Contemporary Evidence about Hospital Strategies for Reducing 30-Day Readmissions: A National Study

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Abstract

Objectives—We sought to determine the range and prevalence of practices being implemented by hospitals to reduce 30-day readmissions of patients with heart failure or acute myocardial infarction (AMI).

Background—Readmissions of patients with heart failure or AMI are both common and costly; however evidence on strategies adopted by hospitals to reduce readmission rates is limited.

Methods—We used a web-based survey to conduct a cross-sectional study of hospitals' reported use of specific practices to reduce readmissions for patients with heart failure or AMI. We contacted all hospitals enrolled in the Hospital to Home (H2H) quality improvement initiative as of July 2010. Of 594 hospitals, 537 completed the survey (response rate of 90.4%). We used standard frequency analysis to describe the prevalence of key hospital practices in the areas of 1) quality improvement resources and performance monitoring, 2) medication management efforts, and 3) discharge and follow-up processes.

Results—Nearly 90% of hospitals agreed or strongly agreed that they had a written objective of reducing preventable readmission for patients with heart failure or AMI. More hospitals reported having quality improvement teams to reduce preventable readmissions for patients with heart failure (87%) than for patients with AMI (54%). On average, hospitals used 4.8 of 10 key practices; fewer than 3% of hospitals utilized all 10 practices.

Conclusions—Although most hospitals have a written objective of reducing preventable readmissions of patients with heart failure or AMI, the implementation of recommended practices varied widely. More evidence establishing the effectiveness of various practices is needed.

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Keywords

Heart failure; AMI; readmissions; quality improvement; medication reconciliation; discharge

Introduction

Nearly one in four patients hospitalized with heart failure and one in five patients hospitalized with acute myocardial infarction are readmitted within 30 days of discharge (1–3). These rates have been fairly stable or have increased slightly in recent years (4–5). Higher readmissions rates have been associated with lower patient satisfaction (6) and are estimated to cost Medicare more than $17 billion per year in hospital payments (7).

Randomized controlled trials have demonstrated successful efforts to reduce readmissions in a variety of patient populations (8–11), and a recent review suggested a substantial proportion of readmissions may be avoidable (12). Strategies commonly recommended for reducing readmissions include improved patient education about their medications, patient-centered discharge instructions, follow-up telephone calls, home visits, and increased coordination with outpatient providers (13–16). Despite the national focus on readmission rates, contemporary data on these hospital practices aimed at reducing readmissions are lacking.

Accordingly, we conducted a descriptive study to determine the range and prevalence of practices being implemented by hospitals to reduce 30-day readmissions of patients. We surveyed hospitals that were enrolled in Hospital-to-Home (H2H), a quality campaign sponsored by the American College of Cardiology (ACC) and Institute of Healthcare Improvement (IHI) with the goal of reducing readmission rates by 20% by the end of 2012. More than 1,000 hospitals have enrolled in this national effort, supported by multiple professional associations and partners. Given its national spread and size, the H2H campaign provides an ideal opportunity to examine changes over time in hospital practices; the present study reports baseline data on these practices.

Methods

Study Design and Sample

We conducted a cross-sectional study using a Web-based survey (Appendix) of hospitals to examine their reported use of specific hospital practices to reduce readmissions for patients with heart failure or AMI. We contacted all hospitals that enrolled in H2H during its first 8 months (October 1, 2009 – July 1, 2010) (n=594). Of the 594 hospitals, 537 completed the survey for a response rate of 90.4%. We sent a letter of invitation to the contact person registered with H2H. The roles reported by respondents varied and many respondents reported having more than one role; nearly 60% were from quality management departments, 25% were from cardiology departments, 25% were from other clinical departments, 16% were from case management or care coordination, and 8% reported working in non-clinical roles. Respondents were instructed to coordinate with other relevant staff to complete a single survey reflecting the hospital practices. All research procedures were approved by the Institutional Review Board at the Yale School of Medicine.

