

Penalizing Physicians for Low-Value Care in Hospital Medicine: A Randomized Survey

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Low-value services—those for which there is little to no benefit, little benefit relative to cost, or outsized potential harm compared with benefit—persist widely despite professional consensus, guidelines, and national campaigns to reduce them. As policy makers consider financially penalizing physicians to deter low-value services, physician support for such penalties remains unknown. We conducted a randomized survey experiment among physicians to evaluate how the framing of harms from low-value care—in terms of those to patients, healthcare institutions, or society—influenced physician support of financial penalties for low-value care services. Policy support rate was 39.6% overall and highest when the

harms of low-value care were framed as costs to society (48.4%). Compared with respondents receiving the “patient harm” version, those receiving the “societal harm” version (adjusted odds ratio [OR] 2.83; 95% confidence interval [CI], 1.20-6.69), but not the “institutional harm” framing (adjusted OR 1.53; 95% CI, 0.66-3.53), were more likely to report policy support. Our results suggest that emphasizing the impact of these harms may increase acceptability of financial penalties among physicians and contribute to the larger effort to decrease low-value care in hospital settings. *Journal of Hospital Medicine* 2018;13:41-44. Published online first November 22, 2017. © 2018 Society of Hospital Medicine

Reducing low-value care—services for which there is little to no benefit, little benefit relative to cost, or outsized potential harm compared with benefit—is an essential step toward maintaining or improving quality while lowering cost. Unfortunately, low-value services persist widely despite professional consensus, guidelines, and national campaigns aimed to reduce them.¹⁻³ In turn, policy makers are beginning to consider financially penalizing physicians in order to deter low-value services.^{4,5} Physician support for such penalties remains unknown. In this study, we used a randomized survey experiment to evaluate how the framing of harms from low-value care—in terms of those to patients, healthcare institutions, or society—influenced physician support of financial penalties for low-value care services.

METHODS

Study Sample

By using a stratified random sample maintained by the American College of Physicians, we conducted a web-based survey

among 484 physicians who were either internal medicine residents or internists practicing hospital medicine.

Instrument Design and Administration

Our study focused on 3 low-value services relevant to inpatient medicine: (1) placing, and leaving in, urinary catheters for urine output monitoring in noncritically ill patients; (2) ordering continuous telemetry monitoring for nonintensive care unit (non-ICU) patients without a protocol governing continuation; and (3) prescribing stress ulcer prophylaxis for medical patients not at a high risk for gastrointestinal (GI) complications. Although the nature and trade-offs between costs, harms, and benefits vary by individual service, all 3 are promulgated through the Choosing Wisely[®] guidelines as low value based on existing data and professional consensus from the Society of Hospital Medicine.⁶

To evaluate intended behavior related to these 3 low-value services, respondents were first presented with 3 clinical vignettes focused on the care of patients hospitalized for pneumonia, congestive heart failure, and alcohol withdrawal, which were selected to reflect common inpatient medicine scenarios. Respondents were asked to use a 4-point scale (very likely to very unlikely) to estimate how likely they were to recommend various tests or treatments, including the low-value services noted above. Respondents who were “somewhat unlikely” and “very unlikely” to recommend low-value services were considered concordant with low-value care guidelines.

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TABLE. Physician Characteristics (by Survey Version)

Physician Characteristic	Overall (n = 187)	Version			P Value
		Patient (n = 60)	Societal (n = 62)	Institutional (n = 65)	
Age (median, IQR)	39 (33-47)	39 (35-44)	42 (33-48)	39 (33-47)	.85
Male (%)	57.8	58.3	53.2	61.5	.85
Professional position (%)					.99
Practicing physician	87.2	86.7	87.1	87.7	
Resident physician	12.8	13.3	12.9	12.3	
Practice incentives (%) ^a					.71
Cost incentives	20.9	25.0	22.6	15.4	
Non-cost incentives ^b	68.4	63.3	67.7	73.8	
No incentives	10.7	11.7	9.7	10.8	
Attitudinal items (% support)					
Providing financial incentives to individual physicians is an effective way to improve the value of healthcare.	73.3	76.7	75.8	67.7	.45
If a test or treatment has any chance of helping the patient, it is the clinician's duty to offer it regardless of cost.	70.1	78.3	69.4	63.1	.18
Clinicians should consider the costs of a test or treatment to society when making clinical decisions.	79.1	71.7	85.5	80.0	.17
Clinicians should consider the costs of a test or treatment to healthcare providers (practices, hospitals, and insurance companies) when making clinical decisions for their patients.	66.3	61.7	74.2	63.1	.27
It is inappropriate for anyone other than the treating clinician and patient to decide if a test or treatment is "worth the cost."	63.6	75.0	54.8	61.5	.06
Concordance between intended behavior and low-value care guidelines (%)					
Telemetric monitoring	11.8	8.3	9.7	16.9	.60
Stress ulcer prophylaxis	57.8	63.3	51.6	58.5	.33
Urinary catheterization	78.6	76.7	82.3	76.9	.25

