

# Opinions on the Hospital Readmission Reduction Program: Results of a National Survey of Hospital Leaders

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**R**educing hospital readmissions has the potential to simultaneously improve patient outcomes and reduce healthcare spending and, as such, has become a major target for US policy makers. In an effort to spur a reduction in readmissions, Medicare began publicly reporting on hospitals' discharge planning in 2007 and, in 2009, added public reporting on readmission rates for acute myocardial infarction (AMI), heart failure (HF), and pneumonia. Despite these efforts, 30-day readmission rates remained stable near 20% during this time frame.<sup>1,2</sup> Consequently, with the passage of the Affordable Care Act in 2010, Congress included legislation establishing the Hospital Readmissions Reduction Program (HRRP).<sup>3</sup> Under the HRRP, CMS penalizes hospitals with higher than expected readmission rates for Medicare patients; it has been in effect since the beginning of fiscal year (FY) 2013.<sup>4</sup> In the HRRP's third year, hospitals performing poorly may lose up to 3% of their base Medicare diagnosis-related group (DRG) payments—a substantial amount given that many hospitals have negative Medicare inpatient margins at baseline.<sup>5</sup>

However, the HRRP has been controversial. Initial reports suggested that the program was more likely to penalize large, teaching, and safety net hospitals.<sup>6</sup> Multiple organizations have argued that the program's methodology should take sociodemographic factors into account and exclude readmissions unrelated to the initial reason for hospitalization,<sup>7</sup> and at least 2 bills have been proposed in Congress to address these concerns and others.<sup>8,9</sup> On the other hand, early data show that readmission rates have fallen by 1% to 2% since the implementation of the HRRP, suggesting that this program may have had a positive impact on this outcome, although causality cannot be established.<sup>1,10,11</sup>

The HRRP is one of a number of value-based payment models within Medicare, and the US Secretary of HHS recently announced a goal to have 85% of Medicare fee-for-service payments tied to quality or value by 2016.<sup>12</sup> Many of these new payment programs are closely related to the HRRP; for example, the forthcoming Skilled Nursing Facility Value-Based Payment program is similarly

## ABSTRACT

**OBJECTIVES:** To determine the opinions of US hospital leadership on the Hospital Readmissions Reduction Program (HRRP), a national mandatory penalty-for-performance program.

**STUDY DESIGN:** We developed a survey about federal readmission policies. We used a stratified sampling design to oversample hospitals in the highest and lowest quintile of performance on readmissions, and hospitals serving a high proportion of minority patients.

**METHODS:** We surveyed leadership at 1600 US acute care hospitals that were subject to the HRRP, and achieved a 62% response rate. Results were stratified by the size of the HRRP penalty that hospitals received in 2013, and adjusted for nonresponse and sampling strategy.

**RESULTS:** Compared with 36.1% for public reporting of readmission rates and 23.7% for public reporting of discharge processes, 65.8% of respondents reported that the HRRP had a "great impact" on efforts to reduce readmissions. The most common critique of the HRRP penalty was that it did not adequately account for differences in socioeconomic status between hospitals (75.8% "agree" or "agree strongly"); other concerns included that the penalties were "much too large" (67.7%), and hospitals' inability to impact patient adherence (64.1%). These sentiments were each more common in leaders of hospitals with higher HRRP penalties.

**CONCLUSIONS:** The HRRP has had a major impact on hospital leaders' efforts to reduce readmission rates, which has implications for the design of future quality improvement programs. However, leaders are concerned about the size of the penalties, lack of adjustment for socioeconomic and clinical factors, and hospitals' inability to impact patient adherence and postacute care. These concerns may have implications as policy makers consider changes to the HRRP, as well as to other Medicare value-based payment programs that contain similar readmission metrics.

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## TAKE-AWAY POINTS

Despite the fact that the Hospital Readmissions Reduction Program (HRRP) has increased efforts to reduce readmissions, hospital leaders identified important issues with the program. Our findings from a national survey of hospital leaders indicate that:

- ▶ Leaders are concerned about the size of the penalties and the lack of adjustment for socioeconomic and clinical factors.
- ▶ Currently, the HRRP remains a lower priority for leaders than other areas of quality improvement, such as patient safety and adherence to guidelines.
- ▶ Federal policy makers may want to address these issues as they consider future changes to the program and seek to maximize its impact.

based on a single readmission measure: 30-day readmission following a hospitalization.<sup>13</sup> Readmissions metrics similar to the one used in the HRRP are also now included in quality measures for the Medicare Shared Savings Program<sup>14</sup> and the Physician Value-Based Modifier Program,<sup>15</sup> and will be included in payment programs in additional settings, such as dialysis facilities, in future years.<sup>16,17</sup>

Given the importance of the HRRP as a model for future value-based payment programs, its controversy, and its initial success, it is crucial to understand how hospital leaders have responded to the program and closely examine their concerns about its methodology. Therefore, we surveyed hospital leadership—including chief executive officers (CEOs), chief medical officers (CMOs), and chief quality officers (CQOs)—at approximately 1600 hospitals, stratified by whether their hospitals received a penalty under the HRRP. We aimed to answer 3 key questions: first, how has the HRRP impacted hospitals' readmission reduction efforts, particularly compared with prior readmissions policies such as public reporting? Second, how have leaders prioritized the HRRP in the context of multiple other federal quality improvement initiatives that they face simultaneously? Third, what are the opinions of hospital leaders on the program's methodology and implementation?

## METHODS

### Survey Development

Our first step in survey development was to conduct a set of case studies examining hospitals' efforts to reduce readmission rates; this work has been described previously.<sup>18</sup> Based on this work, we developed a survey instrument that was tested with hospital leaders, hospital personnel, and survey experts, and revised accordingly.

