

Project RED Impacts Patient Experience

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Abstract

Background: Hospitalized patients are frequently unprepared to care for themselves after discharge often leading to unplanned hospital readmission. One strategy to reduce readmission rates is improving the quality of patient education and preparation before hospital discharge. The ReEngineered Discharge (RED) is a standardized hospital-based program designed to provide patients and caregivers the information they need to continue care at home. **Objectives:** We sought to study the impact of the RED intervention on posthospitalization adult patient experience scores in an urban academic safety-net hospital. **Methods:** We conducted a descriptive study of a pilot program that compared posthospitalization survey responses to the Press Ganey survey item “Instructions were given about how to care for yourself at home.” We compared the survey results for 3 groups of adult patients: those receiving the RED program, those receiving a standard discharge on the same hospital unit, and those receiving a standard discharge on other hospital units. **Results:** A greater percentage of adult patients who received the RED discharge program rated the quality of their discharge as “very good” as compared to those receiving a standard discharge on the same hospital unit and those receiving a standard discharge on other hospital units (61%, 35%, and 41%, respectively, $P = .0001$). **Conclusion:** Delivery of a standardized hospital discharge program resulted in a larger proportion of top-box “very good” responses on a Press Ganey posthospitalization survey. Future research should examine whether hospital-based transition programs can sustain improvement in patient experience measures and whether these improvements can be observed in other patient populations.

Keywords

caregiving, patient expectations, patient satisfaction, HCAHPS

Introduction

Patients and family caregivers often report that they feel unprepared to care for themselves or loved ones after they arrive home from the hospital (1). Poor preparation for discharged patients can result in confusion about medicines, follow-up and tests appointments, pending test results, and diagnoses (2-4). Coupled with the frailty many experience during the hospital to home transition, it is no surprise that many adverse events occur after discharge or that 1 in 5 Medicare patients returns to the hospital within 30 days of hospital discharge—an event that costs the U.S. \$17 billion annually (5,6). Unplanned hospital readmission is a marker of the quality of care provided in the hospital and in the immediate posthospital setting (7,8). One strategy to reduce readmission rates is improving the quality of the hospital-to-home transition that involves discharge and education of patients and their family caregivers (9-11).

The ReEngineered Discharge (RED) is a standardized in-hospital discharge planning program shown to decrease

postdischarge 30-day all-cause hospital readmission and emergency department visits (12). A recent meta-analysis showed that an individualized discharge plan tailored to the individual patient compared with routine discharge care brings about reductions in readmission rates (13).

The RED intervention provides an individualized discharge plan. The plan is organized and reviewed with the

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Table 1. Components of the ReEngineered Discharge.^a

1. Ascertain need for and obtain language assistance
2. Make appointments for follow-up care (eg, medical appointments, postdischarge tests/labs)
3. Plan for the follow-up of results from tests or labs that are pending at discharge
4. Organize postdischarge outpatient services and medical equipment
5. Identify the correct medicines and a plan for the patient to obtain them
6. Reconcile the discharge plan with national guidelines
7. Educate the patient about his or her diagnosis and medicines
8. Review with the patient what to do if a problem arises
9. Expedite transmission of the discharge summary to clinicians accepting care of the patient
10. Prepare and teach a written discharge plan the patient can understand
11. Assess the degree of the patient's understanding of the discharge plan
12. Provide telephone reinforcement of the discharge plan

^a Adapted From Tool 1: Overview: Re-Engineered Discharge (RED) Toolkit (15).

patient by a nurse “discharge advocate.” This patient-centered health plan, the After Hospital Care Plan (AHCP), is formatted with large font, color, icons, and simple clear language. It includes information about medications, future appointments, future and pending tests, and a calendar of activities scheduled over the next 30 days. The AHCP is reviewed with the patient before discharge, and, to close the communication loop, “teach back” is done routinely (14). As part of the RED program, discharge summaries are sent to the primary care provider within 48 hours of discharge. In addition, a telephone call is made to the patient within 48 hours of discharge to reinforce the discharge plan. A complete list of the components of the RED program is shown in Table 1.

The Agency for Healthcare Research and Quality (AHRQ) commissioned the development of a toolkit designed so that other hospitals could more easily implement the RED and for the program to be delivered with greater fidelity. The toolkit is available on the AHRQ website (15). The components of the RED program were recognized as a “best practice” by the National Quality Forum (16).