Measures

We examined hospital practices in 3 areas: quality improvement efforts and performance monitoring regarding readmission, medication management, and discharge and follow up procedures (See Appendix for questionnaire). In addition, in order to summarize the data, we created a summary count variable of 10 specific practices across each of the 3 areas: 1)

having a quality improvement team for reducing readmissions for heart failure or for AMI or both; monitoring the percent of patients with follow up appointments within 7 days of discharge; and monitoring 30-day readmission rates; 2) medication management efforts including providing patient education about the purpose of each medication and any alterations to the medication list, having a pharmacist usually responsible for conducting medication reconciliation at discharge, and having pharmacy technician primarily responsible for obtaining medication history as part of medication reconciliation process; and 3) discharge processes in which patients or their caregivers receive an emergency plan, patients leave the hospital with an outpatient follow-up appointment already arranged, a process is in place to ensure the outpatient physicians are alerted to the patient's discharge status within 48 hours of discharge, and patients are called after discharge to follow up on post-discharge needs or to provide additional patient education.

We assessed the internal consistency of the 10-item summary score using the Cronbach alpha coefficient, which was acceptable at 0.61. Practices included in the survey were selected based on existing literature and recommendations of the H2H campaign, taking into account practices that hospital staff might be expected to be able to address. We field tested the survey items using cognitive interviews (Krauss, 2002) with hospital quality improvement directors to assess clarity and comprehensiveness. The summary score ranged from 0–10 and is supported by a number of studies (8, 10, 15–31) although definitive evidence on their effectiveness is lacking.

We also ascertained hospital characteristics including number of staffed hospital beds, teaching status (member of the Association of American Medical Colleges (AAMC) Council of Teaching Hospitals (COTH) versus non-teaching), multihospital affiliation (yes/no) and ownership (for-profit, nonprofit, and yes/no) using data from the Annual Survey of the American Hospital Association (AHA) from 2009. We determined census regions from the U.S. Census Bureau and urban/suburban/rural location from the 2003 Urban Influence Codes.

Data analysis

We used standard frequency analysis to describe the sample of hospitals, the prevalence of each hospital practice, and the distribution of summary variables. We also used independent samples t-tests and chi-square tests as appropriate to compare our sample of H2H hospitals to all the other adult medical/surgical hospitals in the 2009 Annual Survey of the AHA. To examine variations in summary scores by hospital characteristics, we conducted unadjusted analysis with correlation coefficients (for number of staffed beds), with analysis of variance (ANOVA) (for geographic location, ownership type, and census region), and with t-tests (for teaching status and multihospital affiliation). The research was funded by the Commonwealth Fund, which had no influence on the methodology, findings, or interpretation. All analyses were conducted in SAS, version 9.2 (Carey, NC)

Results

Characteristics of hospital sample

The sample of 537 hospitals (response rate 90.4%) had a mean size of 316 beds with 11% having 600 or more beds (Table 1). Compared with all other adult medical/surgical hospitals in US, hospitals in our sample had more beds, were more likely to be COTH hospitals and part of a multihospital system/chain, were less likely to be government-owned, and more likely to be urban; they also varied significantly in census region, with greater numbers in the South Atlantic region (P-values < 0.05).

Hospital practices to reduce readmission rates

Quality improvement resources and performance monitoring—Nearly 90% of hospitals agreed or strongly agreed that they had a written objective of reducing preventable readmission for patients with heart failure or AMI (Table 2). Most hospitals reported having a reliable process to identify patients with heart failure at the time of admission; most hospitals reported having a quality improvement team in place to reduce preventable readmission for these patients with heart failure. Members of that team were typically quality improvement staff, staff nurses, social workers, physicians, and senior management. Pharmacists were included on teams in two thirds of the hospitals. Hospitals had less focus on readmission after hospitalization for AMI, with 54% of hospitals reporting they had a quality improvement team in place to reduce preventable readmission after hospitalization for AMI. Slightly more than half of hospitals had a multidisciplinary care team to manage patients at high risk for readmissions, more than two thirds had partnered with home care or skilled nursing facilities to reduce readmission rates, fewer than half had partnered with community physicians, and one quarter had partnered with local hospitals to reduce readmissions.