### Survey Administration

We began in mid-2012 with a list of all acute care hospitals that were eligible for the HRRP, excluding Critical Access Hospitals and other facilities not paid under the Inpatient Prospective Payment System and, thus, ineligible for participation.

Based on calculations performed prior to survey administration, we anticipated needing 1000 survey responses to have adequate power to address our hypotheses. We anticipated a response rate of 60% to 65%; thus, our final sample consisted of 1600 hospitals. We also designed our survey sample to enable us to pursue secondary analyses that focused on differences between hospitals that care for a large proportion of black patients (who have previously been shown to have particularly high readmission rates<sup>19</sup> and are also more likely to face unique challenges<sup>18</sup>) versus other hospitals; and differences between hospitals that had high, average, or low 30-day readmission rates. Thus, we calculated the overall proportion of Medicare patients at each hospital that self-identified as black. We then calculated 30-day risk-adjusted readmission rates for AMI, HF, and pneumonia, from 2008 to 2010 (the years used to assign hospital penalties during the first year of the HRRP) for each hospital, using methods that have been described previously.<sup>20</sup> We selected all of the top 900 hospitals in terms of the highest proportion of black patients hospitalized with either AMI, HF, or pneumonia for inclusion in our sample. We divided the remaining hospitals into 3 groups based on performance on readmissions from 2008 to 2010, which was determined by ranking hospitals with the mean risk-adjusted readmission rates for the 3 target conditions into quintiles: top (best) quintile, middle 3 quintiles, and bottom quintile. We selected 266 hospitals from each of these groups using random number generation. There were a small number of hospitals in our sample that had closed, merged with other hospitals, or become Critical Access Hospitals or long-term care facilities; we replaced these using random selection from the same group.

To identify clinical leaders, we obtained the hospital leadership list of CMOs from the American Hospital Association. Study staff called each hospital leader to verify contact information, and once a recipient was verified, his or her hospital was moved into the active fielding stage. The survey was then fielded in 2 phases. The first phase (June 2013 to June 2014) was conducted by Data-Stat Inc, of Ann Arbor, MI. A hard copy of the survey was mailed to hospitals, along with a cover letter explaining the intent of the survey and the consent process. This was followed by follow-up phone calls and a second mailing. If requested, recipients were sent a version of the survey as a PDF file. The second phase (June to December 2014) was conducted by research staff at the Harvard T.H. Chan School of Public Health, and followed a similar protocol—a second mailing and follow-up phone calls—but also gave hospital leaders the option of completing a Web-based version of the survey instrument. The second phase was instituted to ensure an adequately high response rate. Throughout the survey, although the initial point of contact at the hospitals was the

office of the CMO, we encouraged that individual to reach out to other leaders within the hospital who were best equipped to help to either provide assistance or actually complete the survey.

## Analysis

We computed summary statistics both overall and stratified by HRRP penalty amount. We stratified the hospitals into 3 groups based on their penalty in FY2013, the main time frame in which the survey was in the field. Penalty statuses included a) no penalty, b) minor penalty (greater than 0 but less than the median penalty of 0.32% of base DRG payments), and c) major penalty (equal to or greater than the median penalty). Responses were tabulated for each question. For multiple choice or Likert scale questions, responses were summed within groups as they were defined on the survey (ie, “not important,” “somewhat important,” “very important,” and “extremely important”; or “disagree strongly,” “disagree,” “neither agree nor disagree,” “agree,” or “agree strongly”). For open-ended questions, we created a taxonomy based on the frequency of similar responses, and grouped responses accordingly.

Survey responses were adjusted for both sampling strategy and nonresponse to better reflect a national representation of US hospitals. To adjust for sampling strategy, we assigned sample weights to each group. To adjust for nonresponse, we constructed a logistic regression model, in which, returning the survey was the primary outcome, and hospital characteristics—including size, teaching status, ownership, and urban location—were predictors, as has been done previously.<sup>21,22</sup> Each hospital received a likelihood of response based on this model; responses were then weighted with the inverse of this likelihood. Finally, we conducted additional regression analyses, in which, we further adjusted responses for the hospital characteristics listed above, as well as for the safety net status of the hospitals—those hospitals in the top quintile of Disproportionate Share Hospital Index were considered to be in the safety net<sup>6,23</sup>—and the proportion of black patients at each hospital.

All responses were de-identified before analysis. Informed consent was obtained within the survey itself and the introductory page to the survey included detailed information about privacy and data de-identification, as well as consent, stating, “Completion of this survey implies informed consent.” The study was approved by the Office of Human Research Administration at the Harvard T.H. Chan School of Public Health.

## RESULTS

### Hospital and Leader Characteristics

Of the 1600 hospitals contacted, we received completed surveys from 992 (62% response rate). Of that group, 951 were eligible for HRRP penalties in FY2013 and, thus, comprise our analytic sample. The other hospitals, mainly those in Maryland, or hospitals

that no longer had enough cases to qualify for the program, were not eligible for HRRP. Hospital characteristics differed significantly by penalty receipt, with nonteaching, public, and Northeastern hospitals more likely to be in the “major penalty” group, and higher proportions of black and Medicaid patients in the highly penalized hospitals. Readmission rates were, as expected, higher in the highly penalized hospitals (**Table 1**).

Compared with nonrespondents, respondents were more often leaders from large, nonprofit, or teaching hospitals; respondents were also more likely to represent urban hospitals and those located in the Northeast and Midwest (**eAppendix Table A** [eAppendices available at [www.ajmc.com](http://www.ajmc.com)]).

Of the respondents, 29.6% identified themselves as directors of case management or equivalent, 27.1% as CQOs or equivalent, 26.3% as CMOs or chiefs of staff, 4.6% as chief nursing officers, 2.5% as CEOs, and 9.8% as “other,” including vice president for medical affairs and chief operating officer.

