanding IRFs, although freestanding IRFs have slightly higher proportions of patients in the more costly tiers (Table 10-9). Approximately 60 percent of cases in both hospital-based IRFs and freestanding IRFs are in tier 4 and do not have a specific comorbidity identified as increasing the cost of care, although hospital-based IRFs have a slightly larger share of tier 4 cases (62 percent compared with 59 percent for freestanding IRFs).

**Comparability of outcomes among rehabilitation care settings**

Comparability of outcomes among different rehabilitation care settings represents an important question, particularly given that some patients do not live near an IRF and others may obtain care at settings other than IRFs because of the compliance threshold. Overall, research studies do not conclusively identify one post-acute care setting as having better outcomes for rehabilitation patients. A 2010 CMS report to the Congress (Gage et al. 2010) analyzed peer-reviewed research on the effectiveness of IRFs compared with other post-acute care settings and concluded that the studies comparing outcomes in IRFs with outcomes in other post-acute care settings were limited because they did not adequately control for selection bias. The report also found inconsistent results across studies comparing

outcomes for lower extremity joint replacement patients and hip fracture patients in IRFs and SNFs. The report was unable to conclude definitively whether shifts in discharge destination due to the compliance threshold have affected beneficiaries’ access to appropriate rehabilitation services.

Standardized data from the Continuity Assessment Record and Evaluation (CARE) tool—a uniform post-acute care assessment tool tested through the Medicare Post-Acute Care Payment Reform Demonstration—can help CMS compare outcomes for rehabilitation care across settings. The demonstration used the CARE tool to compare outcomes appropriate for many patients across sites of care, such as readmission to the hospital and improvements in two functional measures, mobility and self-care function. The 2011 report summarizing the findings (Centers for Medicare & Medicaid Services 2012, Gage et al. 2011) compared outcomes among home health agencies, IRFs, long-term care hospitals (LTCHs), and SNFs. Results indicated that unadjusted readmission rates did not vary greatly among settings, although IRFs had the lowest rate and LTCHs had the highest rate among the settings. Risk-adjusted rates that controlled for differences in patient severity of illness did not differ among IRFs, SNFs, and home health agencies (patients served by LTCHs had a lower risk-adjusted rate of readmission than SNF patients). On functional outcomes, IRF patients had the greatest average improvement in mobility and self-care function, unadjusted for patient severity at admission. The risk-adjusted analysis found no significant difference in the average degree of improvement in mobility but a slightly higher gain in self-care outcomes among patients who received care from an IRF or home health agency.

Differences in outcomes also varied by clinical condition. The study examined improvement in self-care for the subgroups of patients with musculoskeletal or nervous system conditions, two conditions that typically receive significant amounts of therapy. For nervous system conditions, the average risk-adjusted gain in self-care improvement was higher in IRFs than in SNFs. In contrast, for musculoskeletal conditions, there was no significant difference in the risk-adjusted degree of improvement among LTCH, IRF, and SNF patients (the average improvement was greater for home health patients than for SNF patients).

When results varied, the difference in improvement among settings was relatively small, less than 5 points on a 100-point scale. Home health and IRF patients appear to have better improvement in self-care outcomes, but

unobserved factors regarding patient characteristics can also influence outcomes. For example, the more intensive therapy requirements in IRFs may result in IRFs attracting patients who are more engaged or more motivated to improve. Likewise, factors that are not included in the model, such as informal caregiver support, can influence both the likelihood of referral to home health care and the outcomes.

### Quality of care: Risk-adjusted measures show relative stability

We measured IRF quality through the following metrics: Functional Independence Measure™ (FIM™) gain, rates of discharge to the community, rates of discharge from an IRF to an acute care hospital, admission to a SNF within 30 days of discharge to the community, and admission to an acute care hospital for any reason within 30 days of discharge to the community. The latter two measures are restricted to beneficiaries who were initially discharged home and then admitted to a SNF or readmitted to an acute care hospital. Acute hospital readmission measures include all-cause readmissions and do not account for planned readmissions. FIM gain is the total difference between admission scores and discharge scores for a range of items addressing functional improvement on the IRF–Patient Assessment Instrument.<sup>5</sup>