In terms of monitoring performance data, nearly all hospitals reported tracking the 30-day readmission rate; two thirds had a designated person or group to review unplanned readmissions that occur within 30 days of discharge. Other indicators were monitored by hospitals less frequently, such as the proportion of discharge summaries sent to the primary physician (22.7% of hospitals monitor this proportion), percent of patients with follow-up appointment within 7 days (32.1%), and proportion of patients readmitted to another hospital (11.4%). Approximately one fifth (22.3%) of hospitals reported that they formally estimate the risk of readmission and used it in clinical care during patient hospitalization.

Medication management practices—In about 15% of hospitals, the responsibility for medication reconciliation was not formally assigned at least sometimes (Table 3). Nevertheless, nearly three quarters of hospitals reported having some electronic medical record or web-based form to facilitate medication reconciliation. Typically emergency medicine staff or the admitting medical team obtained the medical history, with less common involvement of pharmacy staff. For nearly half the hospitals, a pharmacist or pharmacy technician was never involved with obtaining the medication history, and a small proportion of hospitals reported always making contact with an outside pharmacy or with the primary physician as part of the medication reconciliation process (in 3.2% and 13.9% of hospitals, respectively). The vast majority of hospitals reported that all patients or their caregivers received discharge instructions and names, doses, and frequency of discharge medications when they left the hospital, and the majority reported using "teach-back" techniques for patient and family education.

Discharge and follow-up practices—Almost 60% of hospitals reported providing patients (or their caregivers) some type of emergency plan and providing an action plan for patients with heart failure if symptoms changed (Table 4). Fewer than half responded that patients with home health services were provided direct contact for a specific inpatient physician in case of questions. Fewer hospitals reported that there was a process in place to ensure that outpatient physicians were alerted to the discharge within 48 hours, and about 30% of hospitals did not routinely make discharge summaries available for viewing within 7 days of discharge. About one third of hospitals assigned someone to follow up on test results that were received after the patient is discharged, nearly two thirds reported that they regularly called patients after discharge, and less than one quarter reported arranging home visits for most or all patients with HF or AMI after discharge. In the case of patients

discharged to skilled nursing facilities, less than two-thirds of hospitals reported that nurse-to nurse report was always conducted prior to transfer.

Summary score of practices—Less than 3% of hospitals had in place all the practices that comprised our summary score (Figure 1). The average number of 10 key practices reported to be in place was 4.8. Just more than 30% of hospitals had all QI and performance monitoring practices in place, and approximately 15% had all the discharge and follow-up practices in place (Table 5). A minority (5%) of hospitals had all the medication management practices in place. Census region was significantly associated with summary scores (with Pacific region having the highest scores and the Mountain region having the lowest scores). Hospital teaching status, urban/suburban/rural location, number of beds, chain affiliation, and ownership type were not significantly associated with summary scores for heart failure or for AMI.

Discussion

We found that the majority of hospitals reported having written objectives to reduce readmission, quality improvement teams focused on readmissions, and ongoing monitoring of 30-day readmission rates, while many of the specific practices considered to be important for preventing readmissions were implemented by fewer hospitals. We also found wide variation among this set of hospitals, although all had enrolled in a national campaign to reduce readmissions. While 12% of hospitals had implemented 2 or fewer of 10 key practices, another 12% had implemented 8 or more of these 10 practices, indicating substantial heterogeneity among hospitals in strategies to reduce readmissions of patients with heart failure and AMI.

Practices were particularly variable within the area of medication management, and the findings suggest that medication reconciliation processes were non-standardized at most hospitals. Although the majority of hospitals reported that physicians, physician assistants, or nurse practitioners were always responsible for conducting medication reconciliation, nearly one third of hospitals reported pharmacists were sometimes responsible, and 14% of hospitals suggested that the responsibility was at least sometimes not formally assigned to anyone. Additionally, for more than half of the hospitals, making contact with outside pharmacies or the primary physician was sometimes, but not always, part of the medication reconciliation process, again underscoring the variability in this process. Although patient education about medications was apparently robust with 70% of hospitals reporting the use of "teach-back" techniques and 77% reporting that all medication details were given to patients at discharge, lack of standard processes for both the reconciliation and patient education regarding medications is potentially problematic.