### Impact of the HRRP on Efforts to Reduce Readmissions

Nearly two-thirds (65.8%) of hospital leaders reported that the HRRP had a “significant” or “great” impact on increasing their hospital’s efforts to reduce readmissions compared with the 2 readmissions policies that preceded the HRRP: public reporting of readmission rates (36.1%) and public reporting of discharge planning (23.7%). When we examined these opinions, stratified by receipt of a penalty, we found that leaders at hospitals receiving a penalty were much more likely to report that each of the federal policies had impacted their efforts to reduce admissions than at those hospitals not receiving a penalty (**Figure 1**). Adjusting these results for hospital characteristics and socioeconomic status (SES) factors yielded similar results (**eAppendix Figure A**).

In terms of potential responses to the HRRP, 26.6% of leaders reported that it was more than moderately likely that hospitals would increase the use of observation status to improve their perceived performance on readmissions, and 15.1% felt it was more than moderately likely that hospitals would increasingly avoid high-risk patients. These responses were similar across penalty strata ( $P = .46$  and  $P = .14$  for differences in response, respectively).

### Prioritization of Readmissions Reduction in the Context of Other Federal Programs

When asked to prioritize readmissions reduction among other current federal quality improvement initiatives, only 44.1% of leaders reported that it was of “highest priority” compared with 79.2% for improving patient safety, 76.6% for improving patient experience, 75.2% for reducing hospital-acquired infections, 65% for meeting Meaningful Use requirements, and 44.4% for improving compliance with guideline-based care. The biggest gap in prioritization between leaders at hospitals with readmission penalties versus without readmission penalties was in prioritizing readmissions.

**TABLE 1.** Hospital Characteristics

Characteristics		Hospitals in Each Category, n	No Penalty, <sup>a</sup> % (n = 245)	Minor Penalty, <sup>a</sup> % (n = 321)	Major Penalty, <sup>a</sup> % (n = 385)	P
Teaching	Major teaching	129	14.5%	46.0%	39.5%	<.001
	Minor teaching	238	32.5%	36.4%	31.1%	
	Nonteaching	625	25.5%	30.2%	44.2%	
Profit/ownership	For-profit	184	19.8%	37.3%	42.9%	.06
	Nonprofit	617	29.1%	32.0%	38.9%	
	Public	192	21.1%	35.8%	43.2%	
Size	Small (1-99 beds)	273	31.9%	26.2%	41.9%	.01
	Medium (100-399 beds)	526	24.4%	35.2%	40.4%	
	Large (≥400 beds)	194	21.0%	40.3%	38.7%	
Region	Northeast	136	11.3%	29.3%	59.4%	<.001
	Midwest	221	25.7%	37.2%	37.2%	
	South	484	23.2%	33.0%	43.8%	
	West	150	46.6%	35.1%	18.2%	
RUCA	Urban	641	24.3%	38.3%	37.4%	<.001
	Suburban	27	33.3%	29.2%	37.5%	
	Large rural town	190	32.4%	26.1%	41.5%	
	Small town/isolated rural	134	21.5%	24.6%	53.8%	
% Black	Median		3.4%	12.3%	13.9%	<.001
% Hispanic	Median		0.3%	0.3%	0.3%	.365
% Medicare	Median		47.5%	45.8%	47.2%	.007
% Medicaid	Median		17.7%	19.8%	20.1%	<.001
DSH	Median		26.7%	29.8%	30.9%	<.001
Readmission rate <sup>b</sup>	Median		18.2%	20.6%	23.3%	<.001
Readmission penalty <sup>c</sup>	Median		0.00%	0.11%	0.57%	<.001

DSH indicates Disproportionate Share Hospital (Index); HRRP, Hospital Readmissions Reduction Program; RUCA, Rural Urban Commuting Area.

<sup>a</sup>Penalties are those that were applied to payments in fiscal year (FY) 2013, when our survey was in the field. Minor penalties were defined as those that were less than the median; major penalties were those that were greater than the median.

<sup>b</sup>Readmission rate is a weighted average of hospital performance across the 3 conditions included in the FY2013 HRRP penalty: acute myocardial infarction, heart failure, and pneumonia.

<sup>c</sup>Readmission penalty is the HRRP penalty from FY2013.

However, leaders at highly penalized hospitals still rated all 6 of the competing priorities more highly than those at nonpenalized hospitals (Figure 2). Results adjusted for hospital characteristics and SES factors were similar (eAppendix Figure B).

### Opinions on the Methodology and Impact of the HRRP

A majority (67.5%) of leaders felt that the HRRP penalties were “much too large”; this was more common among leaders at hospitals receiving major penalties (74.7%) than those hospitals without penalties (65.2%;  $P < .001$ ) but was still a majority in all groups. The most commonly endorsed critique of the HRRP penalty was that it did not adequately account for differences in SES between

hospitals (76.2% “agree” or “agree strongly”). Other common concerns included an inadequate account of medical complexity by the penalty (75.9%), and hospitals’ limited ability to impact patient adherence (64.1%) (Table 2). Each concern was expressed more often among leaders of hospitals receiving major or minor penalties than among leaders of hospitals without penalties (Table 2); results adjusted for hospital characteristics and SES factors were similar, although the differences between groups narrowed somewhat (eAppendix Table B).

Only a minority of study hospitals were participating in bundled payment programs or accountable care organizations (ACOs), and just over half of hospitals were participating in private pay-for-

performance programs (Table 3, top panels). When asked whether these value-based payment programs were likely to improve quality, 42.5% of leaders responded affirmatively about the HRRP compared with 32% for bundled payment programs, 45.6% for ACOs, and 52.6% for pay-for-performance (Table 3, bottom panels).