Our analysis suggests that quality of care across the IRF industry remained fairly stable between 2009 and 2010. FIM gain increased from 26.7 points in 2009 to 27.4 points in 2010 (Table 10-10). Performance on both of the hospital readmission measures remained fairly unchanged between 2009 and 2010. For 2010, the median rate of discharge to an acute care hospital was 10.3 percent and the rate of hospital readmission within 30 days after discharge to the community was 12.0 percent. Performance decreased slightly on admission to a SNF within 30 days after discharge to the community (from 3.6 percent in 2009 to 4.0 percent in 2010), while rates of discharge to the community improved moderately (from 70.6 percent in 2009 to 71.1 percent in 2010). These outcomes do not control for population changes between 2009 and 2010, although the increase in case-mix severity was slight.

Our March 2012 report presented an analysis of IRF industry performance on risk-adjusted quality measures, evaluating improvement between 2004 and 2009 (Medicare Payment Advisory Commission 2012b). To control for large changes in patient mix over the time

**TABLE 10-10** IRF quality of care is relatively stable

	2009	2010
FIM™ gain	26.7	27.4
Discharge to community	70.6%	71.1%
Discharge to acute care hospital	10.4%	10.3%
Hospital readmission within 30 days after discharge to community	12.0%	12.0%
SNF admission within 30 days after discharge to community	3.6%	4.0%

Note: IRF (inpatient rehabilitation facility), FIM™ (Functional Independence Measure™), SNF (skilled nursing facility). FIM gain is the difference between the FIM on the IRF–Patient Assessment Instrument (IRF–PAI) between admission and discharge. The risk-adjustment models controlled for patient demographics; patients’ Impairment Group Code at admission (indicates a patient’s medical condition); prior admission to an IRF; admission to the IRF from the community; certain comorbidities that have been shown in the literature to be predictive of hospital charges, length of stay, and patient health outcomes; and certain complications present at admission to an acute care hospital. Models are preliminary and may be further refined in the future.

Source: RAND analysis of the IRF–PAI, Medicare Provider Analysis and Review file, denominator file, and Provider of Services file.

period, the analysis adjusted performance outcomes using a risk-adjustment model that held the 2004 Medicare IRF patient cohort constant through 2009. The analysis found that adjusted quality improved for all measures over this time period. In the present analysis, the risk-adjustment model does not hold constant the Medicare patient cohort. Due to the relative stability in case-mix index in recent years, quality outcomes can be meaningfully compared between 2009 and 2010 without the controls needed for a longer historic analysis. The models are preliminary and may be further refined in the future.

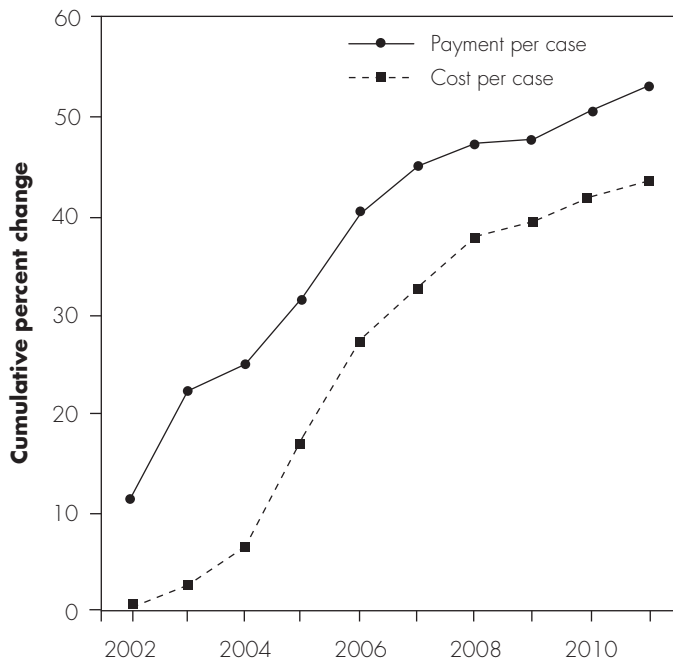
### Providers’ access to capital: IRFs appear to have adequate access to capital

Eighty percent of IRFs are hospital-based units that access capital through their parent institution. As detailed in Chapter 3 of this report, hospitals have overall maintained reasonable levels of access to capital in 2011, in part due to historically low interest rates. Spending on hospital construction projects moderated somewhat in 2011 but remained high, and industry consolidation increased.

