Developing an ED Discharge Team to Incorporate the Re-Engineered Discharge (RED) Toolkit in a Rural Emergency Department

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Abstract

Background: The 72-hour return rate represents an important quality indicator and benchmark for Emergency Department (ED) care to determine if high quality and safe care is being delivered at a particular facility. The RED toolkit was created by Boston Medical University to aide in improving the discharge process and reducing hospital readmission rates and ED return rates (Adams et al, 2014). This quality improvement project utilized the RED components 2 and 11 from the RED toolkit and the project is referred to as *Project Red*. Component 2 is aimed at securing post-discharge follow-up appointments and Component 11 is aimed at transmission of discharge summaries to the PCP seen for follow-up.

Objective: The primary goal of this quality improvement (QI) project was to establish an ED discharge team in order to improve the discharge process for patients meeting Emergency Severity Index (ESI) Level 3 criteria. The secondary outcome measure of this QI project was to preschedule post-discharge follow-up appointments with the PCP within the recommended time frame in an effort to reduce the 72-hour return rate.

Methods: While the goal of this project was reduction in 72-hour return rates, the target population was the ED nursing staff and the ED administrative personnel. Patients meeting the project criteria were tracked by the principal investigator (PI) through the electronic medical record (EMR) with a concurrent log of staff compliance with the *Project Red* guidelines regarding recommended time frame of follow-up and if the appointment with the PCP was completed. Comparison of pre- and post-implementation of 72-hour return rates were measured.

Results: Analysis of utilization of the *Project Red* guidelines showed 80.95% of patients received an appointment to follow-up with a PCP within the recommended time frame. *Project RED* had a positive effect on the 72-hour return rate. While 19 participants were identified and participated in *Project RED*, 82 patients were found to meet qualifications but were not identified by the ED staff resulting in a 7.3% 72-hour return rate for those 82 patients, while the 19 who were identified had a zero percent 72-hour return rate.

Conclusion: The target population of the QI project was the ED nursing staff and the ED administrative personnel. The project had 95% participation of the nursing staff and 100% participation of the administrative personnel. This QI project proved to have a positive impact on the follow-up of patients with an ESI Level 3 classification. The secondary outcome of decreasing the 72-hour return rate was met as none of the *Project RED* participants returned and 7.3% of the patients who qualified but did not participate returned during the intervention period.

Keywords: 72- hour return rate, emergency department, quality improvement, RED Toolkit

ED Discharge Team to Incorporate the Re-Engineered Discharge (RED) Toolkit

Quality of care and patient satisfaction are key determinants in how an emergency room performs; therefore, the 72-hour return rate is utilized as a standard quality measurement among emergency departments (ED) to ensure high quality healthcare is being delivered (Hayward et al, 2018). According to the Center for Disease Control and Prevention (CDC), there are approximately 130 million patients treated in the ED each year (Cairns, 2021). Of those patients treated in the ED approximately 5.8% have return unscheduled ED visits within 72 hours of their initial visit (Shy et al, 2016). 79% of those return visits by patients within 72 hours could have been prevented with proper coordination of follow up care (Polster, 2015).

Patients with multiple comorbidities, of older age, or present with gastrointestinal issues, shortness of breath, or obstetric issues have a higher percentage of return ED visits (Hayward et al, 2018). Patients 65 years of age and older have 20 million ED visits per year with 95% returning to the ED if no outpatient follow up has occurred, suggesting that prompt follow up by a primary care provider (PCP) or subspecialty is needed to reduce return ED visits (Magidson et al, 2020). Follow up compliance is 59% greater when pre-scheduled discharge follow-up appointments are made rather than allowing the patient to self-schedule their follow-up appointment after being discharged from the ED (Kyriacou et al, 2005).

Effective ED discharge must have three characteristics to be effective; it informs and educates patients on their diagnosis, prognosis, treatment plan, and expected course of illness; supports patients in receiving post-ED discharge care; and coordinates ED care within the context of the health care system (AHRQ, 2014). This quality improvement (QI) project was aimed at developing an ED Discharge Team for patients with an Emergency Severity Index (ESI) of level 3 with no PCP through the incorporation of the Re-Engineered Discharge (RED) Toolkit with the goal of prescheduling follow-up appointments within the recommended time frame and lowering the significantly high 72-hour return rate in a rural ED located in rural western North Carolina.

The *RED Toolkit* was created by Boston Medical University and financially supported by the Agency for Health Care Research and Quality (AHRQ) and the National Heart, Lung, and Blood Institute

(NIH) (AHRQ, 2013). It consists of 12 actions (See Table 1) that are proven through research to improve the discharge process and reduce readmission rates (Jack et al, 2012). The ESI is a five-level triaging system used in the emergency department to categorize the acuity level of a patient (level 1: resuscitation, level 2: emergent, level 3: urgent, level 4: less urgent, level 5: nonurgent) and the number of resources needed for the patient determines if patient is deemed level 3,4, or 5 (Gilboy et al, 2020).

Review of Literature

The review of literature was conducted through using Cumulative Index to Nursing and Allied Health Literature (CINAHL).

