

## Cardiology &amp; Vascular Research

## Implementing the Get with the Guidelines - Heart Failure Tools to Improve Transitional Care Efficiency

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## ABSTRACT

**Background:** Heart failure readmissions have identified an inadequate structured program following discharge. Incorporating transitional care processes has improved patient outcomes and quality care [1].

**Local Problem:** A thirty chart audit of heart failure patients was conducted. Only 12 (40%) had documentation that indicated the reason for readmission. Of the 30 patients, three (10%) had documented heart failure education. The aim of this project was to decrease 30-day readmission rates by integrating transitional care tools into Long Term Care (LTC) during a 90-day period.

**Methods:** Every two weeks, rapid cycle quality improvement using plan-do-study-act cycles were performed. Cycles evaluated team and patient engagement, right care for medication reconciliation, and screening. Data was monitored using run charts.

**Interventions:** Surveys and tools were provided to promote change. The primary toolkit utilized was the American Heart Associations, Get with the Guidelines – Heart Failure [2]. Team engagement meetings, shared decision-making (SDM) processes with patients, screening, and medication reconciliation were implemented.

**Results:** Routine team meeting attendance was challenging, but staff were engaged at 77%. Right care for heart failure screenings was achieved at 82%, with utilization of the SDM process at 75%, and medication reconciliation was met at 100%. Readmission rates decreased by 75% following a 90-day utilization of the tool.

**Conclusion:** Implementation of the Get with The Guidelines - Heart Failure toolkit [7] decreased overall readmission rates. Although improvement in all quality measures were noted, there was concern that some may not continue to be sustained due to staffing and scheduling issues.

## Keywords

Quality improvement, Heart failure, Efficacy, Safety, Timeliness, SQUIRE.

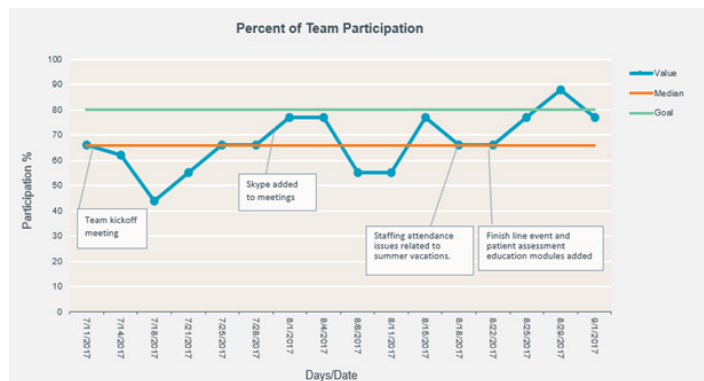
## Introduction

According to the American Heart Association [2], millions of Americans suffer from Congestive Heart Failure (CHF) with thousands more diagnosed annually. This condition represents over one million hospitalizations each year [3] and affects over 6 million in the United States. The Agency for Healthcare Research and Quality [4] identifies heart failure as the primary cause of

hospitalization among adults over the age of 65.

CHF accounts for over \$250 billion dollars in health care costs [3]. With each hospital readmission, this fragile population is placed in a vulnerable position and a greater risk of mortality [3]. The patient Protection and Affordable Care Act (PPACA) has identified fines to be applied and a reduction in reimbursement for hospitals with high readmission rates. The Center for Medicare and Medicaid Services [5] has decreased payment to institutions having an increase in readmission rates. CHF readmissions reveal that 62 % occur in the first 2 weeks following discharge, with 17.6% within

30 days [4]. A comprehensive analysis was performed for those patients readmitted into the Long-Term Care (LTC) facility with CHF. Only 12 (40%) had documentation that indicated the reason for hospital readmission within 30 days. Of the population, a mere three (10%) had documented CHF education with a duration of at least 60 minutes. This analysis identified causative factors (Figure 1) which resulted in frequent readmissions into acute care. The Get With The Guidelines - Heart Failure tools were implemented to decrease 30-day readmission rates within this long-term care population.



