



*Advising the Congress on Medicare issues*

# Refining the Hospital Readmissions Reduction Program

Jeff Stensland, Craig Lisk, and David Glass

March 7, 2013

# Reducing readmissions is important

---

- Commission recommended readmission reduction program in 2008
- Avoidable readmissions represent poor outcomes for patients
- Medicare spending on readmissions is substantial
- While feasible for hospitals to reduce readmissions, FFS incentives used to impede action to do so

# PPACA created financial incentives to increase readmission reduction efforts

---

- Hospital readmission reduction program enacted in 2010
- Payment penalty started in October 2012
  - Penalty based on 2009 – 2011 performance
  - Policy uses three conditions (AMI, heart failure, pneumonia)
  - In aggregate penalties equal about 0.3 percent of total base inpatient hospital payments in FY2013
  - Average penalty for hospitals with penalty about \$125,000
- Penalty capped as 1% of base operating payment in 2013, 2%—2014, 3%—2015 and thereafter

# Hospitals taking a variety of actions

---

- Reduce hospital complications
- Identify patient population at increased risk of readmission
- Improve transitions
  - Provide patient education (such as teach-back) and self management
  - Schedule follow-up visits and medication reconciliation before discharge
  - Call or visit with patients after discharge
- Communicate better with providers outside hospital

# Policy may be having an effect

---

- Policy gave hospitals an incentive to reduce readmissions in 2010 and 2011
- MedPAC found a 0.7 percentage point decline in risk adjusted all-condition potentially preventable readmissions from 2009 to 2011
- CMS has reported that all-condition readmission rates declined from 2011 to the second half of 2012

Source: MedPAC analysis of 2009 through 2011 Medicare claims files.  
CMS: Testimony of Jonathan Blum 2/28/2013 fact sheet

# Four issues requiring policy refinements

---

- Random variation makes detection of differences in individual conditions difficult
- Penalty does not change as industry performance improves
- Socio-economic status related to readmission rates
- Some mortality rates related to readmission rates

# Issue 1. Random variation and small numbers of observations

---

- Difficult to distinguish between random variation and true performance improvement for hospitals with small number of cases
- Possible improvements
  - Use all-condition readmissions to increase  $n$  (continue to use 3 years of data)
  - Allow hospitals to aggregate performance within a system for penalty purposes (continue to publicly report individual hospital performance)

# Refinement 1: Using all-condition measures over 3 years helps the small numbers problem

Number of cases (measured over 3 years)				
Current 3-condition policy				All-condition policy
Percentile	AMI	Heart Failure	Pneumonia	All-conditions
10 <sup>th</sup>	10	60	60	1,170
Median	70	250	230	5,170
90 <sup>th</sup>	410	810	580	16,480

Note: Rates rounded to the nearest 10 to make the table easier to read

## Issue 2. Computation of penalty

---

How the readmission multiplier is computed:

$$\text{Penalty} = \left[ \begin{array}{l} \text{(Payment rate for the} \\ \text{initial DRG)} \\ \times \\ \text{(adjusted number of} \\ \text{excess readmissions)} \end{array} \right] \times \left[ \begin{array}{c} \frac{1}{\text{national} \\ \text{readmission} \\ \text{rate for the} \\ \text{condition}} \end{array} \right]$$

*Excess cost*                      *Penalty multiplier*

## Issue 2. Computation of penalty

---

- Current policy
  - Penalty constant as industry readmission rates decrease
  - Penalty multiplier differs for each condition
  - Over half of hospitals always penalized
- Possible improvement
  - Use a fixed readmission-rate target that is below historical average (e.g., 40<sup>th</sup> percentile)
  - Set penalty equal to Medicare's cost of excess readmissions (excess = actual – target)

## Issue 2: Under current policy, penalties do not decline when industry readmission rates improve

All-condition readmission decile	Initial three-condition penalty*	Penalty* if readmissions decline by 10%
1	.02%	.02%
2	.06	.05
3	.12	.12
4	.17	.17
5	.23	.23
6	.34	.34
7	.37	.37
8	.46	.45
9	.60	.59
10	.73	.72
<hr/>		
Average	.31	.30