Several of the discharge and follow up practices, which have been shown to be associated with reduced readmissions (16), were practiced by fewer than half of hospitals. Central to effective continuity of care is the linking of inpatient and post-discharge (e.g., outpatient, home care, or skilled nursing facility) providers and information. Nevertheless, a process to alert outpatient physicians within 48 hours of the patient's discharge and a process to follow up on test results that return after a patient's discharge were present in 37% and 36% of hospitals, respectively. In the cases of patients discharged with home health services or to skilled nursing facilities, direct contact information for an inpatient physician in case of questions was reported to be provided in 47% and 34% of hospitals, respectively. The limited use of some evidence-based practices found in the present study is consistent with recent qualitative data suggesting that hospital and professional cultures tend to focus on the inpatient part of the patient's care and are less endorsing of responsibilities post discharge (32).

Why might these practices be lacking in so many hospitals? One reason may be because they require added resources. Particularly in the case of producing timely discharge summaries and ensuring adequate patient and caregiver education about complex medication and other issues, it is possible that constraints on staff time is a major rate-limiting step to implementing some of these potentially best practices. Perhaps a more important challenge, however, is the management challenge of coordinating efforts to ensure timely and proper discharge. Especially under the pressure of morning discharges, coordination among various physicians, pharmacists, nurses, and the many ancillary staff to achieve a smooth discharge may be extremely complex. Without standardized systems and across a diverse care team balancing multiple priorities, ensuring these practices requires substantial coordination, which may be difficult to accomplish. Last, clinicians may be uncertain about the efficacy of various strategies as we lack definitive studies demonstrating their impact on readmission. As a result, adoption of these strategies may be slower, particularly in the absence of definitive evidence supporting their effectiveness for reducing readmission rates.

This is the first national study we know of that documents specific hospital practices undertaken to reduce readmission rates. Nevertheless, the results should be interpreted in light of the study's limitations. First, the study was descriptive and cannot evaluate the impact of these practices on outcomes, including readmission rates. Readmission rate data will be linked to these practices in future reports from this study as the data become available. Second, implementation of these practices was self-reported by the primary hospital contact for the H2H campaign, often by the quality improvement director. We did request, however, that respondents consult with other key staff to complete the survey in order to ensure a more comprehensive and informed view of practices implemented. Furthermore, such practices are complex and cannot be fully characterized using quantitative methods, although items were field tested prior to the survey. Last, our findings may have overestimated the use of these practices nationally, as hospitals enrolled with H2H may be more motivated to reduce readmissions, or may have underestimated their use if hospitals with particular concerns may have been more likely to enroll. Nevertheless, among this large sample of hospitals with a high response rate, we found limited use of several practices that have been widely recommended.

In conclusion, we examined the reported use of key practices to reduce readmissions for patients with heart failure and AMI. Although some practices were implemented by many hospitals, most hospitals did not report having a comprehensive set of recommended practices in place. The lack of implementation of key practices was most apparent in the areas of medication management and discharge and follow up processes. Particularly striking was the substantial variability in hospital practices to reduce readmission rates. Given the diversity of efforts to reduce readmission rates, establishing more definitive evidence about the effective hospital practices in this area is warranted. Nevertheless, our findings suggest opportunities for continued improvement in communication and care coordination, which may assist in hospital efforts to reduce readmission rates.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments

Abbreviations

AAMC	Association of American Medical Colleges
AHA	American Hospital Association
AMI	Acute Myocardial Infarction
COTH	Council of Teaching Hospitals
H2H	Hospital-to-Home