**Figure 1:** Percent of team participation.

### Available Knowledge

The Agency for Healthcare Research and Quality [4] identified that rates for hospitalization of patients with CHF have decreased by 30% nationally, whereby 30-day readmission rates have not reduced. Evidence has shown that repeat readmission rates have correlated with poor outcomes associated with morbidity and mortality, which significantly increases for those residents with repeat 30-day hospital readmissions [3]. Appropriate transition of care resources in long term care (LTC) facilities are needed due to the high rate of heart failure readmissions. Tools to be used following hospital discharge from the American Heart Association include shared decision making, screening, and medication reconciliation [2].

### Rationale

According to the AHA Get With The Guidelines - Heart Failure [2], adult patients with a left ventricular ejection fraction (LVEF) less than 40% should have a documented multicomponent heart failure reduction plan setting out strategies to address quality measures. Recommendations regarding the overall management, screening, diagnosis, prevention, and pharmacologic therapy are included in the toolkit. In addition to the guidelines by the American Heart Association, Bradley et al. [6] identified strategies to decrease heart failure readmission rates among hospitals through a national quality initiative program. This is another example of how creating a culture of caring that focuses on the team approach can promote positive outcomes. The aim of this DNP quality improvement project was to implement standardized processes for LTC CHF patients in accordance with the Get With The Guidelines - Heart Failure by the AHA to increase efficiency with CHF discharge transitional care standards by 25% within 90 days.

The team used a variety of process measures to assess and evaluate outcomes, as well as to identify any barriers that would impact on the project's success. The designed measures and data collected were categorized from the Get With The Guidelines resources from the AHA. The organization had no specific measures in place to assist with the reduction of CHF readmission, so the guidelines from the AHA would assist in establishing protocols and focus on the reduction of hospital readmissions, particularly within 30 days by putting efficient transitional care processes in place.

### Methods

The quality project location is a Long-Term Care facility licensed by the state of New York. Total resident population is approximately 80, with 70% having a history of cardiac disease and 45% a diagnosis of CHF. Staff participating in the project included a total of 24 members: two physicians, two nurse practitioners, four registered nurses, four licensed practical nurses, a pharmacist, physical therapist, social worker, and additional ancillary staff.

This rapid-cycle quality improvement initiative used four plan-do-study-act (PDSA) cycles with each cycle having tests of change. Four ramps were identified: team engagement, patient engagement, screening, and right care for medication reconciliation. Each ramp had measurable goals which continued to be monitored throughout the project.

### Interventions

Interventions for team engagement included weekly team meetings, virtual Skype discussions, and education. To increase patient engagement the Shared Decision Making (SDM) tool was utilized, as well as including purple pens and other purple heart resources into implementation. Right care for medication reconciliation included physician text messaging, as well as screening checklists to assure all tests of change were being implemented. Refer to Table 1 for complete details.

	Team Engagement	SDM	Screening Checklist	Medication Reconciliation
PDSA 1	Initiate weekly meetings	Biweekly meetings	Biweekly screening process for new and readmissions	Medication reconciliation cards placed with admission
PDSA 2	Skype and messaging	Self-check plan on outside of chart	Checklist placed on admission assessment paperwork	Text messaging
PDSA 3	Track start/end times of meetings and conduct team building activities	Colorful index cards and purple pens	Six section resource on purple paper	Purple medication cards
PDSA 4	posters	SDM tool and games	Education poster to reflect outcomes related to screening compliance	Provider message board

**Table 1:** PDSA Cycles.

Gaps in nursing and patient knowledge were recognized as well as care associated with medication reconciliation and patient screening. Biweekly meetings included; facility sponsor,

physician, nurse practitioner, pharmacist, registered nurse, nursing assistant, and social worker. During these 10-minute sessions, education opportunities for staff were also provided on the complex pathophysiology and treatment options associated with heart failure. Meetings were scheduled during the week as well as on the weekend to assure the entire team had the opportunity to be exposed to the team engagement and education sessions. Attendance was taken, and Skype was included to assure for the greatest exposure. Attendees ranged from four to nine with a mean of six participants.

Engagement meetings discussed transitional care, which included medication reconciliation, heart failure screening, and the SDM tool. To be certain that the processes were in place and able to be executed to the greatest potential, staff needed to understand the measures taken as they have the greatest exposure to the patient and the program success. Residents were met regularly to discuss the SDM tool, known as the Self Check Plan, and were continually evaluated on their knowledge retention related to medication, disease process, diet, and weight management. When residents were admitted back into the facility, a thorough investigation of their medical record, along with transitional care orders were provided.