The Effectiveness of Timely Follow-up after ED Discharge

By prescheduling ED follow-up visits prior to discharge, timely follow-up care is incorporated in the new ED discharge process. A retrospective study performed to assess the effectiveness of rapid follow-up after ED discharge discovered that out of 118 patients who received rapid outpatient follow-up after discharge, none of them returned to the ED, and all avoided hospital admission (Carmel et al, 2017). Studies performed on the effectiveness of timely follow-up after a hospital stay in an urban medical facility found that patients were 10 times more likely to return to the hospital after discharge if timely follow-up with a PCP or specialist did not occur (Mickey et al, 2010).

Risk Factors that Contribute to 72 Hour Returns

In 2018 a retrospective study was done and identified that infants, elderly adults, and patient with Medicaid as a sour of payment had a greater number of return visits (Chairns, 2021). Infants (101 visits per 100 people) and elderly adults aged 75 or greater (52 visits per 100 people) had the greatest amount of ED visits based on age; and patients with Medicaid (97 visits per 100 people) had significantly higher ED visits than patients with Medicare (45 visits per 100 people) and uninsured patients (37 visits per 100 people) based on source of payment (Chairns, 2021).

One retrospective study was done to identify characteristics of patients at high risk of returning to the ED within 72 hours for the same complaint (n = 470,902). Focusing on predictors of ED unscheduled return visits it was found that there was an unscheduled return rate of 8.7% with the highest predictors

being age greater than 65, higher disease acuity, and gastrointestinal complaints (Hayward et al, 2018). Wang et al., (2017) evaluated contributing factors for return ED visits within 72 hours among patients with minor head injuries treated in the ED (n = 2,815) and found among the 57 patients that returned, 17% had one or more comorbidities and were older than 42 years of age.

In a tertiary hospital in Singapore, of the 3.25% (n = 3,065) of patients who returned to the ED within 72 hours there was a greater significance in the male gender, older age, and abdominal complaints (all $p < 0.001$) (Chan et al, 2016). Similar findings were noted in another retrospective study that focused on risk factors of patients who return to the ED within 72 hours. This study found that out of 24,206 ED visits, 3,144 patients returned and in those returned patients, adults with chronic diseases and aged ≥60 years had the highest probability of returning within 72 hours of first ED visit (Ahmed, 2018).

Effectiveness of Re-Engineered (RED) Toolkit

The RED toolkit created by Boston Medical University consist of 12 components (See Table 1) that have been proven through research to improve the discharge process and reduce readmission rates (Jack et al, 2012).

In 2014, a rural community hospital incorporated the RED toolkit into their ED service and noticed a 37% reduction in readmission rates within four months of implementing the toolkit (Carol et al, 2017). Qualitative research studies (Mitchell et al, 2015; Sullivan et al, 2018) reported that hospitals with visible leadership support and positive staff cooperation had a significant decrease in readmission rates and adopted the tool kit as a standard discharge process. After implementation of a quality improvement project to decrease the 72-return rate in a pediatric ED, the effectiveness of the discharge project reduced the 72-hour return rate by 8.2% (Navanandan et al, 2020).

The Effectiveness of Pre-Scheduling Follow-up Appointments

Follow-up compliance is 59% greater when outpatient follow-up appointments are made at discharge rather than providing discharge instructions requiring self-scheduling for follow-up appointments (Kyriacou et al, 2005). A prospective study performed in an ED in the southeastern United States reported that out of a sample size of 500 patients, 80% attended their outpatient follow-up visit when the appointment were made by the ED (Tessitore & Cook, 2021). Studies (AHRQ, 2014; Kyriacou et al, 2005) found that a higher percentage of outpatient follow-up compliance occurred from ED prescheduled appointments as opposed to when patients self-schedule their outpatient appointments.

Similar findings were noted in another retrospective study that focused on prompt outpatient care for older adults. The study used the Reasons for Geographic and Racial Differences in Stroke (REGARDS) database to collect a sample size of 10,858 ED patients. The database found that older adults who have prompt follow up with their primary care provider or subspecialist have decreased return ED visits (Magidson et al, 2020).

A quality improvement project was implemented in a tertiary pediatric emergency department to improve their discharge process in efforts to decrease their 72-hour return rate and because of an improved discharge process and prescheduling outpatient appointments, they were able to decrease their 72-hour return rate by 8.2% (Nidhya et al, 2020).

Theoretical Framework

The Shewhart Cycle or Deming Cycle will be used as the conceptual framework for this QI project. The Shewhart Cycle was created to guide quality improvement projects by utilizing the PDCA cycle (Plan Do Check Act) that focuses on assessing, planning, acting, monitoring, evaluating, and reassessing to create effective change (Anderson, 2018).

The planning stage of this process began by identifying that in the months of January, February, and March the average 72-hour return rate was 11% for the urban ED where this QI project took place. This is significantly higher than the average 72-hour return rate (Shy et al, 2016). In the planning stage, an ED Discharge Planning Team was formed that consisted of the ED case manager, ED director,

Director of Case Management, ED Head Secretary, ED data analyst, and a DNP student. The ED planning team met biweekly to establish roles, the pre-scheduling process, and method of tracking follow-up compliance as well hosted training sessions to inform all other ED staff of the new process.