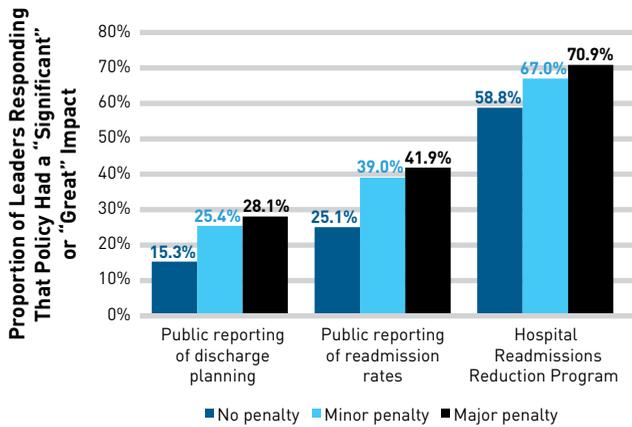
Response patterns were generally similar when stratified by receipt of a penalty, but leaders at hospitals receiving penalties were less likely to respond that the HRRP was likely to improve care (35.7% for hospitals with major penalties vs 45% for minor penalties vs 48.4% for no penalties [Table 3]) and response patterns were also similar when adjusting for hospital characteristics and SES factors (eAppendix Table C). The highest proportion of respondents (54.8%) felt that the HRRP was likely to reduce costs compared with the other programs (Table 3); responses were similar across penalty strata and after adjustment (eAppendix Table C).

## DISCUSSION

In a large, national survey, hospital leaders reported that the HRRP has had a sizable impact on their hospitals' efforts to reduce readmissions. However, despite paying more attention to readmissions than previously done, hospital leaders continue to prioritize other quality improvement efforts, such as improving patient safety, improving patient experience, and adhering to clinical guidelines. Hospital leaders also reported critiques of the policy—largely centered around risk adjustment for SES and clinical factors—and the ability of hospitals to impact patient adherence, as well as post-acute, ambulatory, and institutional care. Leaders at hospitals that were receiving penalties under the HRRP tended to have more negative opinions about the program than leaders at hospitals without penalties.

According to hospital leaders, the HRRP has had a significantly greater impact on their own efforts to reduce readmission rates than its policy predecessors—namely, public reporting of discharge planning and public reporting of readmission rates. This observation, that financial incentives alter behavior to a greater degree than public reporting alone, is consistent with prior observations<sup>24</sup> and may explain why the HRRP has been associated with improvements in readmission rates<sup>10,11</sup> whereas public reporting was not. This experience may suggest that policy makers should move more rapidly to financially reward or penalize hospitals for desired outcomes rather than merely reporting them publicly.<sup>25</sup> Of course, the fact that over one-fourth of respondents suggested

**FIGURE 1. Impact of Federal Policies on Hospital Efforts to Reduce Readmissions, by Receipt of Penalty in 2013<sup>a,b</sup>**



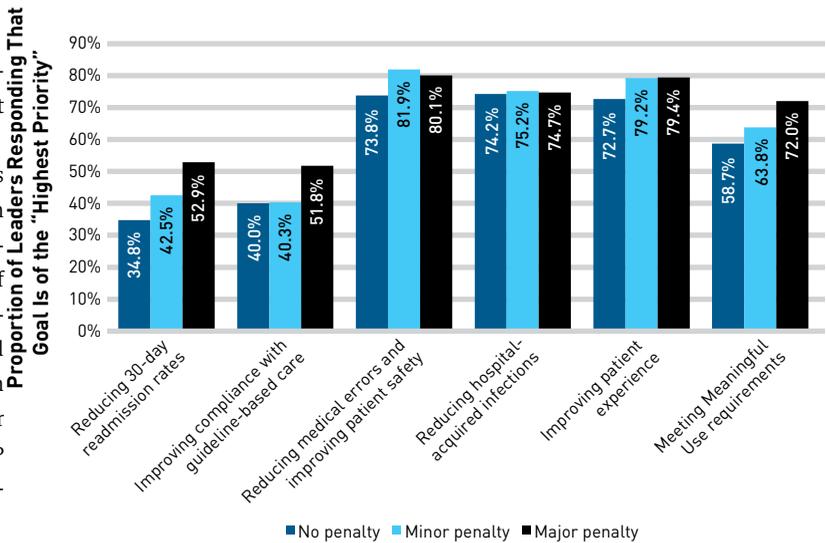
<sup>a</sup>Penalties are those that were applied to payments in fiscal year 2013, when our survey was in the field. Minor penalties were defined as those that were less than the median; major penalties were those that were greater than the median.

<sup>b</sup>Results are adjusted for sample weights and nonresponse bias.

that hospital leaders might increase the use of observation status to improve performance on readmissions, and 15% thought hospitals might avoid high-risk patients, could serve as cautionary counterpoints to the enthusiasm for financial incentives.

Nevertheless, despite the reported impact of the HRRP, nearly every other mandatory federal quality improvement program was

**FIGURE 2. Prioritization of Competing Goals by Hospital Leadership<sup>a,b,c,d</sup>**



<sup>a</sup>Respondents were asked to respond on a scale of 1 (lowest priority) to 10 (highest priority). The results displayed here correspond to responses of 9 or 10.

<sup>b</sup>Penalties are those that were applied to payments in fiscal year 2013, when our survey was in the field. Minor penalties were defined as those that were less than the median; major penalties were those that were greater than the median.

<sup>c</sup> $P < .001$  for all comparisons except "reducing hospital-acquired infections," for which  $P = .85$ .

<sup>d</sup>Results are adjusted for sample weights and nonresponse bias.