^aRefers to the % of respondents reporting that they are measured on these incentives in their inpatient practice.

^bIncludes quality, productivity, and patient satisfaction incentives.

NOTE: Abbreviation: IQR, interquartile range.

Following the vignettes, respondents then used a 5-point scale (strongly agree to strongly disagree) to indicate their agreement with a policy that financially penalizes physicians for prescribing each service. Support was defined as "somewhat or strongly" agreeing with the policy. Respondents were randomized to receive 1 of 3 versions of this question (supplementary Appendix).

All versions stated that, "According to research and expert opinion, certain aspects of inpatient care provide little benefit to patients" and listed the 3 low-value services noted above. The "patient harm" version also described the harm of low-value care as costs to patients and risk for clinical harms and complications. The "societal harm" version described the harms as costs to society and utilization of limited healthcare resources. The "institutional harm" version described harms as costs to hospitals and insurers.

Other survey items were adapted from existing literature⁷⁻⁹ and evaluated respondent beliefs about the effectiveness of

physician incentives in improving the value of care, as well as the appropriateness of including cost considerations in clinical decision-making.

The instrument was pilot tested among study team members and several independent internists affiliated with the University of Pennsylvania. After incorporating feedback into the final instrument, the web-based survey was distributed to eligible physicians via e-mail. Responses were anonymous and respondents received a \$15 gift card for participation. The protocol was reviewed and deemed exempt by the University of Pennsylvania Institutional Review Board.

Statistical Analysis

Respondent characteristics (sociodemographic, intended clinical behavior, and cost control attitudes) were described by using percentages for categorical variables and medians and interquartile ranges for continuous variables. Balance in respondent characteristics across survey versions was evaluated using χ^2 and

Kruskal-Wallis tests. Multivariable logistic regression, adjusted for characteristics in the Table, was used to evaluate the association between survey version and policy support. All tests of significance were 2-tailed with significance level $\alpha = 0.05$. Analyses were performed using STATA version 14.1 (StataCorp LLC, College Station, TX, <http://www.stata.com>).

RESULTS

Of 484 eligible respondents, 187 (39%) completed the survey. Compared with nonrespondents, respondents were more likely to be female (30% vs 26%, $P = .001$), older (mean age 41 vs 36 years, $P < .001$), and practicing clinicians rather than internal medicine residents (87% vs 69%, $P < .001$). Physician characteristics were similar across the 3 survey versions (Table). Most respondents agreed that financial incentives for individual physicians is an effective way to improve the value of healthcare (73.3%) and that physicians should consider the costs of a test or treatment to society when making clinical decisions for patients (79.1%). The majority also felt that clinicians have a duty to offer a test or treatment to a patient if it has any chance of helping them (70.1%) and that it is inappropriate for anyone beyond the clinician and patient to decide if a test or treatment is “worth the cost” (63.6%).

Concordance between intended behavior and low-value care guidelines ranged considerably (Figure). Only 11.8% reported behavior that was concordant with low-value care guidelines related to telemetry monitoring, whereas 57.8% and 78.6% reported concordant behavior for GI ulcer prophylaxis and urinary catheter placement, respectively.

Overall, policy support rate was 39.6% and was the highest for the “societal harm” version (48.4%), followed by the “institutional harm” (36.9%) and “patient harm” (33.3%) versions. Compared with respondents receiving the “patient harm” version, those receiving the “societal harm” version (adjusted odds ratio [OR] 2.83; 95% confidence interval [CI], 1.20-6.69), but not the “institutional harm” framing (adjusted OR 1.53; 95% CI, 0.66-3.53), were more likely to report policy support. Policy support was also higher among those who agreed that providing financial incentives to individual physicians is an effective way to improve the value of healthcare (adjusted OR 4.61; 95% CI, 1.80-11.80).

