RESEARCH LETTER

Characteristics of Hospitals Receiving Penalties Under the Hospital Readmissions Reduction Program

To the Editor: The federal Hospital Readmissions Reduction Program (HRRP) took effect on October 1, 2012, the first day of fiscal year 2013. Under this program, using claims data from July 2008 through June 2011, the Centers for Medicare & Medicaid Services (CMS) determined, for each eligible US hospital, whether their readmission rates were higher than would be predicted by CMS models based on their case mix. Hospitals with higher-than-predicted readmission rates will have their total Medicare reimbursement for fiscal year 2013 cut by up to 1% based on these calculations.1 The CMS recently made these payment cuts public.

Because prior studies have shown that readmissions are related to severity of illness and socioeconomic status,2,3 we sought to examine the risk of penalties for US hospitals that care for medically complex or socioeconomically vulnerable patients, namely large teaching hospitals and safety-net hospitals.4

Methods. We used the publicly available HRRP Supplemental Data File5 and categorized hospitals as having high penalties (top half of penalized hospitals), low penalties (bottom half), and no penalties. We linked these data to the 2011 American Hospital Association annual survey to identify hospitals that likely care for sicker patients (large hospitals with ≥400 beds and major teaching hospitals with membership in the Council of Teaching Hospitals) as well as safety-net hospitals (SNHs, those in the highest quartile of the disproportionate share hospital index, a measure used by the CMS to quantify care provided for the poor). We compared the readmission penalties for these hospitals with other types of institutions. Subsequently, we used multinomial logistic regression analyses to calculate the odds of receiving high vs no penalties and low vs no penalties for each hospital type of interest.

We considered a 2-tailed P value of less than .05 as significant. Analyses were performed using Stata version 12.1 (StataCorp). This study was approved by the Office of Human Research Administration at the Harvard School of Public Health.

Results. Of the 3282 hospitals in our sample, 2189 (66.7%) will receive payment cuts as a result of the HRRP. Forty percent of large hospitals (n = 178) vs 28% of small hospitals (n = 296) will be highly penalized (Table). Conversely, 47% of small hospitals (n = 503) will receive no payment cuts compared with 24% of large hospitals (n = 108).

Similarly, we found that major teaching hospitals are more likely to be highly penalized than nonteaching hospitals (44% [n = 118] vs 33% [n = 979], respectively) and less likely to not be penalized (19% [n = 50] vs 35% [n = 1043]). Safety-net hospitals are more likely to be highly penalized than non-SNHs (44% [n = 337] vs 30% [n = 760], respectively), and only 20% (n = 157) will not be penalized. In multivariate analyses, we found that the adjusted odds of being highly penalized are greater for SNHs (odds ratio, 2.38 [95% CI, 1.91-2.96]; P < .001).

Comment. We found that large hospitals, teaching hospitals, and SNHs are more likely to receive payment cuts under the HRRP. It is unclear exactly why these hospitals have higher readmission rates than their smaller, nonteaching, non-SNH counterparts, but prior research suggests that differences between hospitals are likely related to

### Table. Hospital Characteristics by Penalty Groupa

<table>
<thead>
<tr>
<th>High Penalties (n = 1097)b</th>
<th>Low Penalties (n = 1092)c</th>
<th>No Penalties, Unadjusted Rates, No. (%) (n = 1093)d</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size of hospital</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large (≥ 400 beds)</td>
<td>178 (40)</td>
<td>108 (24)</td>
</tr>
<tr>
<td>Medium (200-399 beds)</td>
<td>622 (35)</td>
<td>482 (27)</td>
</tr>
<tr>
<td>Small (&lt;200 beds)</td>
<td>296 (28)</td>
<td>503 (47)</td>
</tr>
<tr>
<td><strong>Teaching hospital</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major</td>
<td>118 (44)</td>
<td>50 (19)</td>
</tr>
<tr>
<td>Not major</td>
<td>979 (33)</td>
<td>1043 (35)</td>
</tr>
<tr>
<td><strong>Safety-net hospital</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>337 (44)</td>
<td>157 (20)</td>
</tr>
<tr>
<td>No</td>
<td>760 (30)</td>
<td>936 (37)</td>
</tr>
</tbody>
</table>

Abbreviation: OR, odds ratio.

The unadjusted mean (SD) payment penalty for hospitals with high penalties is 0.72% (0.23%); low penalties, 0.15% (0.10%); and no penalties, 0. The unadjusted mean (SD) number of admissions for hospitals with high penalties is 945.7 (790.1); low penalties, 791.3 (654.5); and no penalties, 623.8 (743.6). The number of admissions includes the following types of diagnoses: acute myocardial infarction, congestive heart failure, and pneumonia, which are the 3 conditions assessed under the Hospital Readmissions Reduction Program.

aMade up of hospitals that will receive above-average penalties under the Hospital Readmissions Reduction Program.
bMade up of hospitals that will receive below-average penalties.
cMade up of hospitals that will not be penalized.

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both case mix (medical complexity) and socioeconomic mix of the patient population. There is less evidence that differences in readmissions are related to measured hospital quality.

The consequences of these payment cuts remain to be seen. While the current penalties of up to 1% of total Medicare reimbursement in fiscal year 2013 may be modest for some hospitals, they may represent substantial financial shortfalls for hospitals operating on low profit margins.

There are limitations to our study. There is no single, agreed-upon method to identify the hospitals that care for the sickest patients or those that are SNHs. Although our definitions are widely used, others may take a different approach. Furthermore, although the data presented represent penalties for fiscal year 2013, whether the same hospitals will be penalized as the program ramps up in 2014 and 2015 is unknown.

In summary, we found that large teaching hospitals and SNHs are more likely than other hospitals to be penalized under the HRRP.

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Author Contributions: Dr Joynt had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

Study concept and design: Joynt, Jha.
Acquisition of data: Joynt, Jha.
Analysis and interpretation of data: Joynt, Jha.
Drafting of the manuscript: Joynt.
Critical revision of the manuscript for important intellectual content: Joynt, Jha.
Statistical analysis: Joynt.
Obtained funding: Jha.
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Study supervision: Jha.

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1. Department of Health and Human Services; Centers for Medicare & Medicaid Services. Medicare program; hospital inpatient prospective payment systems for acute care hospitals and the long-term care hospital prospective payment system and fiscal year 2013 rates; hospitals’ resident caps for graduate medical education payment purposes; quality reporting requirements for specific providers and for ambulatory surgical centers. 42 CFR Parts 412, 413, 424, and 476.

CORRECTIONS

Variables Omitted in Box: In the Rational Clinical Examination entitled “Does This Adult Patient With Suspected Bacteremia Require Blood Cultures?” published in the August 1, 2012, issue of JAMA (2012;308[5]:502-511), 3 variables were inadvertently omitted from the “minor” criteria of the clinical prediction rule by Shapiro et al.33 In the Box on page 508, the 3 variables are platelet count <150,000/μL, neutrophils >80%, and band forms >5%. This article was corrected online.

Incorrect Residual Heparin Amount: In the Original Contribution entitled “Effect of the Use and Timing of Bone Marrow Mononuclear Cell Delivery on Left Ventricular Function After Acute Myocardial Infarction: The TIME Randomized Trial,” published in the December 12, 2012, issue of JAMA (2012;308[22]:2380-2389), under the Results heading, third full paragraph, the third sentence should have stated, “The cell product was devoid of significant red blood cell contamination, contained only minuscule amounts of heparin (estimated at 0.01 U/mL), and most participants were infused within 1 hour of completion of cell processing,” thereby avoiding concerns recently expressed in the literature. This article has been corrected online.