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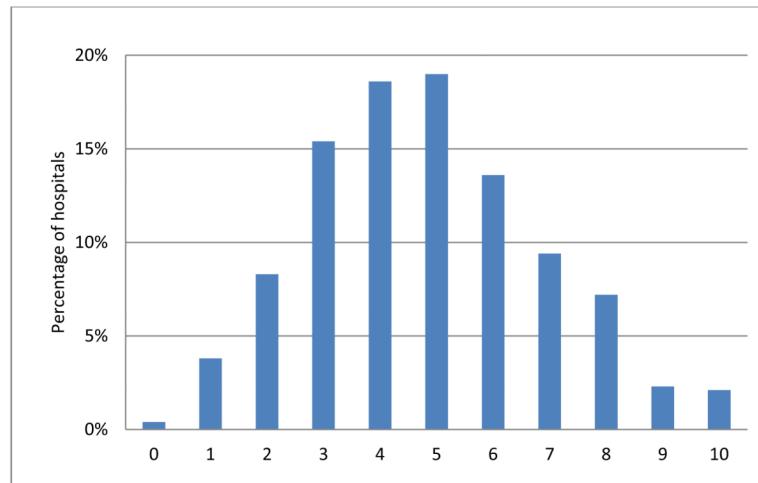
Figure 1.
Percentage of hospitals implementing 10 key practices – Summary scores indicating the frequency with which hospitals are implementing key practices in quality improvement and performance monitoring, medication management, and discharge and follow-up

Table 1

Descriptive characteristics of surveyed hospitals (n=537)

Characteristic	N (%)[*]
Hospital teaching status	
COTH	76 (14.2%)
Nonteaching	461 (85.9%)
Number of staffed beds	
< 200 beds	181 (34.0%)
200–399 beds	201 (37.8%)
400–599 beds	90 (16.9%)
600+ beds	60 (11.3%)
Mean (SD)	316 (220)
Census region	
New England	21 (3.9%)
Middle Atlantic	58 (10.8%)
East North Central	99 (18.5%)
West North Central	45 (8.4%)
South Atlantic	122 (22.8%)
East South Central	52 (9.7%)
West South Central	55 (10.3%)
Mountain	33 (6.2%)
Pacific	51 (9.5%)
Puerto Rico	1 (0.2%)
Geographic location	
Urban	457 (85.3%)
Suburban	53 (9.9%)
Rural	26 (4.9%)
Ownership type	
For-profit	129 (24.0%)
Nonprofit	360 (67.0%)
Government	48 (8.9%)
Multihospitalaffiliation	
Yes	384 (71.5%)
No	153 (28.5%)

[*] Number missing by item ranged from 0 to 5.

Table 2

Quality improvement resources and performance monitoring

	N (%)[*]
Hospital has reducing preventable readmissions as a written objective	
Strongly agree/agree	483 (89.9%)
Not sure/disagree/strongly disagree	54 (10.1%)
Hospital has a reliable process in place to identify patients with heart failure at the time they are admitted.	440 (82.2%)
Hospital has quality improvement (QI) teams devoted to reducing preventable readmissions for patients with heart failure (HF)	
Yes	467 (87.0%)
No	70 (13.0%)
Members of QI teams focusing on readmission for patients with HF (select all that apply)[a]	
Nurses	459 (98.3%)
Quality improvement/Quality management staff	447 (95.7%)
Social workers and/or case managers	418 (89.5%)
Physicians	415 (88.9%)
Senior management of the hospital	407 (87.2%)
Pharmacists	306 (65.5%)
Advanced practice nurses or physician assistants	271 (58.0%)
Hospital governing board members	86 (18.4%)
Patient or family representatives	56 (12.0%)
Hospital has quality improvement (QI) teams devoted to reducing preventable readmissions for patients with acute myocardial infarction (AMI)	
Yes	287 (53.5%)
No	250 (46.6%)
Members of QI teams focusing on readmission for patients with AMI (select all that apply)[‡]	
Nurses	275 (95.8%)
Quality improvement/Quality management staff	269 (93.7%)
Physicians	259 (90.2%)
Senior management of the hospital	244 (85.0%)
Social workers and/or case managers	225 (78.4%)
Pharmacists	179 (62.4%)
Advanced practice nurses or physician assistants	155 (54.0%)
Hospital governing board members	62 (21.6%)
Patient or family representatives	41 (14.3%)
Hospital has a multidisciplinary team to manage the care of patients who are at high risk of readmission	302 (56.5%)
Hospital has partnered with the following to reduce readmission rates (select all that apply)	
Community home care agencies and/or skilled nursing facilities	363 (67.9%)
Community physicians or physician groups	263 (49.3%)
Other local hospitals	125 (23.5%)
Hospital tracks the following for quality improvement efforts	