In the Doing cycle of the PDCA cycle, the team began implementing the QI project of pre-scheduling follow-up appointments while the DNP student collected data for the purpose of outcome results. Throughout the project constant monitoring occurred to ensure barriers were being addressed.

Once the QI project was completed, data was evaluated to determine if implementing an ED discharge team was effective in prescheduling post ED discharge follow-up appointments during the recommended time frame and subsequently decreasing the 72-hour return rate.

Purpose

The primary purpose of this QI project was to establish an ED discharge team in order to utilize specific components of the RED discharge toolkit to improve the discharge process. The secondary outcome of this QI project was to preschedule outpatient appointments within the provider recommended time frame and reduce the 72-hour return rate in a rural ED located in western North Carolina.

Methods

Context

This was a three-month quantitative QI project named *Project Red* where an ED discharge team was formed and components 2 and 11 of the *RED toolkit* were utilized in a rural ED located in western North Carolina. The new discharge process involved prescheduling post-discharge follow-up appointments prior to ED discharge.

Participants

The ED triage nurses, ED secretaries, and the ED primary nurses in the rural emergency department were the primary participants of this quality improvement project. The ED triage nurses were responsible for classifying the patient's ESI level of acuity. If participants identified a patient to have an

ESI of level three with no primary care provider, they were responsible for flagging the patient has a *Project Red* participant in the electronic medical record.

The ED secretaries were responsible with prescheduling post-discharge follow-up appointments, and the ED primary nurses provided the discharge instructions and appointment information to the patient. Participation was required by all ED staff as part of the new department discharge process. The stakeholders were the ED nurse manager and the case management director, both of whom voiced full support of this QI project and were a part of the ED Discharge Team.

Intervention

Project Red required participation and involvement of various interprofessional roles working together to ensure recognition of patients who met criteria, accurately placing referral orders, pre-scheduling the post-discharge follow-up appointment, and expediting discharge summaries to outpatient clinicians.

During the planning stage of *Project RED*, the ED discharge team met to create the new discharge process based on the *RED toolkit* and began training all ED staff on the project and its processes. The ED secretaries attended a training session on how to perform electronic scheduling for providers within the CHS Blue Ridge system. Only the ED secretaries had access to the electronic scheduling system. All ED staff nurses received training on *Project RED* learning how to identify *Project RED* participants and how to provide the patient with the prescheduled post-discharge follow-up appointment time as part of the discharge instructions. Microsoft Teams was the virtual method used to train the ED staff as the learning material was pre-recorded and could be accessed multiple times. Multiple training sessions were offered to give the 35 ED staff members the opportunity to attend. A member of the ED discharge team was the moderator of the Microsoft Teams training sessions that lasted approximately 30 minutes allotting time for questions after the presentation. A disclosure statement was included at the end of the training session informing the ED staff member that a non-signature consent was obtained through participation and attendance of the training session.

Project RED took place in the ED and began once the patient was identified as not having a primary care provider and classified as a level 3 ESI. Identifying the patient's ESI level, if the patient has a primary care provider, and listing the provider's name was already part of the triage assessment. If the patient was a candidate for *Project RED* the triage nurse typed *Project RED* in the comment section within the patient's electronic medical record (EMR). The ED provider would then include a recommended time frame of when the post-discharge follow-up appointment should occur. The ED secretary would proceed in pre-scheduling the follow-up outpatient appointment electronically in the EMR called Epic and notifying the primary nurse that the patient was ready for discharge. The ED case manager was consulted if barriers, such as with transportation or financial coverage, was identified during the scheduling of the appointment. The nurse reviewed discharge instructions with the patient and provided them with a card that had the documented date, time, address, and phone number of the prescheduled post-discharge follow-up appointment. Appointments were made in real time while the patient was present in the ED. The patient's identification sticker, phone number, and outpatient follow-up clinician's name were documented in a logbook for the purpose of recording if the appointment was made within the recommended time frame. *Project RED* was implemented for a total of three months.

Study of Intervention

The primary outcome was to create an ED discharge team that would incorporate components of the *RED toolkit* in order to improve the ED discharge process. The secondary outcomes were to preschedule post-discharge follow-up appointments within the recommended time frame which would subsequently reduce the 72-hour return rate. Process measures included a comparison of 72-hour return rates pre and post implementation of *Project RED*.

Measures

To measure the primary outcome of utilizing an ED discharge team to implement the components 2 and 11 of the toolkit, a system change in the discharge process was created. To measure the effectiveness of *Project RED*, the pre implementation and implementation of *Project RED* 72-hour return rates were compared. Quantitative data on the pre-project implementation 72-hour return rate was

obtained through a retrospective chart review. All reports were housed in Cerner, the hospital's EMR system. The data was categorized by date and ran monthly for the longitude of the project. The reports identified the percentage of pre- and post- implementation 72-hour return rates in patients categorized with an ESI level of 3 that had no PCP. The 72-hour return reports also provided direct access into the patient's EMR to obtain demographics, treatments, discharge instructions, insurance information, and established primary care provider information. Access to the Cerner Electronic Medical Record Program was granted by the hospital system and password protected.

To measure the secondary outcome of prescheduling the post-discharge follow-up appointments in the recommended timeframe, a log was kept that noted the recommended time frame of follow-up and if the outpatient appointment was made within those parameters. There was no identifying information on the data collected and all stored data was password protected on the Doctor Nursing Practice (DNP) resident's laptop.