DISCUSSION

To our knowledge, this study is the first to prospectively evaluate physician support of financial penalties for low-value services relevant to hospital medicine. It has 2 main findings.

First, although overall policy support was relatively low (39.6%), it varied significantly on the basis of how the harms of low-value care were framed. Support was highest in the “societal harm” version, suggesting that emphasizing these harms may increase acceptability of financial penalties among physicians and contribute to the larger effort to decrease low-value care in hospital settings. The comparatively low support for the “patient harm” version is somewhat surprising but may reflect variation in the nature of harm, benefit, and cost trade-offs for individual low-value services, as noted above, and physician

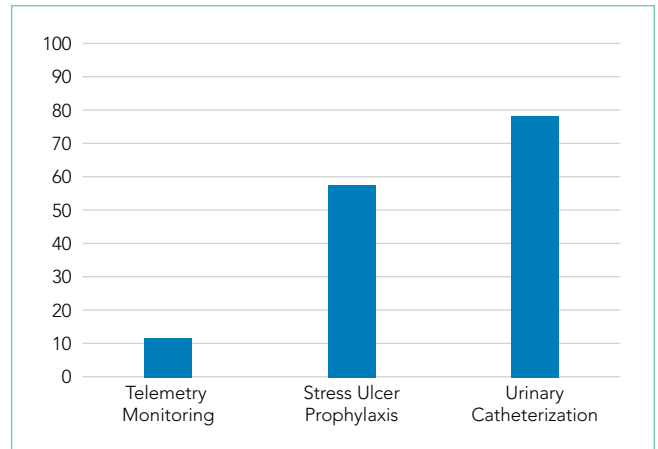


FIG. Percent Concordance between Intended Behavior and Low Value Care Guidelines.

belief that some low-value services do not in fact produce significant clinical harms.

For example, whereas evidence demonstrates that stress ulcer prophylaxis in non-ICU patients can harm patients through nosocomial infections and adverse drug effects,^{10,11} the clinical harms of telemetry are less obvious. Telemetry's low value derives more from its high cost relative to benefit, rather than its potential for clinical harm.⁶ The many paths to “low value” underscore the need to examine attitudes and uptake toward these services separately and may explain the wide range in concordance between intended clinical behavior and low-value care guidelines (11.8% to 78.6%).

Reinforcing policies could more effectively deter low-value care. For example, multiple forces, including Medicare payment reform and national accreditation policies,^{12,13} have converged to discourage low-value use of urinary catheters in hospitalized patients. In contrast, there has been little reinforcement beyond consensus guidelines to reduce low-value use of telemetry monitoring. Given questions about whether consensus methods alone can deter low-value care beyond obvious “low hanging fruit,”¹⁴ policy makers could coordinate policies to accelerate progress within other priority areas.

Broad policies should also be paired with local initiatives to influence physician behavior. For example, health systems have begun successfully leveraging the electronic medical record and utilizing behavioral economics principles to design interventions to reduce inappropriate overuse of antibiotics for upper respiratory infections in primary care clinics.¹⁵ Organizations are also redesigning care processes in response to resource utilization imperatives under ongoing value-based care payment reform. Care redesign and behavioral interventions embedded at the point of care can both help deter low-value services in inpatient settings.

Study limitations include a relatively low response rate, which limits generalizability. However, all 3 randomized groups were similar on measured characteristics, and experimental randomization reduces the nonresponse bias concerns accompanying descriptive surveys. Additionally, although we evaluat-

ed intended clinical behavior in a national sample, our results may not reflect actual behavior among all physicians practicing hospital medicine. Future work could include assessments of actual or self-reported practices or examine additional factors, including site, years of practice, knowledge about guidelines, and other possible determinants of guideline-concordant behaviors.

Despite these limitations, our study provides important early evidence about physician support of financial penalties for low-value care relevant to hospital medicine. As policy makers design and organizational leaders implement financial incentive policies, this information can help increase their accept-

ability among physicians and more effectively reduce low-value care within hospitals.

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