Nurses were able to assess the resident for signs and symptoms of impending heart failure exacerbation during their SDM meetings. According to Dharmarajan et al. [7], 62.6% of patients were readmitted within the first 2 weeks after hospital discharge for heart failure. It became necessary for staff to have a significant knowledge of CHF pathophysiology and assessment skills to be able to see the early warning signs and address them as timely as possible. Regularly scheduled SDM meetings with residents was a significant intervention in decreasing hospital readmissions. Staff would see residents reviewing their tool and asking questions as they became more engaged with their education process. Occasional reminders were needed to maintain compliance and were provided during meetings for both staff and residents, as well as through text messaging for physicians related to medication reconciliation.

### Study of Interventions

To measure the perceptions of the LTC facility team, surveys were used to determine level of engagement and team building. Additional interventions were measured and analyzed through retrospective chart review. Information collected related to the SDM tool included patient response and level of understanding. Data were extracted and managed with the use of Excel spread sheets that later were placed into run charts. This data management included: team engagement, SDM, screening, and medication reconciliation. According to Ogrinc [8], a formalized analysis is necessary to recognize an impact of the interventions, and identify if the observations obtained were directly related to the interventions.

### Measures

The aim of this project was influenced by process, outcome,

and balancing measures. These processes were implemented to promote change and determine quality improvement. Measures can be found on Table 2. Teamwork was measured with the use of a 17-question team effectiveness survey with a mean efficiency score calculated. The SDM tool was compiled internally by one person to maximize reliability, with a calculation completed based on total number of heart failure patients using the tool. This resource was evaluated through verbal tests to assess patient knowledge and understanding. Right Care was identified through successful medication reconciliation, SDM, and the Self-Check Plan screening checklist total number used based on total CHF patient population.

### Analysis

Statistical quantitative analysis was accomplished through the graphic display of data over time to analyze measures, and tests of change. Run charts with some control parameters were created to measure processes according to time. Stability was identified as well as needs for potential interventions to implement changes for improvement. Measures were examined and plotted on scales with goals, median, and value data included. Examination of graphs and measures made related to outcomes, and those measures which impacted on successful change. Trends were determined to identify specific patterns of gradual change related to these processes through a series of data points which move in a certain direction. These points create the linear trend line on the graph [9]. Specific comparisons continued over time; if the need to change the goal was met due to outcomes, changes were made to assist in continuing to target the AIM.

No external funding was required to support this process improvement project. This DNP project was excused from review by the Institutional Review Board at Frontier Nursing University because it does not qualify as human subjects research and meets federal requirements for quality improvement.

### Results

Increasing Right Care Compliance (medication reconciliation, screening, and SDM) and transitional care efficiency was improved with the support of the Get With The Guidelines - Heart Failure tools by 25% during a 90-day period. We developed multiple interventions associated with tests of change for four ramps. Ramps included: team engagement, patient engagement, screening, and medication reconciliation. Results are summarized in Table 2.

The goal of the first 2-week cycle was to promote team engagement and educate staff on the AHA toolkit. The SDM Self Check Plan was introduced and a comprehensive screening and medication reconciliation process began. Staff meetings were scheduled biweekly and included communication meeting minutes to assist staff members in gaining knowledge if meetings were missed. Staff seemed resistant initially due to lack of understanding of general quality improvement principles.

The goal of the second 2-week cycle was to continue with promoting team engagement but to also promote regular staff

education at meetings. Skype was added to meetings to encourage better attendance. Compliance with meeting attendance was 44% during this ramp. Due to a rate of 30%, the SDM tool was placed on the outside of the patients' chart to provide for a visual cue, while screening checklists were placed with admission paperwork to promote compliance. Text messaging with flagged charts were encouraged to remind providers if medication reconciliation needed to be addressed, since providers seemed to show a compliance rate of 50%.