Data Analysis

Descriptive statistics were used to illustrate the projects frequency and percentages of prescheduled post-discharge follow-up appointments as well as demographics of the population. A linear regression analysis was conducted to assess whether the utilization of *Project RED* significantly predicted 72-hour return rate percentages. A Chi-square Test of Independence was conducted to examine whether the utilization of *Project RED* and trained ED staff members were independent. An additional Chi-square Test of Independence was conducted to examine whether adequate staffing ($\geq 81\%$) and utilization of *Project Red* were independent. However, due to assumption violations of the Chi-square Test of Independence, a Fisher's exact test was performed instead. All quantitative statistical analysis were computed using the Intellectus Statistics software.

Ethical Considerations

The QI project was approved by the Institutional Review Board at Lenoir-Rhyne University in Hickory, North Carolina. The QI project was completed at a rural emergency department in westem North Carolina. Patients who charts were reviewed remain anonymous and no identifiable data was

collected. A no-signature consent form was obtained during training of all ED staff members to the new discharge process. Health Insurance Portability and Accountability Act (HIPPA) guidelines were abided by during the course of this project. There was no funding for this quality improvement project.

Results

Project RED Patient Participants

Twenty-one patients were selected to participate in *Project RED* based on meeting the criteria of having an ESI of level 3 with no PCP. Demographic profiles of the patients enrolled in *Project Red* are summarized in Table 2. Demographic information revealed the average patient age was 34 years, with an age range of 17 years to 60 years. Gender of the patients revealed 14 male patients and seven female patients were qualified to participate.

Ability to pay is a significant factor for patients being seen in the ED. During *Project Red* 15 out of the 21 patients were self-pay. Other payment sources identified were Medicaid ($n = 4$) and commercial insurance ($n = 2$). Self-Pay ($n = 15$, 71.43%) was the most frequently observed in the coverage category (Table 2).

Of the 21 enrolled patients, 19 received pre-scheduled post discharge follow-up appointments while two refused to participate in *Project Red*. Only two enrolled patients attended their prescheduled post-discharge follow-up appointments. A total of 19 patients (90.48%) did not attend their follow up appointments. Upon examination of payment source, one self-pay patient and one patient with commercial insurance attended their follow-up appointments.

Appointments made within the Designated Timeframe

The recommended time of follow-up appointments was made by the ED provider. The majority (80.95%) of post-discharge follow-up appointments for patients who participated in *Project Red* were made within the recommended time frame. Only 19.05% of post-discharge follow-up appointments were outside of the recommended time frame due to appointment times not available within the time frame (see Table 2).

Patients with a 72-hour Return

Analysis to assess whether the utilization of *Project Red* during the months of November, December, and January significantly affected the 72-hour return rate when compared to pre-implementation months of August, September, and October was conducted. Results show a significant improvement in the 72-hour patient return rate ($p = .018$), indicating that approximately 79.02% of the variance in 72-hour return percentage is affected by the utilization of *Project Red* (see Table 3).

Failure to Enroll Qualified Patients

The ED staff identified 19 patients for participation in *Project Red*. A retrospective chart review by the principal investigator (PI) identified 82 additional patients who met the qualifications for *Project Red* but were not identified by the ED staff to participate. Of the 19 patients who participated in *Project Red* none returned to the ED within the 72 hours post-discharge and of the 82 who qualified but did not participate 7.3% returned (n =6) within 72 hours (see Figure 1).

Utilization of '*Project Red*' by Trained Staff versus Untrained Staff

The duration of this QI project was 72 days, but *Project Red* was implemented only 13 days (18.06%) of those days. Staff who were travel nurses or nurses not yet trained in the *Project Red* protocol were on duty 48 of those 72 days. Analysis to examine whether any relation was noted between the days *Project Red* was utilized and if trained staff were on duty revealed a significant difference in enrollment of ESI Level 3 patients to the project (alpha value = .05; $p = .002$) (see Table 4). With untrained staff being on duty 67% of the days *Project RED* was implemented, enrollment into the project was limited. On the days trained staff were on duty (n=24); enrollment into *Project RED* occurred on 13 of those days.

Adequate Staffing and *Project RED* Utilized

Analysis was conducted to examine whether adequate staffing of 81% or higher and the days when *Project Red* was utilized were related. Management in the rural ED where *Project Red* was implemented reported the ED was adequately staffed and could run efficiently if 81% of staff were on duty. Optimal staffing occurred when 96% of staff were on duty.

The results of the Chi-square test were not significant (alpha value of .05; $p = .847$), suggesting that adequate staffing of 81% was not related to days when *Project Red* was implemented. Both variables were independent of one another (see Table 5); however, due to the small sample size, the Fisher's Exact Test was performed to validate the Chi-square test of independence results.