**TABLE 2.** Opinions About Program Methodology<sup>a,b</sup>

	Overall	No Penalty (n = 245)	Minor Penalty (n = 321)	Major Penalty (n = 385)	P <sup>c</sup>
<b>Hospitals Answering “Agree” or “Agree Strongly”</b>					
The methods used to calculate the penalties don’t account for differences in patients’ socioeconomic status.	76.2%	72.9%	72.3%	82.3%	<.001
The methods used to calculate the penalties don’t adequately account for differences in patients’ medical complexity.	75.9%	72.0%	72.7%	82.3%	<.001
Hospitals have no ability or a limited ability to impact patients’ adherence to treatments.	64.1%	56.8%	63.6%	71.9%	<.001
Risk-adjusted readmission rates are not an accurate metric of the quality of care hospitals deliver.	62.8%	58.6%	61.7%	67.6%	<.001
Hospitals have no ability or a limited ability to impact care delivered at nursing homes and rehabilitation facilities.	61.4%	54.6%	66.5%	63.0%	<.001
Hospitals have no ability or a limited ability to impact ambulatory care delivered outside the hospital.	58.5%	48.9%	59.1%	66.3%	<.001

<sup>a</sup>Results are adjusted for sample weights and nonresponse bias.

<sup>b</sup>Penalties are those that were applied to payments in fiscal year 2013, when our survey was in the field. Minor penalties were defined as those that were less than the median; major penalties were those that were greater than the median.

<sup>c</sup>P value reflects a difference in the groups stratified by penalty receipt.

rated higher in terms of its importance in our survey, although the study design did not allow us to determine why this was the case. One possibility is that readmissions were seen by many as being outside the control of the hospital; in the setting of competing priorities, perceiving a lack of ability to change an outcome could cause hospital leadership to focus on other areas for intervention. As programs, such as ACOs, increasingly bridge the inpatient and outpatient settings, it is possible that increasing integration could alter these per-

ceptions. Additionally, as the number of Medicare programs that reward readmissions as components of performance continues to grow—not only in ACOs,<sup>14</sup> but also including the Physician Value-Based Modifier<sup>15</sup> and the coming pay-for-performance programs in the dialysis<sup>16,17</sup> and postacute care settings<sup>13</sup>—it is feasible that inpatient facilities may prioritize readmission reduction more highly.

In terms of methodology, the frequently cited critiques of the HRRP included its lack of adjustment for SES or patient adherence

**TABLE 3.** Other Program Participation and Opinions About Program Impact on Quality and Costs<sup>a</sup>

	Is your hospital participating in this program through Medicare?					Is your hospital participating in this program through one or more private payers?				
	Overall	No Penalty (n = 245)	Minor Penalty (n = 321)	Major Penalty (n = 385)	P <sup>b</sup>	Overall	No Penalty (n = 245)	Minor Penalty (n = 321)	Major Penalty (n = 385)	P <sup>b</sup>
HRRP	100%				N/A	N/A				N/A
Bundled payments	33.7%	32.5%	34.8%	34.2%	.450	30.6%	28.9%	33.9%	29.5%	.010
ACO or shared savings program	23.3%	25.8%	24.2%	21.0%	.011	31.5%	30.8%	32.7%	31.5%	.571
Pay-for-performance	100% <sup>c</sup>				N/A	53.2%	51.3%	50.9%	58.8%	<.001

	Do you think this program will improve care?					Do you think this program will reduce costs?				
	Overall	No Penalty (n = 245)	Minor Penalty (n = 321)	Major Penalty (n = 385)	P <sup>b</sup>	Overall	No Penalty (n = 245)	Minor Penalty (n = 321)	Major Penalty (n = 385)	P <sup>b</sup>
HRRP	42.5%	48.4%	45.0%	35.7%	<.001	54.8%	54.6%	58.5%	52.3%	.003
Bundled payments	32.0%	29.3%	36.2%	29.2%	<.001	50.1%	49.1%	50.9%	49.3%	.601
ACO or shared savings program	45.6%	46.4%	47.5%	42.6%	.023	52.8%	55.9%	52.2%	48.4%	<.001
Pay-for-performance	52.6%	59.8%	49.8%	48.1%	<.001	49.3%	49.1%	49.8%	47.7%	.504

ACO indicates accountable care organization; HRRP, Hospital Readmissions Reduction Program; N/A not applicable.

<sup>a</sup>All percentages represent the proportion of hospitals responding “yes” to each question. Results are adjusted for sample weights and nonresponse bias.

<sup>b</sup>P value reflects a difference across groups stratified by penalty receipt.

<sup>c</sup>All hospitals in our sample are also included in the Hospital Value-Based Purchasing Program, so this cell was assumed to be 100%.

and concern about its adjustment for medical complexity. Although these findings were not necessarily surprising given prior publications<sup>6</sup> and public commentary to this end,<sup>26</sup> our survey allows us, for the first time, to quantify the degree to which these are concerns for hospital leaders. Given that more than 3 of 4 hospital leaders reported SES as a critical issue, it is clear that the concerns are not just among those who disproportionately care for the poor. On the other hand, a sizable proportion of leaders did not feel that SES adjustment was necessary, suggesting that support is not unanimous among the hospital community. There is a great deal of current activity around SES and readmission policy: the National Quality Forum recently released recommendations in this area,<sup>27</sup> and is currently undertaking analyses to determine if adjustment for SES is appropriate for certain measures, including many having to do with readmissions.<sup>28</sup> Two bills that were recently proposed in Congress aimed to incorporate measures of poverty, income, and education into risk adjustment for the HRRP,<sup>8,9</sup> but neither legislation has moved forward. The Medicare Payment Advisory Commission has argued that the HRRP should stratify hospitals into groups based on SES,<sup>29</sup> which is one promising strategy. Congress also passed the Improving Medicare Post-Acute Care Transformation (IMPACT) Act in October 2014, which calls on the HHS to study the relationship between SES and performance in Medicare's incentive-based programs, and to suggest changes in these programs that might be warranted.<sup>30</sup>

### Limitations

As is the case with all surveys, it is possible that nonrespondents were different than those who responded to our survey. Although we used appropriate techniques to deal with nonresponse, these statistical techniques are imperfect. Further, we believe that hospital leaders answered these questions to the best of their ability, but, nevertheless, there may be differing opinions within hospitals, such that our results reflect only the individual who filled out the instrument. Therefore, it is possible that sampling different individuals within these hospitals would have yielded different results. Finally, we surveyed hospitals during the first 2 years of the HRRP, and leaders' opinions may change over time.