	N (%)[*]
Timeliness of discharge summary	374 (70.2%)
Proportion of discharge summaries that are sent to primary physician	121 (22.7%)
Percent of patients discharged with follow-up appointment within 7 days	171 (32.1%)
Accuracy of medication reconciliation	390 (73.2%)
30-day readmission rate	504 (94.6%)
Early (<7 day) readmission rate	297 (55.7%)
Proportion of patients readmitted to another hospital	61 (11.4%)
Has a designated person or group to review unplanned readmissions that occur within 30 days of the original discharge.	339 (63.5%)
Estimates risk of readmission in a formal way and uses it in clinical care during patient hospitalization	119 (22.3%)

[*] Number missing by item ranged from 0 to 5

[†] Among hospitals reporting corresponding quality improvement teams

Table 3

Medication management practices

	N (%)[*]
Who is responsible for conducting medication reconciliation at discharge?	
Discharging physician, physician assistant or nurse practitioner	
Never	14 (2.6%)
Sometimes	42 (7.9%)
Usually	76 (14.2%)
Always	403 (75.3%)
Nurse	
Never	55 (10.3%)
Sometimes	51 (9.6%)
Usually	49 (9.2%)
Always	379 (71.0%)
Pharmacist	
Never	313 (58.7%)
Sometimes	163 (30.6%)
Usually	21 (3.9%)
Always	36 (6.8%)
Responsibility not formally assigned	
Never	458 (86.3%)
Sometimes	23 (4.3%)
Usually	21 (4.0%)
Always	29 (5.5%)
Tools in place to facilitate medication reconciliation (select all that apply)	
Paper-based standardization form	292 (54.4%)
Electronic medical record/web-based form	396 (73.7%)
How often does each of the following occur as part of the medication reconciliation process at your hospital?	
Emergency medicine staff obtains medication history.	
Never	3 (0.6%)
Sometimes	40 (7.5%)
Usually	154 (28.8%)
Always	338 (63.2%)
Admitting medical team obtains medication history.	
Never	8 (1.5%)
Sometimes	33 (6.2%)
Usually	98 (18.3%)
Always	396 (74.0%)
Pharmacist or pharmacy technician obtains medication history.	
Never	248 (46.4%)
Sometimes	161 (30.2%)

	N (%)[*]
Usually	47 (8.8%)
Always	78 (14.6%)
Contact is made with outside pharmacies.	
Never	78 (14.6%)
Sometimes	369 (69.2%)
Usually	69 (13.0%)
Always	17 (3.2%)
Contact is made with primary physician.	
Never	29 (5.4%)
Sometimes	282 (52.8%)
Usually	149 (27.9%)
Always	74 (13.9%)
Outpatient and inpatient prescription records are linked electronically.	
Never	327 (61.4%)
Sometimes	93 (17.5%)
Usually	61 (11.4%)
Always	52 (9.8%)
Third party prescription database that provides historical fill and refill information (e.g., Health Care Systems).	
Never	444 (83.3%)
Sometimes	55 (10.3%)
Usually	15 (2.8%)
Always	19 (3.6%)
All patients (or their caregivers) receive at the time of discharge information about the purpose of each medication, which medications are new, which medications have changed in dose or frequency, and/or which medications are to be stopped	412 (77.2%)
Hospital promotes use of teach-back techniques (having the patient "teach" new information back to educator) for patient and family education	374 (69.8)