Increase Right Care (SDM, Medication Reconciliation, Screening) compliance with heart failure discharge transitional care standards by 25% by September 15, 2017				
RAMP	Process Measure	Final Process	Outcome Measure	Final Outcome
Team	A. Increase weekly team engagement meetings by 80% Operational definition: attendance by September 15, 2017.	77%	A. Increase the mean team efficacy score by 80% by Sept 15, 2017. Average score of team efficacy survey Team Effectiveness Tool: <a href="http://web.augsburg.edu/global/intranet/TeamEffectivenessSurvey.doc">web.augsburg.edu/global/intranet/TeamEffectivenessSurvey.doc</a>	100%
Patient Engagement	B. Utilize the Get with the Guidelines - Target Heart Failure Shared Decision-Making Tool for LTC Heart Failure Patients by 80% by September 15, 2017 # of tools completed/total # cardiac disease/CHF patients	75%	B. Increase patient understanding with Target Heart Failure Shared Decision-Making Tools with tracking and participation in care with medication understanding and engagement with 75% of total patient encounters by Sept 15, 2017 30/40 Increase patient centered goals by 80% Operational Definition: % of documented goals	87.5%
Screening	C. Implement the Get with the Guidelines Target Heart Failure Right of Care Readmission Classification Screening Checklist Operational Definition: # forms completed/total # (cv)admissions by September 15, 2017.	82%	C. 1. Identify re-admission/admission cause Operational Definition: Cause identified on screening checklist Number 1-5: 1 run chart with several value columns/different colors And 2. # of re-admissions by 50% by September 15, 2017. Average #	1. 38% readmissions due to treatment breakdown 2. Readmissions decreased by 75%
Referral	D. Utilize medication reconciliation checklist tool Operational Definition: Average # meds reconciliation checklists completed	100%	D. Increase notification of provider for med order/change of inaccurate transition meds by 50% by September 15, 2017 Operational Definition: # calls to provider/total # inaccurate medication reconciliation Tool: log book: provider /call date/med error/verbal order/	100%
Balancing Measure	The Implementation of a time schedule tool by 100% by September 1, 2017 will measure each tool performed, and carefully carry out a schedule by utilizing a checklist to monitor all time spent on the project.			A. 1605min B. 3870min C. 1770min D. 630min

Table 2: Ramps and measures.

The goal of the third 2-week cycle was related to establishing an identity for this quality improvement project. The color purple was used on most documents from the team survey to the SDM and medication reconciliation index cards. This empowering intervention encouraged the team to begin to feel the success related to their efforts. Team engagement moved to 77% with the addition of the purple power box on the unit for team survey collection. SDM notebooks with self-check plans were placed in patient rooms, to encourage patient interaction and compliance increased to 71%. At the end of this cycle, patients began to become more involved and initiated the command of their care.

Process and outcome measures continued to trend upward, as the final weeks of the PDSA cycle ended. Team attendance was at a high of 88%, with a 100% survey completion. The SDM tool, which seemed to be owned by the patients, moved to 75%, and readmission checklists shifted up to 80%. With the addition of purple pens and posters, providers also became more involved as the culture of the facility seemed to change. Refer to Figures 1, 2, and 3 for run chart data. The balancing measure was monitored on a continuum throughout the cycles as all tools continued to be used. The measure was paralleled to a time study where all tools

were evaluated for length of time and then that data used as the standard throughout the cycle. The Team Engagement Tool took a total of 1605 minutes (25.75 hrs.) throughout the project, whereas each assessment took approximately 15 minutes. The SDM tool took a total of 3870 minutes (64.5 hrs.), with each tool assessment lasting approximately 30 minutes and primarily reviewed by the NPs or house provider with continued reinforcement throughout the day. The Risks Screening Tool took approximately 30 minutes with review and had a total time commitment of 1770 minutes (29.5 hrs.). The medication reconciliation tool took approximately 630 minutes (10.5 hrs.), and information related to reconciliation was provided regularly to reinforce all information to the patient and family. Run charts have identified successful outcomes with tests of change supporting all measures to obtain success.