As for freestanding IRFs, market analysts we spoke with thought that access to capital for one major national chain

**FIGURE  
10-2**

**Under the PPS, IRFs' payments per case have increased cumulatively more than costs, 2002-2011**



Note: PPS (prospective payment system), IRF (inpatient rehabilitation facility). Costs are not adjusted for changes in case mix.

Source: MedPAC analysis of Medicare cost report data from CMS.

remains good. Its ability to borrow has increased, largely due to improving credit markets and the chain's strong operating performance. Besides this chain, most other freestanding facilities are independent or local chains with only a few providers (for profit or nonprofit). The extent to which these providers have access to capital is not clear.

**Medicare payments and providers' costs: Since 2002 PPS implementation, payments to IRFs have grown faster than costs**

Since implementation of the PPS in 2002, Medicare's payments per case to IRFs have cumulatively increased more than IRFs' costs per case, although in most years from 2004 to 2010, costs per case grew faster than payments (Figure 10-2). According to Medicare cost reports, between 2010 and 2011, payments per case increased more than costs per case did (2.5 percent payment growth compared with 1.6 percent cost growth). Payments also increased more than costs in 2010, the first year since 2003 that average payments grew more than average costs.

Costs per case grew rapidly between 2004 and 2006, as revisions to the compliance threshold resulted in IRFs' fixed costs being spread over fewer cases, and patient severity increased. Cost growth slowed after 2006, as patient volume steadied. The average Medicare payment per case grew 56 percent between 2002 and 2011 (Table 10-1, p. 218). While payments per case grew by an annual average of 9.3 percent between the first two years of the PPS (2002-2004), the average payment per case fell between 2008 and 2009 because of a zero payment update in 2009, as required by MMSEA, and CMS's adjustment of the 2009 outlier threshold.

**Differences in standardized costs suggest economies of scale**

Adjusting IRF costs per discharge for differences in wages, case mix, and outlier payments permits a standardized comparison of costs across different types of IRFs across the country. In 2011, the mean adjusted cost per discharge for all IRFs was \$15,822 (Table 10-11). On average, after adjustment, costs per discharge in

**TABLE  
10-11**

**Mean adjusted costs per discharge are lower for freestanding IRFs and larger facilities, 2011**

Type of IRF	Mean adjusted cost per discharge
All IRFs	\$15,822
Hospital based	16,725
Freestanding	12,388
Nonprofit	15,979
For profit	14,767
Government	17,837
Urban	15,300
Rural	18,567
Number of beds	
1 to 10	17,854
11 to 21	17,303
22 to 59	15,097
60 or more	12,538

Note: IRF (inpatient rehabilitation facility). Cost per discharge is standardized for the wage index, case mix, and outliers. Government-owned facilities operate in a different financial context from other facilities, so costs are not necessarily comparable.

Source: MedPAC analysis of 2011 standard analytical file and Medicare cost report data from CMS.



freestanding IRFs were about \$4,340 lower (26 percent) than in hospital-based IRFs, and costs per discharge in urban IRFs were approximately \$3,270 (18 percent) lower than in rural IRFs. Larger facilities have lower costs per discharge, which likely results from economies of scale. In 2011, costs per discharge were \$5,320 (29 percent) lower in facilities with more than 60 beds compared with facilities in the 1-bed to 10-bed range.

We stratified IRFs into quartiles of standardized costs to compare the characteristics of facilities in the low-cost and high-cost quartiles (Table 10-12) for 2011. Nearly all facilities (about 96 percent) in the highest cost quartile were hospital based, whereas facilities in the lowest cost quartile were disproportionately freestanding (about 56 percent were freestanding even though they make up only 20 percent of industry facilities). IRFs in the lowest cost quartile tended to have more beds and higher occupancy rates. The median number of beds in the lowest cost quartile was 42 beds compared with the highest cost quartile's median of 17 beds. The median occupancy rate for IRFs in the lowest cost quartile was 71 percent, while the rate in the highest cost quartile was 51 percent. Case mix varied only slightly across quartiles, suggesting that number of beds and occupancy rates rather than case mix accounted for lower costs per discharge. The median Medicare margins reflect the differences in adjusted costs: The median margin for IRFs in the lowest cost quartile of costs was about 25 percent compared with -26 percent for IRFs in the highest cost quartile.