## Refinement 2: Under prospective targets, penalties decline when industry readmission rates improve

All condition readmission rate deciles	Initial all-condition penalty*	If readmissions covered by policy decline by 10%	
		Penalty*	Readmission savings*
1	.00%	.00%	.79%
2	.00	.00	.93
3	.00	.00	1.02
4	.00	.00	1.06
5	.23	.00	1.09
6	.71	.00	1.15
7	1.00	.01	1.17
8	1.00	.37	1.25
9	1.00	.95	1.36
10	1.00	1.00	1.76
Average	<b>.48</b>	<b>.21</b>	<b>1.15</b>



# Issue 3. Patient socio-economic status affects readmissions

---

- Hospitals serving low-income patients have higher readmission rates
  - Lower-income individuals may have fewer resources for self-care outside of the hospital
  - Hospitals may have to expend more resources to get equal outcomes for low-income patients
- Effect of race on readmission rates is smaller after controlling for income
  - Mixed readmission effects across racial groups (e.g., African American higher, Asian lower)
  - African Americans have lower 30-day mortality

## Issue 3. Penalties under current policy are higher for hospitals treating low-income patients

---

### Possible refinements:

- Add SES to risk adjustment models
  - “Hides” disparities
- Leave SES out, but compare hospitals to peer hospitals to compute penalty
  - Set target readmission rate for each hospital equal to the 40<sup>th</sup> percentile of hospitals in its peer group (SSI decile)
  - No hospital that meets the peer-group prospective target would get a penalty
  - Similar average penalty in each peer-group (SSI decile)
- Publicly report values without SSI adjustment

## Refinement 3: Comparing hospitals to their peer group results in similar penalties across groups

Share of beneficiaries on SSI	Average penalty under the current system*	Average penalty under the new system*	Penalty with 10% reduction under new system*
0-3%	.21%	.49%	.22
2-4	.23	.47	.20
4-5	.22	.47	.17
5-6	.26	.48	.19
6-7	.29	.47	.19
7-9	.30	.47	.20
9-10	.36	.49	.19
10-13	.40	.46	.15
13-18	.39	.49	.27
Over 18	.45	.54	.34
<b>Average</b>	<b>.31</b>	<b>.48</b>	<b>.21</b>

# Issue 4: Mortality and readmissions can be inversely related

---

- Hypothesis 1: Hospitals that keep very ill patients alive may have lower mortality, but higher readmission rates
- Hypothesis 2: Hospitals that admit more patients that could be treated on an outpatient basis may have more admissions, more readmissions, and lower mortality per admission

# Mortality / Readmission relationships: simplified illustrative examples

<b>Hypothesis 1</b>	<b>Low-mortality hospital</b>	<b>High-mortality hospital</b>
Patients seen	100	100
Admissions	10	10
Mortality	1 (1/10 = 10%)	2 (2/10 = 20%)
Readmissions*	2 (2/9 = 22%)	1 (1/8 = 12.5%)

<b>Hypothesis 2</b>	<b>High-admitting hospital</b>	<b>Low-admitting hospital</b>
Patients seen	100	100
Admissions	12	10
Mortality	2 (2/12 = 17%)	2 (2/10 = 20%)
Readmissions*	3 (3/10 = 30%)	2 (2/8 = 25%)

## All-condition measure reduces the mortality/readmission correlation

---

- CMS heart failure mortality has high negative correlation with readmission measures for all three conditions (CHF, AMI, Pneumonia)
- Other two mortality measure are less correlated with readmissions
- Heart failure mortality also negatively correlated with all-condition readmissions
- Insignificant correlation between more inclusive mortality measure and all-condition readmissions

# Summary

---

- Policy may be having an effect
- Refining the policy will:
  - Help small numbers problem
  - Decrease penalties when industry performance improves
  - Make penalties similar across hospitals serving different socio-economic groups
  - Limit issues regarding interaction with mortality
  - Create greater benefits for individual hospitals and the industry as whole if they reduce readmissions

# Discussion

---

- Policy refinements will require change in law
- Are the refinements to the policy going in the right direction?
  - Move to an all condition measure?
  - Set a target in advance (e.g., 40<sup>th</sup> percentile)?
  - Compare hospitals to a peer group with a similar share of low-income Medicare patients?