Fisher's exact test was conducted to validate the findings described above. Similar results revealed no relationship between adequate staffing at 81% and implementation of *Project Red* (alpha value of .05; $p = 1.000$), suggesting that adequate staffing of 81% or greater had no relation to the days when *Project Red* was utilized (see Table 6). Both variables were independent of one another and have no correlation supporting the Chi-square test of independence results

Discussion

Summary and Interpretation

The primary outcome was successfully met by creating an ED Discharge Team who was able to incorporate components 2 and 11 of the *RED toolkit* and implement a new discharge process. Training of the ED staff was successful as 95% of full-time ED nursing staff was trained in the use of the *Project Red* program and 100% of all the ED administrative staff were trained. The secondary outcome of making pre-scheduled post-ED follow-up appointments within the recommended time frame was met as 80.95% of appointments were made within the recommended time frame while the appointments not made within the recommended time frame were due to no available dates within the recommended time frame.
The other secondary outcome of decreasing the 72-hour return rate was met as there was zero percent of returns from the *Project RED* Participants and a 7.3% 72-hour return rate from the patients who were a level 3 with no PCP but did not participate in *Project RED*. The average 72-hour return rate for Pre-Implementation of *Project RED* (August, September, and October) was 12.1% and the average 72-hour return rate for Implementation of *Project RED* (November, December, January) was 9.4%. A linear regression analysis was performed and showed that Project RED had significant effects on the 72-hour return rate.

Limitations

Lack of project implementation was one of the limitations for *Project RED*. Only 21 patients were identified by staff to participate in *Project RED* while an additional 82 patients qualified but were not included in *Project RED*. This limitation supports Mitchell et al, 2015; Sullivan et al, 2018 findings that hospitals with visible leadership support and positive staff cooperation had a significant decrease in readmission rates. Staff turn-over contributed to lack of implementation. Due to an increase in staffing turnover during the months of implementation requiring float pool, PRN, and travel nurse staff was required to fulfill staffing needs. This challenged the project as none of these staff members had received pre-implementation training on *Project Red*. When looking at adequate staffing and utilization of *Project RED*, there was no significance noted on the chi square test of independence; however, there was a correlation of when trained staff worked and *Project RED* was utilized.

Another great limitation was the impact of the COVID-19 pandemic. Due to the COVID-19 pandemic, the small rural emergency department experienced an increase in the number of patients being treated. Not only was the emergency department experiencing an increase in the number of patients being treated, but the primary care offices were also experiencing the same. This led management to the decision of terminating all QI projects which included *Project RED*. The last limitation was noted with regards to the linear progression analysis of *Project RED* Utilized and The Percentage of 72-hour returns represented only 6 data points instead of a recommended 10 data points due to early termination of *Project RED*. However, with the 6 data points; significance was proven among the variables.

Conclusion

Project RED was successful in utilizing the *RED Toolkit* and creating a new discharge process for a 9-bed rural emergency department in western North Carolina. *Project RED* was able to accomplish the primary outcome of utilizing an ED Discharge Team to implement components 2 and 11 of the ED discharge process. As a result of the primary outcome being met, the secondary outcomes of making pre-scheduled post discharge follow-up appointments and lowering the 72-hour patient return rate was successful.

Barriers including staff attrition, locum tenens staffing and the COVID-19 pandemic limited the implementation of *Project Red*. Early termination restricted the ability to collect a larger sample size. In the future, based on the data; *Project RED* should be re-attempted with the recommendation of creating a plan to educate new incoming staff once the COVID-19 Pandemic has ended.

References

Adams, C. J., Stephens, K., Whiteman, K., Kersteen, H., & Katruska, J. (2014). Implementation of the Re-Engineered Discharge (RED) Toolkit to decrease all-cause readmission rates at a rural community hospital. *Quality Management in Health Care*, 23(3), 169–177. https://doi.org/10.1097/qmh.0000000000000032

Ahmed, A., AlBuraikan, D., Almazroa, H., Alrajhi, M., ALMuqbil, B., Albaijan, M., Al-salamah, M., & AL-Jahdali, H. (2018). Seventy-two-hour emergency department revisits among adults with chronic diseases: A Saudi Arabian study. *Therapeutics and Clinical Risk Management*, *14*, 1423–1428. https://doi.org/10.2147/tcrm.s168763

Anderson, P. (2018). Theoretical approaches to quality improvement. In J.B. Butts and K.L. Rich (Eds.), *Philosophies and theories for advanced nursing practice* (pp. 375-391). Jones and Bartlett Learning.

Cairns, C., Ashman, J., & Kang, K. (2021). Emergency Department visit rates by selected characteristics: United States, 2018. *National Hospital Medical Care Survey*, 401, 1–8. https://www.cdc.gov/nchs/products/databriefs/db401.htm

Carmel, A., Steel, P., Tanouye, R., Novikov, A., Clark, S., Sinha, S., & Tung, J. (2017). Rapid primary care follow-up from the ED to reduce avoidable hospital admissions. *Western Journal of Emergency Medicine*, *18*(5), 870–877. https://doi.org/10.5811/westjem.2017.5.33593

Case Management Society of America. (n.d.). *What is a case manager?* https://cmsa.org/who-we-are/what-is-a-case-manager

Chan, A., Ho, S., Fook-Chong, S., Lian, S., Liu, N., & Ong, M. (2015). Characteristics of patients who made a return visit within 72 hours to the emergency department of Singapore tertiary hospital. *Singapore Medical Journal*, *57*(06), 301–306. https://doi.org/10.11622/smedj.2016104