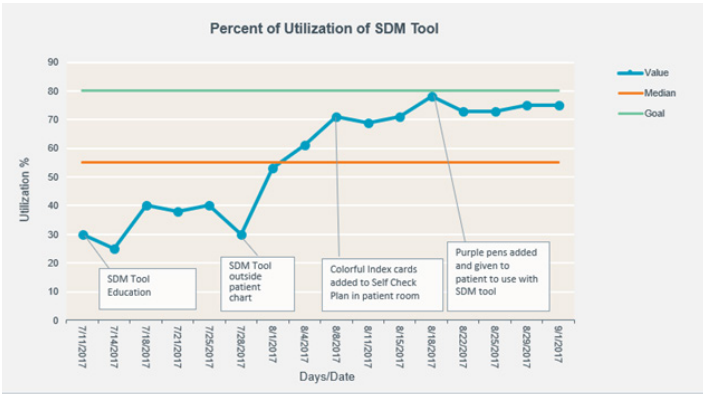


Figure 2: Percent of utilization of SDM tool.

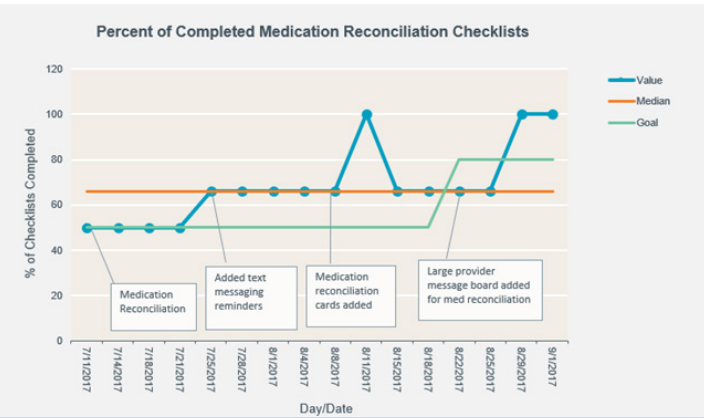


Figure 3: Percent of completed medication reconciliation checklists.

### Discussion

This organization improved outcomes by implementing a transitional care process for LTC CHF patients in accordance with the AHA's Get With The Guidelines - Heart Failure and increased efficiency with CHF discharge transitional care standards by 25% within 90 days. A minor modification of the Self Check Plan was made and focused on the key criteria of education, screening, and medication reconciliation. These processes became part of the routine with the organization, and were utilized for every patient from admission throughout residency. The initial phase of the project demonstrated concerns with buy-in and team engagement, but as the project continued to evolve and engagement improved,



so did the utilization of all resources. Screenings and education continued, and readmission rates slowly began to decrease by the final cycle.

### Interpretation

The success of the project was promoted through the teams, as some processes will continue to be supported. This process has been quite rigorous, and full project sustainability is a concern due to staffing and scheduling issues. APRN behaviors produce a winning attitude in the clinical and educational systems and promote a confident and successful environment. Interventions from each cycle had a direct influence on outcomes, as anticipated tests of change demonstrated improvement. Observed outcomes focused on enhancing team dynamics, improving measures related to transitional care standards, screening, medication therapy, follow-up treatment, education conferences, mentoring, and overall patient experience, quality of care, and reduction in readmission rates. According to Gupta et al. [10], Medicare patients discharged after CHF hospitalization, with implementation of a transitional readmission program were associated with a reduction in 30-day and 1-year readmissions. Kociol et al. [11] recognized the direct relationship between transitional care and lower readmission rates. Further research and the creation of federal transitional care policies are needed to assure all discharged CHF patients are provided the same quality care.

### Limitations

This project had few limitations once the team became fully engaged. Initially, there were concerns related to staff scheduling and team meetings, but with the incorporation of Skype and conferencing into the process, improvement was recognized. There were no factors limiting internal variability. Population and size of participants was consistent, and data collected on the same days of the week by the same nurse practitioners also supported no minimization in inter-observer variability. Utilizing transitional measures supports generalizability by encouraging an extension of processes to the LTC CHF population, as data has supported positive outcomes and decrease in readmission rates.

### Conclusion

Timely transitional care processes, which include medication reconciliation, screening tools, and SDM resources, have a direct

influence on decreasing readmission rates for CHF residents. For sustainability of processes and delivery of quality care, support is a necessity. The project impacted significantly on the system, and created an engaged team that participated in a patient-focused quality improvement initiative. Additional LTC facilities in the community were made aware of the decrease in readmission results and are interested in initiating the program. Providing innovative quality improvement initiatives is necessary in promoting safe and efficient patient-centered care.

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