## CONCLUSIONS

In a national survey of hospital leaders, we found that the HRRP has had a major impact on hospital leaders' efforts to reduce readmissions; however, the HRRP currently remains a lower priority for leaders than other areas of quality improvement, such as patient safety, patient experience, and adherence to guidelines. Further, concerns remain about its manner of accounting for social and medical risk factors and whether hospitals, by themselves, can impact patient adherence or the transitional and postacute care that helps determine whether a patient is readmitted. These findings

may be useful for policy makers contemplating future iterations of the HRRP and other programs using readmissions as a quality metric that may have a synergistic effect on improving patient care.

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**Authorship Information:** Concept and design (KEJ, JFF, AKJ); acquisition of data (AKJ); analysis and interpretation of data (KEJ, JFF, JO, AKJ); drafting of the manuscript (KEJ, JFF, JO, AKJ); critical revision of the manuscript for important intellectual content (KEJ, JFF, JO, AKJ); statistical analysis (KEJ, JFF, JO); provision of patients or study materials (AKJ); obtaining funding (AKJ); administrative, technical, or logistic support (KEJ, JFF); and supervision (AKJ).

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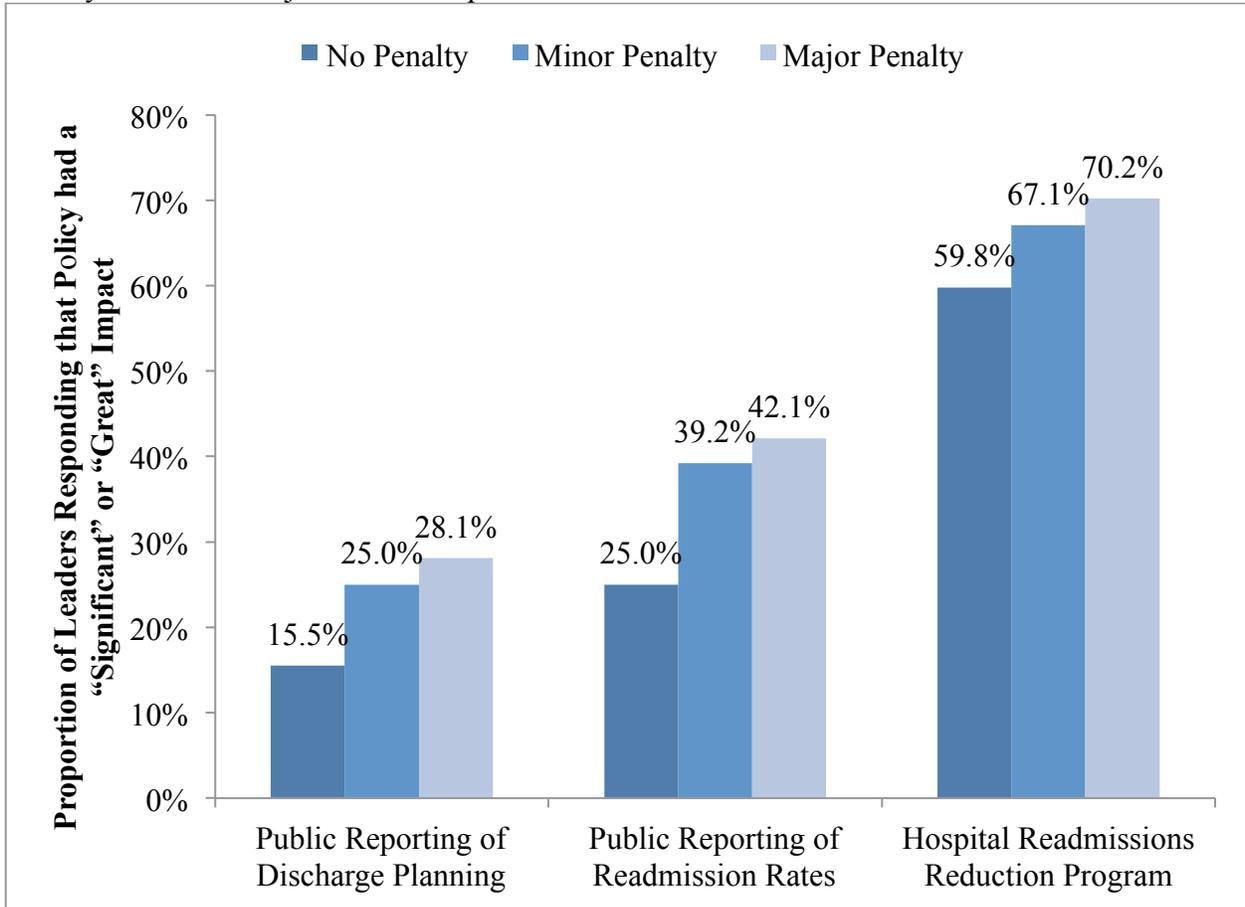
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## eAppendix