There is little evidence that a standardized discharge program like the RED improves adult patient experience scores on posthospitalization surveys among patients discharged from a general medical hospital. We studied whether the RED program improves posthospital patient experience measures in 3 groups of patients: those receiving the RED program, those receiving a standard discharge on the same hospital unit, and those receiving a standard discharge on other inpatient units in the same hospital. We hypothesize that adult patients who receive the RED will have higher posthospitalization patient experiences scores than the 2 groups who did not receive the RED.

Methods

We conducted a descriptive study of the RED intervention pilot program in order to evaluate its impact on Press Ganey posthospitalization survey scores in adult patients who received the RED intervention while admitted to the hospital compared to those adult inpatients who did not. The study was carried out at Boson Medical Center (BMC), the largest safety-net hospital in New England serving a largely urban patient population. Approximately 70% of patients at BMC come from underserved populations, including low-income families, elders, people with disabilities and immigrants, and 32% of its patients do not speak English as a primary language (17). Eligible patients were those patients aged 18 years and older who were admitted to the BMC adult medical wards and discharged between July 1, 2011 and June 30, 2013.

The RED Intervention

The components of the RED process were previously described in detail (12,15,18,19). The RED intervention includes 12 components (Table 1) to assist the patient in understanding how to care for themselves after they are discharged from the hospital. In this study, the RED intervention was delivered to an adult inpatient unit by a trained registered nurse (the “discharge advocate”), who was trained in the RED process using protocols described in the RED toolkit. There was 1 discharge advocate during the study period.

The RED intervention was part of a pilot program delivered to adult patients admitted to a geographical unit of Boston Medical Center that exclusively admits adult medical patients from a consortium of federally qualified community health centers, the Boston HealthNet. The pilot aimed to enroll 3 patients per day into the RED program. One unit-based discharge advocate selected adult patients at the time of admission to receive the RED intervention based on the anticipation of high-complexity discharge care planning or history of frequent hospital readmissions. Data on the intervention group were collected at the time of admission.

Standard Discharge

Patients receiving the “standard” discharge process routinely received discharge instructions on the day of discharge. The activities related to a standard discharge in our hospital are described in detail (20). In a standard discharge, instructions included a computer-generated document listing the “reason for admission” and discharge medications. A hospital discharge summary is often given to the patient.

Outcome variable. Patient experience data were obtained from the Press Ganey Inpatient Survey administered by Press Ganey Associates (South Bend, Indiana). Patients eligible to receive a survey included those discharged alive from the hospital, with the exception of patients transferred to another

Table 2. Survey Return Frequency Among Adult Medical Patients Between July 1, 2011 and June 30, 2013.

	RED	Non-RED (Same Unit)	Non-RED (Other Units)
Surveys returned, n	74	158	1831
Answered "The extent to which you felt ready to be discharged," n	70	153	1739
Answered "Instructions given about how to care for yourself at home," n	70	146	1707

Abbreviation: RED, ReEngineered Discharge.

hospital and patients previously surveyed within the preceding 30 days. Patients were surveyed within 2 weeks of hospital discharge. Surveys were randomly mailed to 70% of hospital discharges. Surveys were anonymous and were offered in 3 languages: English, Spanish, or Haitian-Creole.

The primary end points for this analysis were scores from patient responses to 2 items under the Discharge Domain of the Press Ganey Inpatient Survey. The first item was "The extent to which you felt ready to be discharged" and the second item was "Instructions given about how to care for yourself at home." The responses were graded on a 5-point Likert scale (very poor, poor, fair, good, and very good). In this analysis, we used the total number of "very good" or "top box" responses as the outcome variable. The survey return rate was defined as the total number of surveys returned divided by the total number of surveys that were mailed.

Statistical Analysis

Among those medical patients who were discharged from BMC and returned surveys, we compared the Press Ganey Inpatient Survey scores in the sample of patients who received the RED on the intervention unit to those who did not receive the RED on the same unit. We also compared these scores to those scores of patients discharged from all other general adult medical units at BMC, who did not receive the RED discharge process.

This study was an initial evaluation of the patients' experiences of the RED discharge process. We used χ^2 analysis to compare the distribution of "very good" responses among patients who received the RED program compared to those who did not. The χ^2 test was chosen to test relationships between categorical variables. Not all patients answered every question and the resulting loss of respondents reduced the sample size by a range of 3.2% to 6.8% for all χ^2 analyses (Table 2). All analyses were performed using SAS version 9.3 (SAS Institute Inc).

Results

There were 41 024 discharges of adult patients from the BMC general medical service between July 1, 2011 and June 30, 2013. During this time period, 70% of discharges were surveyed with the Press Ganey Inpatient Survey. The return rate was about 14% (Figure 1).