Gilboy, N (2020)., Tanabe, P., Travers, D., Rosenau, A.; (2020). Implementation handbook of Emergency Severity Index: A triage tool for emergency department care. In N. Williams (Ed.), *Emergency Nurses Association* (4th ed., pp. 2-3). ENA

Grover, C., Sughair, J., Stoopes, S., Guillen, F., Tellez, L., Wilson, T., Gaccione, C., & Close, R. (2018). Case Management reduces length of stay, charges, and testing in emergency department frequent users. *Western Journal of Emergency Medicine*, *19*(2), 238–244. https://doi.org/10.5811/westjem.2017.9.34710

Hayward, J., Hagtvedt, R., Ma, W., Gauri, A., Vester, M., & Holroyd, B. (2018). Predictors of admission in adult unscheduled return visits to the emergency department. *Western Journal of Emergency Medicine*, 19(6), 912–918. https://doi.org/10.5811/westjem.2018.38225

Jack, B.; Paasche-Orlow, M.; Mitchell, S.; Forsyth, S.; Martin, J.; Brach, C. (2013, February). *Re-Engineered Discharge (RED) Toolkit. Agency for Healthcare Research and Quality*. https://www.ahrq.gov/patient-safety/settings/hospital/red/toolkit/index.html

Johns Hopkins University, Armstrong Institute for Patient Safety and Quality. Improving the emergency department discharge process: Environmental scan report. (Prepared by Johns Hopkins University, Baltimore, MD, under Contract No. HHSA 2902010000271.) Rockville, MD: *Agency for Healthcare Research and Quality*; December 2014. AHRQ Publication No. 14(15)-0067-EF.

Kyriacou, D. N., Handel, D., Stein, A. C., & Nelson, R. R. (2005). Brief report: Factors affecting outpatient follow-up compliance of emergency department patients. *Journal of General Internal Medicine, 20*(10), 938–942. https://doi.org/10.1111/j.1525-1497.2005.0216_1.x

Magidson, P., Huang, J., Levitan, E., Westfall, A., Sheehan, O., & Roth, D. (2020). Prompt outpatient care for older adults discharged from the emergency department reduces recidivism. *Western Journal of Emergency Medicine, 21*(6), 1–8. https://doi.org/10.5811/westjem.2020.8.47276

Misky, G. J., Wald, H. L., & Coleman, E. A. (2010). Post-hospitalization transitions: Examining the effects of timing of primary care provider follow-up. *Journal of Hospital Medicine, 5*(7), 392–397. https://doi.org/10.1002/jhm.666

Navanandan, N., Schmidt, S. K., Cabrera, N., Topoz, I., DiStefano, M. C., & Mistry, R. D. (2020). Seventy-two-hour Return Initiative: improving emergency department discharge to decrease returns. *Pediatric Quality & Safety*, *5*(5), e342. https://doi.org/10.1097/pq9.0000000000000342

Polster, D. (2015). Patient discharge information. *Nursing 2015*, *45*(5), 42–49. https://doi.org/10.1097/01.nurse.0000463652.55908.75

Shy, B. D., Kim, E. Y., Genes, N. G., Lowry, T., Loo, G. T., Hwang, U., Richardson, L. D., & Shapiro, J. S. (2016). Increased identification of emergency department 72-hour returns using multihospital health information exchange. *Academic Emergency Medicine*, 23(5), 645–649. https://doi.org/10.1111/acem.12954