### IRF Medicare margins increased in 2011

Between 2010 and 2011, aggregate IRF Medicare margins increased from 8.7 percent to 9.6 percent (Table 10-13, p. 230). During the first two years of the IRF PPS, margins rose rapidly, reaching 17.8 percent in 2003, with all IRF provider types experiencing solid gains. After this rapid buildup, margins declined each year from 2004 through 2009, although they remained healthy. Margins rose moderately in 2010 and 2011.

As in other Medicare sectors, margins varied substantially across providers. Medicare margins in freestanding IRFs far exceed those of hospital-based facilities. In 2011, margins for freestanding IRFs (45 percent of discharges) increased to 22.9 percent, while hospital-based IRFs (55 percent of discharges) had margins of -0.8 percent. It was the second year of negative margins for hospital-based facilities. Aggregate margins in for-profit facilities were 21.3 percent in 2011, while nonprofit IRFs had margins

**TABLE  
10-12**

### Higher number of beds and occupancy rates are characteristics of IRFs in the low-cost quartile of standardized costs, 2011

Characteristic	Quartile	
	Low cost	High cost
Number of IRFs	247	247
Percent:		
Hospital based	43.7%	95.6%
Freestanding	56.3	4.5
Nonprofit	39.7	62.4
For profit	57.5	18.6
Government	2.8	19.0
Urban	93.5	67.6
Rural	6.5	32.4
Median:		
Medicare margin	24.5%	-26.4%
Number of beds	42	17
Occupancy rate	71%	51%
Case-mix index	1.25	1.20

Note: IRF (inpatient rehabilitation facility). Costs per discharge are standardized for the wage index, case mix, and outliers. Government-owned facilities operate in a different financial context from other facilities, so costs are not necessarily comparable.

Source: MedPAC analysis of 2011 standard analytical file and Medicare cost report data from CMS.

of 2.0 percent. However, margins by ownership status varied by facility type. Among freestanding facilities, for-profit IRFs had margins of 25.3 percent, while nonprofit facilities had margins of 14.8 percent. Among hospital-based IRFs, nonprofits had margins of -0.9 percent, while hospital-based for-profit IRFs had margins of 3.9 percent. Between 2010 and 2011, total (all-payer) margins for freestanding facilities increased from 10.2 percent to 11.9 percent.<sup>6</sup>

The difference in margins is affected by volume and the ability to constrain cost growth. Hospital-based units tend to be smaller facilities, yet still generally have lower occupancy rates than freestanding facilities. More than half of hospital-based IRFs (57 percent) have fewer than 22 beds, whereas only 6 percent of freestanding IRF facilities have fewer than 22 beds and about half have 60 beds or more.

**TABLE  
10-13****IRFs' Medicare margins rose in 2011, but vary by type of facility**

Type of IRF	Share of Medicare discharges	Margins					
		2004	2006	2008	2009	2010	2011
All IRFs	100%	16.7%	12.4%	9.5%	8.4%	8.7%	9.6%
Urban	91.4	17.0	12.6	9.7	8.6	9.1	10.3
Rural	8.6	13.9	10.6	7.6	6.3	5.4	5.7
Freestanding	44.6	24.7	17.5	18.2	20.3	21.4	22.9
Hospital based	55.4	12.2	9.6	4.1	0.3	-0.3	-0.8
Nonprofit	53.7	12.8	10.7	5.6	2.3	2.0	2.0
For profit	36.6	24.4	16.3	16.7	19.0	19.7	21.3
Government	9.5	N/A	N/A	N/A	N/A	N/A	N/A
Number of beds							
1 to 10	2.6	3.4	-3.8	-4.9	-11.6	-10.3	-7.1
11 to 21	18.3	9.6	7.0	0.7	-2.6	-3.2	-3.8
22 to 59	41.3	16.1	12.4	8.5	6.5	6.9	7.8
60 or more	37.7	22.6	17.5	17.1	18.3	18.5	19.4

Note: IRF (inpatient rehabilitation facility), N/A (not applicable). Government-owned facilities operate in a different financial context from other facilities, so their margins are not necessarily comparable. Their margins are not presented separately here, although they are included in the margins for other groups (e.g., all IRFs), where applicable.