[*] Number missing by item ranged from 0 to 6

Table 4

Discharge and follow-up procedures

	N (%)[*]
For all patients	
All patients (or their caregivers) receive the following in written form at the time of discharge:	
Discharge instructions	490 (91.4%)
Names, doses, and frequency of all discharge medications	468 (87.5%)
Educational information about heart failure, when relevant	389 (72.6%)
Symptoms that prompt immediate call to physician or return to hospital	356 (66.5%)
Educational information about AMI	350 (65.3%)
Any type of emergency plan[‡]	316 (59.0%)
Action plan for heart failure patients for managing changes in condition	284 (53.0%)
Personal health record	141 (26.5%)
Discharge summary	105 (19.6%)
Patients are discharged from the hospital with an outpatient follow-up appointment already arranged	
Never	20 (3.7%)
Sometimes	224 (41.9%)
Usually	235 (43.9%)
Always	56 (10.5%)
Patients with home health services are provided direct contact information for a specific inpatient physician in case of questions	250 (46.8%)
Process is in place to ensure outpatient physicians are alerted to the patient's discharge within 48 hours of discharge	199 (37.3%)
Proportion of patients for whom a paper or electronic discharge summary is sent directly to the patient's primary MD	
None	43 (8.1%)
Some	154 (28.8%)
Most	201 (37.6%)
All	136 (25.5%)
Patient's discharge summary typically completed and available for viewing	
Upon discharge	
Within 48 hours of discharge	43 (8.1%)
Within 7 days	223 (41.8%)
Within 30 days	94 (17.6%)
No explicit goals or policies regarding timeframe for completing the discharge summary	159 (29.8%)
	14 (2.6%)
Someone in the hospital is assigned to follow up on test results that return after the patient is discharged	191 (35.8%)
Patients are regularly called after discharge to either follow up on post- discharge needs or to provide additional education	337 (63.0%)
Home visits are arranged for all or most patients after discharge	116 (21.7%)
After discharge, patients:	
Receive telemonitoring	

	N (%)[*]
None	245 (45.8%)
Some	266 (49.7%)
Most	23 (4.3%)
All	1 (0.2%)
Receive referrals to cardiac rehabilitation	
None	27 (5.1%)
Some	192 (36.0%)
Most	204 (38.3%)
All	110 (20.6%)
Are enrolled in chronic disease management programs	
None	161 (30.2%)
Some	325 (60.9%)
Most	41 (7.7%)
All	7 (1.3%)
For patients transferred to skilled nursing facilities	
Nurse-to-nurse report is always conducted prior to transfer	327 (61.1%)
Information always provided to the facility upon discharge	
Completed discharge summary	253 (47.3%)
Reconciled medication list	441 (82.4%)
Medication administration record	353 (66.0%)
Direct contact number of inpatient treating physician	181 (33.8%)

[*] Number missing by item ranged from 1 to 4

[†] Indicates hospitals that provide direct contact information for a specific physician in case of emergency and/or any other type of emergency plan.

Table 5

Summary scores of hospital practices to reduce preventable readmissions

		N (%)[*]
Quality improvement resources and performance monitoring:		
- Having at least one quality improvement team for reducing readmissions for heart failure, AMI or both	0	28 (5.3%)
	1	334 (62.8%)
- Monitoring proportion of discharged patients with follow-up appt within 7 days	2	4 (0.8%)
- Monitoring 30-day readmission rates	3	166 (31.2%)
Medication management:		
- Providing information to all patients about medications (including the purpose of each medication; which medications were new; which medications had changed in dose or frequency; and which medications had been stopped)	0	95 (17.8%)
	1	309 (58.0%)
	2	103 (19.3%)
- Having pharmacist responsible for conducting medication reconciliation at discharge	3	26 (4.9%)
- Having pharmacy technician primarily responsible for obtaining medication history as part of medication reconciliation process		
Discharge and follow-up:		
- Providing patients or their caregivers direct contact information for a specific physician in case of an emergency and/or other type of emergency plan	0	48 (9.0%)
	1	115 (21.5%)
- Arranging an outpatient follow-up appointment before patients leave the hospital	2	168 (31.5%)
- Ensuring the outpatient physicians are alerted to a patient's discharge in 48 hours	3	124 (23.2%)
- Calling patients regularly after discharge to either follow up on post-discharge needs or to provide additional education	4	79 (14.8)

[*] Summations for each practice set had between 3 and 5 missing values