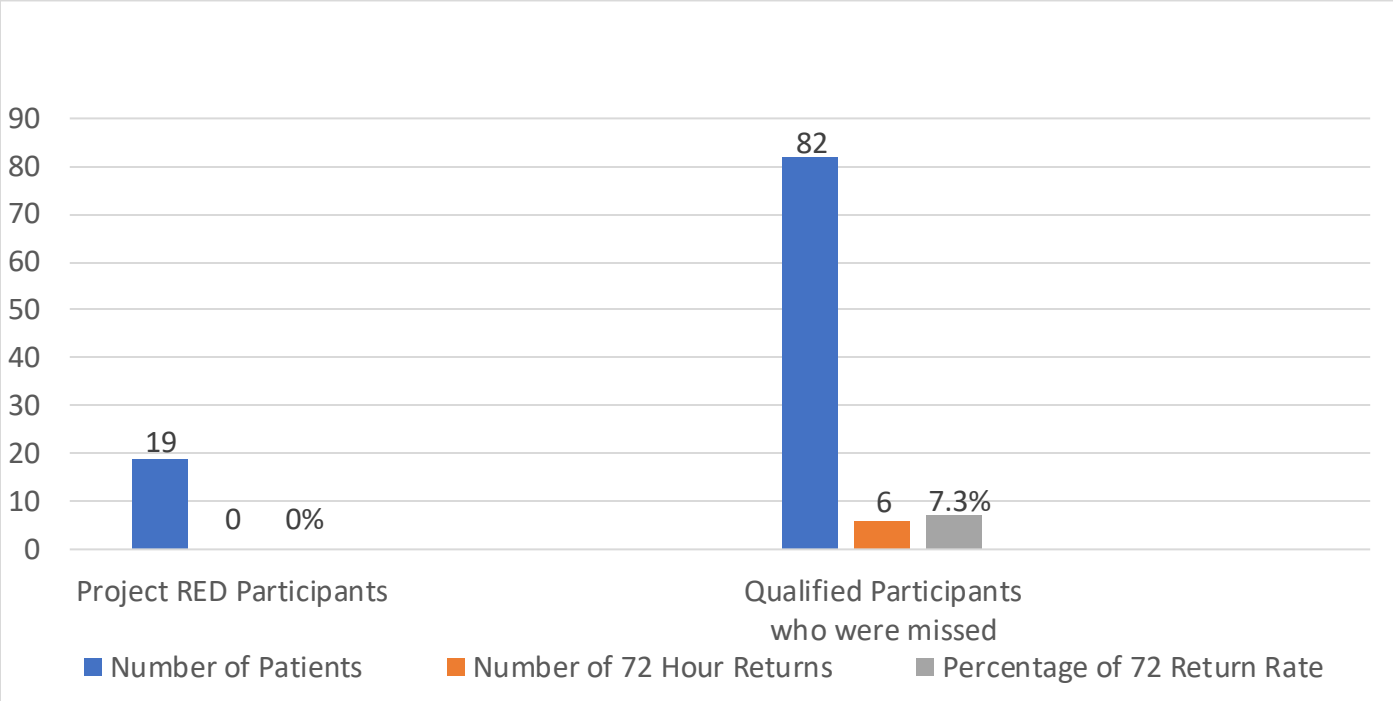
Sullivan, J. L., Shin, M. H., Engle, R. L., Yaksic, E., VanDeusen Lukas, C., Paasche-Orlow, M. K., Starr, L. M., Restuccia, J. D., Holmes, S. K., & Rosen, A. K. (2018). Evaluating the implementation of Project Re-Engineered Discharge (RED) in five Veterans Health Administration (VHA) hospitals. *The Joint Commission Journal on Quality and Patient Safety*, *44*(11), 663–673. https://doi.org/10.1016/j.jcjq.2018.01.007

Wang, K.-C., Chaou, C.-H., Liu, P.-H., Chien, C.-Y., & Lee, C.-H. (2017). Factors affecting unscheduled return visits to the emergency department among minor head injury patients. *BioMed Research International*, 2017, 1–8. https://doi.org/10.1155/2017/8963102

Tessitore, A., & Brennan-Cook, J. (2021). Improving outpatient follow-up through innovative appointment scheduling at emergency department discharge. *Advanced Emergency Nursing Journal*, *43*(1), 71–78. https://doi.org/10.1097/tme.0000000000000340

Figure 1

Project RED Participants' 72 Hour Return Data versus Qualified but Did Not Participate Patients' Data



Note. The number of patients, number of 72-hour returns, and the percentage of 72-hour returns are represented for *Project RED* Participants and Qualified Participants who were missed.

Table 1

RED Components and Discharge Educator Responsibilities

RED Component	***DE Responsibilities***
1. Ascertain need for and obtain language assistance.	• *Find out about preferred languages for oral communication, phone calls, and written materials.* • *Determine patient and caregivers' English proficiency.* • *Arrange for language assistance as needed, including translation of written materials.*
2. Make appointments for follow-up care (e.g., medical appointments and post discharge tests/labs).	• *Determine primary care and specialty follow-up needs.* • *Find providers (if patient does not have) based on patient preferences: gender, location, specialty, health plan participation, etc.* • *Determine need for scheduling future tests.* • *Make appointments with input from the patient regarding the best time and date for the appointments.* • *Instruct patient in any preparation required for future tests and confirm understanding.* • *Discuss importance of clinician appointments and tests/labs.* • *Inquire about traditional healers and ensure that traditional healing and conventional medicine are complementary.* • *Confirm that the patient knows where to go and has a plan about how to get to appointments; review transportation options and address other barriers to keeping appointments (e.g., lack of daycare for children).*
3. Plan for the follow-up of results from tests or labs that are pending at discharge.	• *Identify tests and lab work with pending results.* • *Discuss who will review the results and when and how the patient will receive this information.*
4. Organize post discharge outpatient services and medical equipment.	• *Collaborate with the case manager to ensure that durable medical equipment is obtained.* • *Document all contact information for medical equipment companies and at-home services in the after hospital discharge plan (AHCP).* • *Assess social support available at home.* • *Collaborate with the medical team and case managers to arrange necessary at-home services.*
5. Identify the correct medicines and a plan for the patient to obtain them.	• *Review all medicine lists with the patient, including, when possible, the inpatient medicine list, the outpatient medicine list, and the outpatient pharmacy list, as well as what the patient reports taking.* • *Ascertain what vitamins, herbal medicines, or other dietary supplements the patient takes.*