Table 2 depicts the frequency with which the items "The extent to which you felt ready to be discharged," (item D1) and "Instructions given about how to care for yourself at home" (item D3) were answered. Seventy-four patients received the RED intervention and returned the survey. Of these patients, 70 completed each of the 2 items that we analyzed. A total of 158 patients who were seen on the same adult medical unit during this time period and who did not receive the RED discharge returned the survey. Of these patients, 153 and 146 patients answered items D1 and D3, respectively. Finally, of the 1831 adult general medical patients discharged from similar hospital units and who did not receive the RED intervention, 1739 and 1707 patients answered items D1 and D3, respectively.

Table 3 depicts the number of patients who responded "very good" to the 2 survey items among those patients who received the RED compared to those who did not receive the RED from the same unit. For item D1, 45% of patients who received the RED responded "very good" while 35% of non-RED patients responded similarly ($P = .1526$). For item D3, 61% of patients who received the RED responded "very good" while 35% of those patients who did not receive the RED intervention answered similarly ($P < .0001$).

Table 4 depicts "very good" responses among those patients who received the RED compared to all other patients from similar adult medical units at BMC who were discharged during this time period and who completed the survey. For the item "The extent to which you felt ready to be discharged," 45% of patients who received the RED responded "very good" as compared to 51% of patients who did not receive the intervention ($P = .250$). For item "Instructions given about how to care for yourself at home," 61% of patients who received the RED responded "very good" as compared to 41% of patients who receive the usual discharge processes ($P < .001$). These results are depicted in Figure 2.

Discussion

Our analysis shows that those patients who received the RED intervention at an urban academic safety-net hospital scored significantly higher on the Press Ganey Inpatient Survey item "Instructions given about how to care for yourself at home" as compared to patients who did not receive the intervention. Hospital-based educational programs were linked to discharge readiness in previous research. The Readiness for Hospital Discharge Scale, a measure of a patient's self-

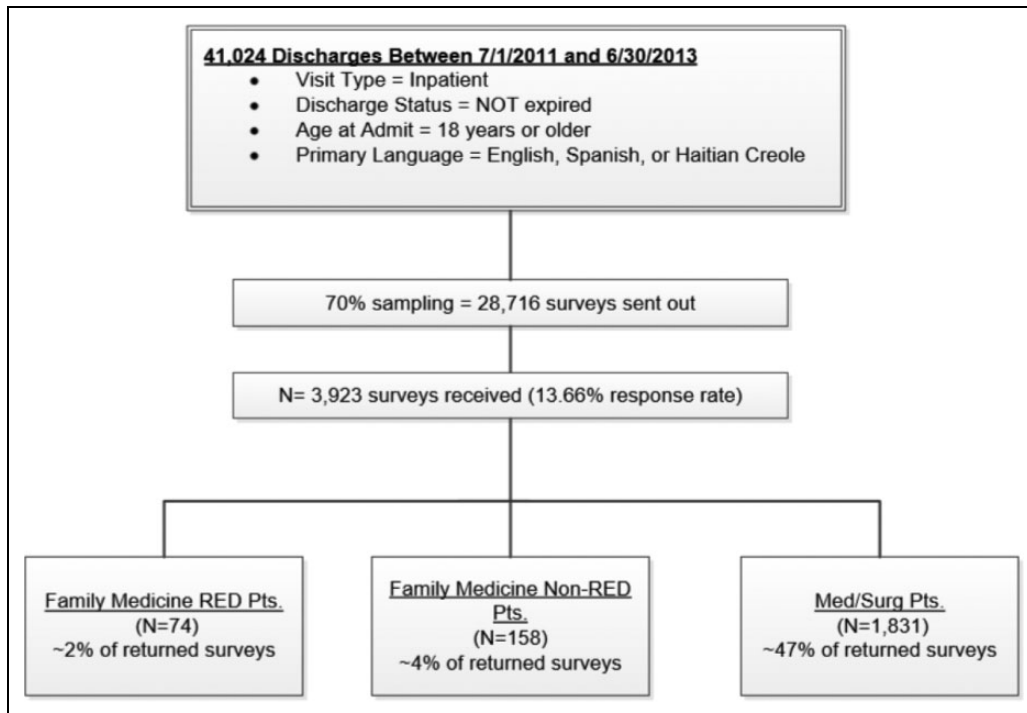


Figure 1. Study flow diagram.

Table 3. Number and Percentage of Patients on the Same Unit Who Responded “Very Good” for Items, “The Extent to Which You Felt Ready to be Discharged” and “Instructions Given About How to Care for Yourself at Home” for Those Receiving and Not Receiving the ReEngineered Discharge (RED) in the Same Medical Unit.