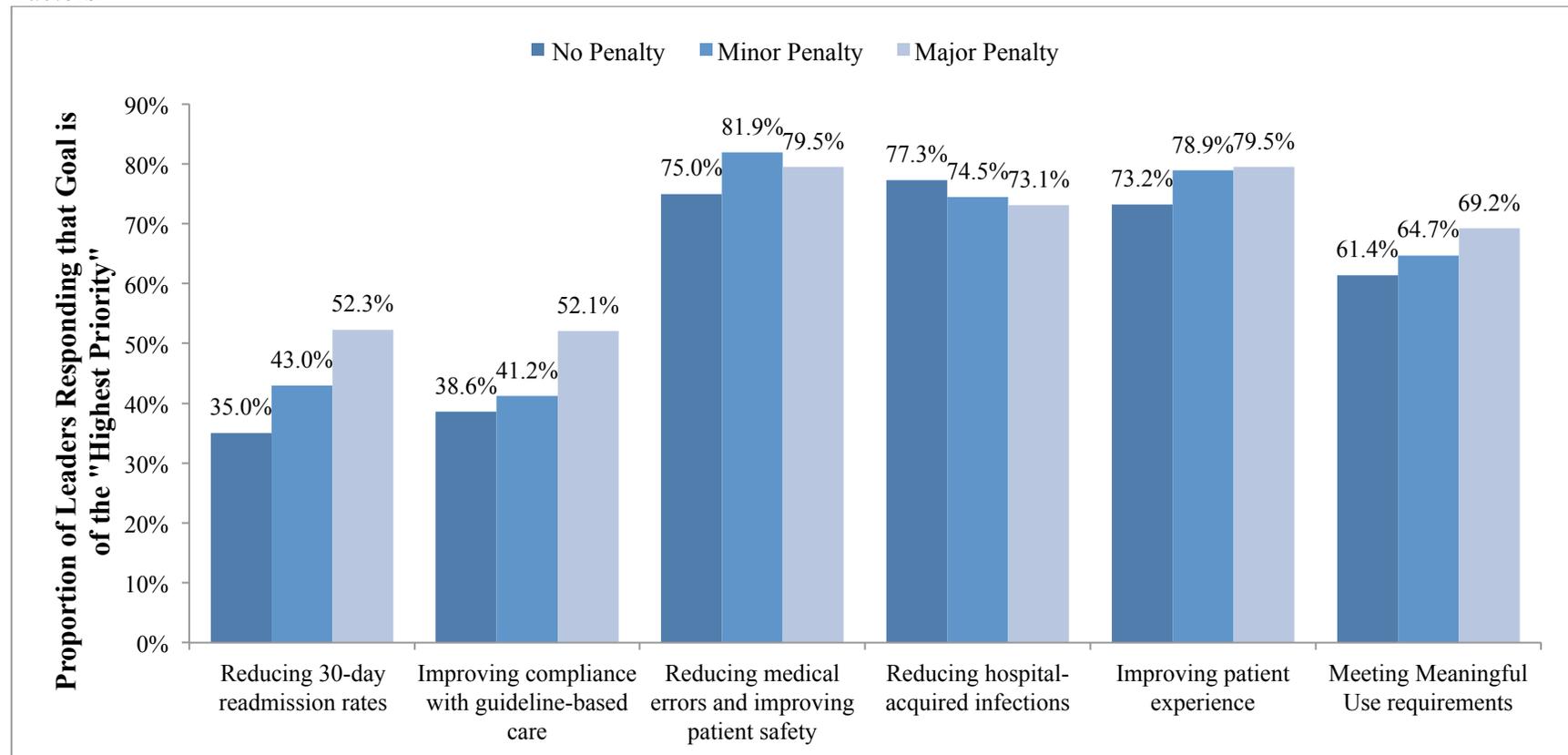
**Figure A.** Impact of Federal Policies on Hospital Efforts to Reduce Readmissions, by Receipt of Penalty<sup>a</sup> in 2013—Adjusted for Hospital Characteristics and Socioeconomic Factors<sup>b</sup>



<sup>a</sup>Penalties are those that were applied to payments in fiscal year 2013, when our survey was in the field. Minor penalties were defined as those that were less than the median; major penalties were those that were greater than the median.

<sup>b</sup>Results are adjusted for sample weights, nonresponse bias, and hospital characteristics, including size, teaching status, ownership, urban location, and region, and safety net status, as well as proportion of the hospital's Medicare patients that self-identify as black.

**Figure B.** Prioritization of Competing Goals by Hospital Leadership—Adjusted for Hospital Characteristics and Socioeconomic Factors<sup>a,b,c</sup>



<sup>a</sup>Respondents were asked to respond on a scale of 1 (lowest priority) to 10 (highest priority). The results displayed here correspond to responses of 9 or 10.

<sup>b</sup>Penalties are those that were applied to payments in FY2013, when our survey was in the field. Minor penalties were defined as those that were less than the median; major penalties were those that were greater than the median.

<sup>c</sup>Results are adjusted for sample weights, nonresponse bias, and hospital characteristics, including size, teaching status, ownership, urban location, and region, and safety net status, as well as proportion of the hospital's Medicare patients that self-identify as black.  $P < .001$  for all comparisons except "reducing hospital-acquired infections," for which  $P = .06$ .

**Table A.** Hospital Characteristics, Respondents vs Nonrespondents

Characteristics		Survey Respondents (N = 992)	Nonrespondents (N = 587)	P
Teaching	Major teaching	13.0%	6.1%	<.001
	Minor teaching	24.0%	27.6%	
	Non-teaching	63.0%	66.3%	
Profit/ownership	For-profit	18.5%	27.6%	<.001
	Nonprofit	62.2%	54.9%	
	Public	19.4%	17.6%	
Size	Small (1-99 beds)	27.5%	32.3%	.016
	Medium (100-399 beds)	53.0%	53.3%	
	Large ( $\geq$ 400 beds)	19.6%	14.5%	
Region	Northeast	13.7%	10.7%	.002
	Midwest	22.3%	16.0%	
	South	48.8%	54.9%	
	West	15.1%	18.4%	
RUCA	Urban	64.6%	61.0%	.03
	Suburban	2.7%	5.3%	
	Large rural town	19.2%	18.1%	
	Small town/isolated rural	13.5%	15.7%	
% Black	Median	11.6%	11.1%	.45
% Hispanic	Median	0.3%	0.3%	.71
% Medicare	Median	46.9%	47.5%	.03
% Medicaid	Median	19.4%	18.4%	.25
DSH	Median	28.8%	28.5%	0.82
Readmission rate <sup>a</sup>	Median	20.9%	21.1%	0.94

DSH indicates Disproportionate Hospital Index; RUCA, Rural Urban Commuting Area.