RED Component	***DE Responsibilities***
	• *Ensure a realistic plan for obtaining medicines is in place.*
6. Reconcile the discharge plan with national guidelines.	• *Compare the treatment plan with National Guideline Clearinghouse™ recommendations for patient's diagnosis and alert the medical team of discrepancies.*
7. Teach a written discharge plan the patient can understand.	• *Research the patient's medical history and current condition.* • *Communicate with the inpatient team regarding ongoing plans for discharge.* • *Create an AHCP, the easy-to-understand discharge plan sent home with the patient.* • *Review and orient the patient, family, and caregiver to all aspects of the AHCP.* • *Encourage questions.*
8. Educate the patient about his or her diagnosis and medicines.	• *Provide education on primary diagnosis and comorbidities.* • *Explain what medicines to take, emphasizing any changes in the regimen.* • *Review each medicine's purpose and how to take each medicine correctly, and note important side effects.* • *Assess patient's concerns about the medicine plan.*
9. Review with the patient what to do if a problem arises.	• *Instruct on a specific plan of how to contact providers by providing contact numbers, including evenings and weekends.* • *Instruct on what constitutes an emergency and what to do in cases of emergency and nonemergency situations.*
10. Assess the degree of the patient's understanding of the discharge plan.	• *Ask patients to explain in their own words the details of the plan. Continue instruction until patients correctly teach-back the plan.* • *Contact family members and other caregivers who will share in the caregiving responsibilities if necessary.*
11. Expedite transmission of the discharge summary to clinicians accepting care of the patient.	• *Deliver discharge summary and AHCP to clinicians accepting care of patient (including visiting nurses) within 24 hours of discharge.*

RED Component	***DE Responsibilities***
12. Provide telephone reinforcement of the discharge plan.	• *Call the patient within 3 days of discharge to reinforce the discharge plan and help with problem solving.* • *Staff DE help line. Answer phone calls from patients, family, and other caregivers with questions about the AHCP, hospitalization, and followup plan in order to help patient transition from hospital care to outpatient care setting.*

Note: Agency for Health Care Research and Quality, 2013

Table 2

Demographics of Project Red Participants

Variable	*n*	%
Sex		
F	7	33.33
M	14	66.67
Appt In Timeframe		
Y	17	80.95
N	4	19.05
Returned to ED		
N	21	100.00
Y	0	0.00
Coverage		
Self-Pay	15	71.43
Commercial	2	9.52
Medicaid	4	19.05
Attended		
N	19	90.48
Y	2	9.52
Refused		
N	19	90.48
Y	2	9.52

Age

Variable	*M*	*SD*	*N*	SE_M	*Min*	*Max*
Age	34.19	11.56	21	2.52	17.00	60.00

Note. In the Sex category, F represents Female participants and M represents Male participants. In the Cove category, Self-pay represents noninsured, Commercial represents insured through non-government-controlle source, and Medicaid represents insured through government-controlled program. In the Attended category represents No the patient did not attend their pre-scheduled post-ED discharge appointment and Y represent the patient did attend their pre-scheduled post-ED discharge appointment. The average age, minimum age, maximum age are represented of those 21 patients who participated in Project RED.

Table 3

Linear Regression Analysis with Project RED Utilized Effects on the 72-Hour Return Percentage

Variable	*B*	*SE*	95.00% CI	β	*t*	*p*
(Intercept)	12.53	0.67	[10.66, 14.41]	0.00	18.59	< .001
'Project RED' _Utilized Yes	-3.70	0.95	[-6.35, -1.05]	-0.89	-3.88	.018

Note. The results of the Linear Regression Analysis show that *Project RED* Utilized ($F(1,4) = 15.06$, $p = .018$, $R^2 = .79$) does have a positive effect on the 72 Hour Return Percentage *(*$B = -3.70$, $t(4) = -3.88$, $p = .018$).

Table 4

Frequencies and Chi-Square Results for Project RED Trained Staff on Duty and Project RED Utilized.

	Trained				
'Project RED' _Utilized	No	Yes	χ^2	*df*	*p*
No	*n* = 44[39.33%]	*n* = 15[19.67%]	9.20	1	.002
Yes	*n* = 4[8.67 5]	*n* = 9[4.33%]			

Note. The results of the Chi-square test were significant based on an alpha value of .05, $\chi 2(1) = 9.20$, $p = .002$, suggesting that *Project RED* Utilized and Trained Staff are related to one another.

Table 5

Frequencies and Chi-Square Results for Project RED Utilized and Adequate Staffing Greater than 81%

	Project_RED_Utilized				
Adequate_Staffing_81_or_Greater	NO	YES	χ^2	*df*	*p*
YES	*n*=19[19.17%]	*n*=6[5.83%]	0.04	1	.847
NO	*n*=4[3.83%]	*n*=1[1.17%]			

Note. The results of the Chi-Square test were not significant based on the alpha values of $.05, \chi^2(1) = 0.04, p =$ .847, suggesting that *Project RED* Utilized and Adequate Staffing Greater than 81% are not related on one another.

Table 6

Frequencies and Fisher's Exact Test Results for Project RED Utilized and Adequate Staffing Greater than 81%

	Adequate_Staffing_81_or_Greater			
Project_RED_Utilized	YES	NO	OR	*p*
NO	*n*=19[9.27%]	*n*=4[1.85%]	0.80	1.000
YES	*n*=6[2.82%]	*n*=1[0.56%]		

Note. The results of the Fisher's Exact Test were not significant based on the alpha $05, OR = 0.80, p =$ 1.000, suggesting that *'Project RED'* Utilized and Adequate Staffing Greater than 81% were not related to one another.