Survey Item	Received RED, n (%)	Did Not Receive RED (Same Unit), n (%)	P Value
“The extent to which you felt ready to be discharged”	31/70 (45)	54/153 (35)	.1526
“Instructions given about how to care for yourself at home”	43/70 (61)	51/146 (35)	<.0001

Table 4. Number and Percentage of Patients on the Same Unit Who Responded “Very Good” for Items, “The Extent to Which You Felt Ready to be Discharged” and “Instructions Given About How to Care for Yourself at Home” for Those Receiving and Not Receiving the ReEngineered Discharge (RED) in All Hospitalized Patients.

Survey Item	Received RED, n (%)	Did Not Receive RED (Other Units), n (%)	P Value
“The extent to which you felt ready to be discharged”	31/70 (45)	892/1739 (51)	.250
“Instructions given about how to care for yourself at home”	43/70 (61)	707/1707 (41)	<.001

perception of readiness for discharge using the dimensions of personal status, knowledge, coping ability, and expected support, showed the quality of discharge teaching to be a strong predictor of self-reported discharge readiness in a similar patient population (21,22).

This result adds to our knowledge about ways to influence patient experience scores by demonstrating an association between Press Ganey inpatient survey scores and a hospital-based discharge program. Postdischarge programs were shown to improve Press Ganey scores after emergency department utilization (23), and posthospitalization phone calls were shown to improve patient satisfaction (24). This is the first report of an inpatient-based patient education

program’s impact on posthospitalization patient experience survey responses.

These findings have several implications to practice and policy. First, the RED process is a tool that can be used to improve patient experience. In particular, the AHCP includes patient-centered information that patients indicate is very helpful in organizing appointments and services after discharge (12). This information is important to patients and to their caregivers, who often assist patients in the post-discharge time frame and who often feel unprepared to do so (25,26).

Second, patient experience scores are important to both patients and hospitals for judging quality of care, and any

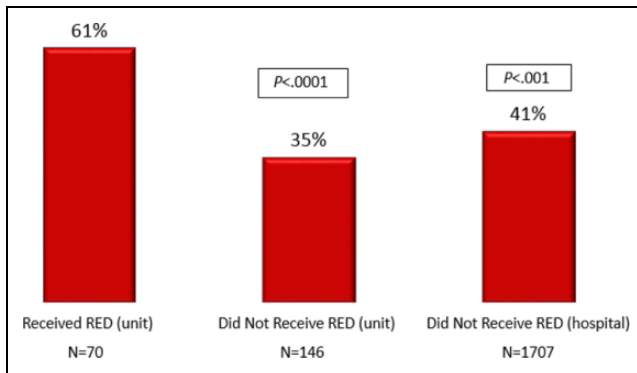


Figure 2. Percentage of patients responding “very good” to discharge item: instructions given about how to care for yourself at home.

increase in discharge quality scores reflects an improvement in the overall quality of care delivered. In the safety-net hospital studied, the overall baseline scores were low, even in the study population who received the RED intervention. Safety-net hospitals report lower performance on metrics of patient-reported experience (27). Hospital reimbursement can be affected by improvement in these scores, and policies should support those programs which improve patient experience and health-care quality, especially those in safety-net hospitals.

Third, the RED hospital-based discharge program was shown to decrease hospital utilization (12) and, in this study, we show that patient experience measures are also improved, adding additional evidence that hospitals and patients benefit from implementing patient-centered discharge programs designed to better prepare patients to care for themselves when they return home from the hospital.

We found no significant difference between scores on the measure of readiness for discharge (The extent to which you felt ready to be discharged) between those who received the RED and those who did not. It is possible that sentence syntax may have confounded these results as some patients may have self-reported feelings of “medical readiness” rather than “preparedness” for discharge.

Our study has several limitations. First, the cross-sectional study design and the low response rate may have biased our results in that there might have been differences between those patients who responded to the survey and those who did not. Second, our analysis did not adjust for possible confounders in the relationship between the patients who either did or did not receive the RED intervention and the survey results. Third, responses may have been influenced by recall bias of study participants who were discharged from the hospital. Finally, our results, utilizing a standardized discharge process can improve measures in patient experience, should be tested in other hospitals serving different patient populations, especially in hospitals that demonstrate higher baseline patient engagement scores.

In conclusion, our study demonstrates that patients who received the RED intervention in the hospital reported a

significantly higher rating on postdischarge patient experience scores related to the quality of the discharge process. Future research should examine whether the hospital-based transitions program can sustain improvement in patient experience measures.

Declaration of Conflicting Interests

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