Source: MedPAC analysis of cost report data and Medicare Provider Analysis and Review data from CMS.

Analysis of changes in component costs shows that freestanding facilities have contained cost growth more than hospital-based facilities have, particularly growth in routine costs, which include room and board and nursing (Figure 10-3). Between 2004 and 2010, routine costs grew 49 percent in hospital-based facilities but only 20 percent in freestanding facilities. In 2010, routine costs per case were 37 percent higher in hospital-based facilities than in freestanding facilities. Differences in cost growth trends are similar for ancillary costs, which include the costs of therapy, drugs, and other supplies, and for indirect costs, which include administration, capital, and general overhead. In 2010, indirect costs per case were 11 percent higher in hospital-based facilities than in freestanding facilities, and ancillary costs per case were 19 percent higher in hospital-based facilities than in freestanding facilities. As changes in the compliance threshold resulted in lower patient volumes and higher severity of illness in patients, freestanding facilities may have been more successful at containing costs across all components because of financial necessity among the stand-alone and predominantly for-profit facilities.

Although in 2010 hospital-based IRFs averaged a -0.3 percent margin, in aggregate, the Medicare payments for hospital-based IRFs were sufficient for the units to cover their direct costs. In 2010, the direct cost margin (calculated as payments minus direct costs, divided by payments) for hospital-based IRFs was 34.4 percent. Further, hospital margins were higher in hospitals that had an IRF unit than in hospitals without one. In 2011, Medicare margins for inpatient hospitals with an IRF unit averaged -3.6 percent compared with -5.2 percent for hospitals without an IRF unit, which suggests that IRF units were able to make positive financial contributions to their parent hospitals.

### Medicare margins for 2013

To project the aggregate Medicare margin for 2013, we model the policy changes that went into effect in 2012 and 2013. These policies include:

- an average payment rate increase of 2.2 percent in fiscal year 2012, the net result of a 2.9 percent market basket increase, an estimated 0.4 percent payment

increase for changes in the outlier threshold, a -0.1 percentage point budget adjustment per the Patient Protection and Affordable Care Act of 2010 (PPACA), and a -1.0 percentage point reduction for productivity per PPACA; and

- an average payment rate increase of 2.1 percent in fiscal year 2013, the net result of a 2.7 percent market basket increase, an estimated 0.2 percent payment increase for changes in the outlier threshold, a -0.1 percentage point budget adjustment per PPACA, and a -0.7 percentage point reduction for productivity per PPACA.

We project that the aggregate Medicare margin between 2011 and 2013 will decline from 9.6 percent to 8.5 percent. The margin projection for 2013 assumes that costs will increase by the market basket and does not assume increased cost control efforts by IRFs in response to the market basket reductions or the economy.

## How should Medicare payments change in 2014?

### RECOMMENDATION 10

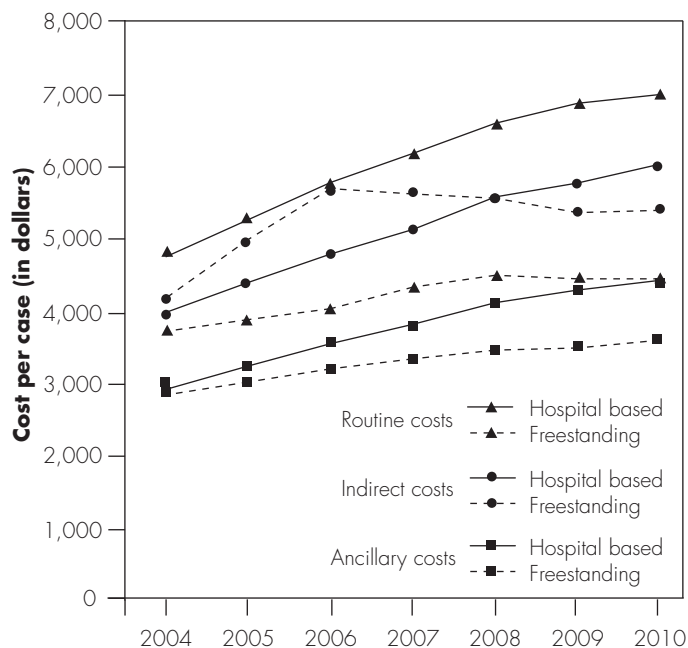
**The Congress should eliminate the update to the Medicare payment rates for inpatient rehabilitation facilities in fiscal year 2014.**