<sup>a</sup>Readmission rate is a weighted average of hospital performance across the 3 conditions included in the FY 2013 Hospital Readmissions Reduction Program penalty: acute myocardial infarction, heart failure, and pneumonia.

**Table B.** Opinions About Program Methodology—Adjusted for Hospital Characteristics and Socioeconomic Factors<sup>a</sup>

	<b>Overall</b>	<b>No Penalty<sup>b</sup> (N = 245)</b>	<b>Minor Penalty<sup>b</sup> (N = 321)</b>	<b>Major Penalty<sup>b</sup> (N = 385)</b>	<b><i>P</i><sup>c</sup></b>
	<b>Hospitals Answering “Agree” or “Agree Strongly”</b>				
The methods used to calculate the penalties don't account for differences in patients' socioeconomic status.	76.5%	74.9%	72.1%	81.3%	<.0001
The methods used to calculate the penalties don't adequately account for differences in patients' medical complexity.	76.4%	73.6%	72.4%	81.5%	<.0001
Hospitals have no ability or a limited ability to impact patients' adherence to treatments.	65.0%	56.8%	64.2%	71.0%	<.0001
Risk-adjusted readmission rates are not an accurate metric of the quality of care hospitals deliver.	63.2%	61.0%	62.3%	65.3%	.075
Hospitals have no ability or a limited ability to impact care delivered at nursing homes and rehabilitation facilities.	61.8%	55.6%	66.8%	61.6%	<.0001
Hospitals have no ability or a limited ability to impact ambulatory care delivered outside the hospital.	59.1%	49.0%	60.0%	64.8%	<.0001

<sup>a</sup>Results are adjusted for sample weights, nonresponse bias, and hospital characteristics, including size, teaching status, ownership, urban location, and region, and safety net status, as well as proportion of the hospital's Medicare patients that self-identify as black.

<sup>b</sup>Penalties are those that were applied to payments in fiscal year 2013, when our survey was in the field. Minor penalties were defined as those that were less than the median; major penalties were those that were greater than the median.

<sup>c</sup>*P* value reflects a difference across groups stratified by penalty receipt.

**Table C.** Other Program Participation and Opinions About Program Impact on Quality and Costs—Adjusted for Hospital Characteristics and Socioeconomic Factors<sup>a,b</sup>

	Is your hospital participating in this program through Medicare?					Is your hospital participating in this program through 1 or more private payers?				
	Overall	No Penalty <sup>c</sup> (N=245)	Minor Penalty <sup>c</sup> (N=321)	Major Penalty <sup>c</sup> (N=385)	P <sup>d</sup>	Overall	No Penalty <sup>c</sup> (N=245)	Minor Penalty <sup>c</sup> (N=321)	Major Penalty <sup>c</sup> (N=385)	P <sup>d</sup>
<b>HRRP</b>	100%					N/A				
<b>Bundled Payments</b>	34.0%	32.8%	34.4%	34.5%	.652	30.9%	29.2%	33.5%	29.8%	.039
<b>ACO or Shared Savings Program</b>	23.4%	26.5%	23.8%	21.1%	.009	32.0%	32.0%	31.8%	32.1%	.972
<b>Pay-for-Performance</b>	100% <sup>e</sup>					54.2%	52.3%	51.0%	58.2%	<.001
	Do you think this program will improve care?					Do you think this program will reduce costs?				
	Overall	No Penalty <sup>c</sup> (N=245)	Minor Penalty <sup>c</sup> (N=321)	Major Penalty <sup>c</sup> (N=385)	P <sup>d</sup>	Overall	No Penalty <sup>c</sup> (N=245)	Minor Penalty <sup>c</sup> (N=321)	Major Penalty <sup>c</sup> (N=385)	P <sup>d</sup>
<b>HRRP</b>	42.0%	46.6%	45.0%	36.5%	<.001	55.1%	52.8%	59.0%	53.3%	.002
<b>Bundled Payments</b>	31.5%	30.4%	35.2%	29.2%	.001	49.8%	50.3%	49.5%	49.8%	.925
<b>ACO or Shared Savings Program</b>	45.3%	47.9%	46.5%	42.6%	.017	51.6%	57.3%	50.7%	48.8%	<.001
<b>Pay-for-Performance</b>	51.5%	61.9%	49.2%	46.8%	<.001	48.8%	48.4%	49.6%	48.4%	.748

ACO indicates accountable care organization; HRRP, Hospital Readmission Reduction Program; N/A, not applicable.

<sup>a</sup>All percentages represent the proportion of hospitals responding “yes” to each question.

<sup>b</sup>Results are adjusted for sample weights, nonresponse bias, and hospital characteristics, including size, teaching status, ownership, urban location, and region, and safety net status, as well as proportion of the hospital’s Medicare patients that self-identify as black.

<sup>c</sup>Penalties are those that were applied to payments in fiscal year 2013, when our survey was in the field. Minor penalties were defined as those that were less than the median; major penalties were those that were greater than the median.

<sup>d</sup>P value reflects a difference across groups stratified by penalty receipt.

<sup>e</sup>All hospitals in our sample are also included in the Hospital Value-Based Purchasing Program, so this cell was assumed to be 100%.