### RATIONALE 10

Our indicators of Medicare payment adequacy for IRFs are positive. Despite the overall supply of IRF beds decreasing slightly, other measures such as low occupancy rates, growth in volume, and availability of other rehabilitation alternatives suggest that capacity remains adequate to meet demand. In 2011, spending increased by 5.2 percent, and margins averaged 23 percent for freestanding facilities, which tend to have lower costs. Risk-adjusted quality of care remained stable, and access to credit appears adequate for both hospital-based and freestanding IRFs. Finally, we calculate a margin of 9.6 percent in 2011 and project a margin of 8.5 percent for 2013. On the basis of our assessment of the indicators of payment adequacy, we conclude that IRFs should be able to accommodate cost changes in fiscal year 2014 with payments held at 2013 levels. We will closely monitor our payment update indicators and will be able to reassess our recommendation for the IRF payment update in the next fiscal year.

**FIGURE 10-3**

### Growth in component costs by IRF type, 2004-2010



Note: IRF (inpatient rehabilitation facility). Routine costs include room and board and nursing. Indirect costs include administration, capital, and general overhead. Ancillary costs include therapy, drugs, and other supplies.

Source: MedPAC analysis of cost report data from CMS.

### IMPLICATIONS 10

#### Spending

- The payment update for IRFs under current law in fiscal year 2014 consists of a forecasted 2.7 percent market basket increase for rehabilitation, psychiatric, and long-term care hospitals; a forecasted -0.5 percent productivity adjustment; and a -0.3 percent budget adjustment per PPACA.<sup>7</sup> This recommendation would decrease federal program spending relative to current law by between \$50 million and \$250 million in 2014 and by less than \$1 billion over five years.

#### Beneficiary and provider

- We do not expect this recommendation to have adverse effects on Medicare beneficiaries with respect to access to care or out-of-pocket spending. This recommendation may increase the financial pressure on some providers, but, overall, a minimal effect on reasonably efficient providers' willingness and ability to care for Medicare beneficiaries is expected. ■

## Endnotes

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- 1 This rule does not take the place of Medicare’s general medical necessity requirements.
- 2 The 13 conditions are stroke; spinal cord injury; congenital deformity; amputation; major multiple trauma; hip fracture; brain injury; neurological disorders (e.g., multiple sclerosis, Parkinson’s disease); burns; three arthritis conditions for which appropriate, aggressive, and sustained outpatient therapy has failed; and hip or knee replacement when bilateral, body mass index  $\geq 50$ , or age 85 or older. These conditions may count toward an IRF meeting the compliance threshold if they are being actively treated in conjunction with the condition that is the primary cause for admission.
- 3 The proprietary data come from eRehabdata<sup>®</sup>, which has data on a subset of IRFs that subscribe to their inpatient rehabilitation outcomes system. eRehabdata has developed a protocol to assess whether a case satisfies the compliance threshold.
- 4 Source: MedPAC analysis of the Inpatient Rehabilitation Facility–Patient Assessment Instrument. Annual percent changes in average case mix are for the first half of one year to the first half of the following year.
- 5 Scores for each of the 18 FIM items range from 1 (complete dependence) to 7 (independence). The scores on the 18 measures are summed to calculate a total score.
- 6 All-payer margins for hospital-based facilities reflect the total margins for the entire hospital rather than for the IRF unit alone. Therefore, we present all-payer margins only for freestanding facilities.
- 7 The market basket forecast and productivity adjustment were made in the third quarter of 2012. CMS will use the most recent forecast available when setting updates, which may differ from the number we report here.

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