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MDR Matters! Improving Primary Nurse Participation in Multidisciplinary Rounds

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Abstract

Problem: The current model of multidisciplinary rounds (MDR) in a 40-bed medical-surgical unit within a Northern California community hospital has demonstrated low participation rates from primary nursing. The primary nurse attendance in MDRs is consistently at 50% participation, below the target goal of 80%. This lack of engagement leads to ineffective communication and fragmented care coordination resulting in suboptimal quality care and cost outcomes.

Context: An intervention strategy to standardize the MDR model was implemented over three months. A literature review revealed that effective and consistent MDR practices can directly influence primary nurse participation. This change management project focus on integrating evidence-based MDR practices to optimize patient-centered care, team work, and cost savings.

Interventions: Three evidenced-based interventions were utilized for this project: 1. Standardized MDR time schedule, 2. Created a practical MDR communication tool, and 3. Deliver educational sessions to promote MDR best practices.

Measures: A set of metrics was developed to address outcome, process, and balancing measures. The most significant outcome measure was primary nurse participation in MDR.

Results: Over three months, organizational metrics related to avoidable inpatient days, patient care experience, and timeliness in discharge all improved. Primary nurse participation increased from 50% to 88% and was characterized by more genuine authenticity and enthusiasm.

Conclusion: MDR Matters! This improvement project demonstrates that authentic and enthusiastic participation in MDR can significantly impact both the quality of team communication and patient-centered care. Furthermore, the pivotal role of MDR can lead to substantial cost savings for the sponsoring organization.

Keywords: bedside rounds, MDR, patient-centered, standardize MDR, coordination

MDR Matters! Improving Primary Nurse Participation through Multidisciplinary Rounds

Within today's complex healthcare delivery system, hospital organizations are confronted with numerous challenges in providing safe quality care. As the Centers for Medicare & Medicaid Services continues to associate reimbursement with quality of care, hospital institutions will need to find new ways to deliver optimal patient care. The Institute of Medicine (IOM) (2001) emphasizes the need for safe, effective patient-centered care that is timely and efficient. Failures in communication within multidisciplinary healthcare teams lead to negative healthcare outcomes (IOM, 2001). Timely and accurate communication between healthcare providers is essential to safely care for patients and prevent care delays which can result in avoidable hospital days. An avoidable delay is any barrier to facilitating effective, efficient, timely, and safe care. The term avoidable day is used to describe barriers that prolong patients' hospital stays when they are medically ready for discharge (Shelerud & Esden, 2017). Quality improvement in care delivery redesign such as standardizing the bedside MDR process at bedside will generate improved patient outcomes.

Before the MDR model was introduced, patient care coordination was conducted in private conference rooms without the presence of a primary nurse. Such a lack of involvement between patients and nurses around care coordination negatively affects the patient experience and contributes to poor patient care outcomes (Monash et al., 2017). For example, a lack of readiness for discharges and delay in care directly results in avoidable hospital days. According to the National Quality Forum (2018), effective care coordination has been associated with higher-quality care, improved efficiency, better patient experiences, and reduced costs. Because delivery of organized care brings together multidisciplinary teams in the healthcare system, enhancing care coordination offers a potential opportunity to improve care quality that could

save up $240 billion a year (Agency for Healthcare Research and Quality, 2016). Nurses and other providers must ensure that patient concerns are addressed, standards of care are met, and positive outcomes are achieved through interactive and engaged participation in MDR.

MDRs represent best practices to improve throughput, reduce length of stay, and improve patient satisfaction. Providing safe, effective care in a timely manner and utilizing existing resources such as MDR can lead to better care outcomes. This quality improvement project utilized evidence-based practices to implement the use of standardized MDR processes in one medical-surgical unit to enhance interdisciplinary team communication and coordination of care with the aim to deliver higher-quality care, better patient care experiences, and reduced costs.

Problem description

The current model of MDR in a 40-bed medical-surgical unit within a Northern California community hospital has demonstrated low participation rates from primary nursing. The primary nurse attendance in MDR is consistently at 50% participation, below the target goal of 80% (see Appendix O for primary RN MDR participation). This lack of engagement leads to ineffective communication and fragmented care coordination resulting in suboptimal care and cost outcomes. Timely discharge has trended downward and currently averages 52% per day, below the target goal of 65%. The quarterly HCAHPS survey metric for patient care experience related to care transition is currently at a level score of 2, below the target of 4 out of 5 stars as measured by the Centers for Medicare & Medicaid Services. The current MDR practice is disjointed and avoidable inpatient days are increasing up to 67 days per month resulting in losses approaching $3 million annually.

Available Knowledge

The search for evidence was initiated by developing a population, intervention, and

outcome (PICOT) question. In one hospitalized adult medical-surgical unit (P), does a triad of participation with an Hospital Based Specialist (HBS), Patient Care Coordinator (PCC), and primary RN during bedside multidisciplinary rounds (I) versus no triad participation (C) enhance interdisciplinary team communication and care coordination to improve timeliness of discharge and avoidable hospital days (O) by December 1, 2018 (T)?

Literature Search

Based on the PICOT question, an electronic data search was conducted in the Cochrane Database, CINAHL, and PubMed using the following terms: care coordination at bedside, discharge planning, interdisciplinary rounding, multidisciplinary rounding, patient-centered care, and attending rounds. Limits were set to only include peer-reviewed articles written in the English language. The search yielded 269 articles, and nine met the inclusion criteria. Six articles were selected in the literature review (see Appendix B for the evaluation table). The evidence search includes one cluster randomized controlled trial studies, one mixed method study, one qualitative and quantitative mixed method study, one retrospective study, one systematic review, and one non-experimental study. The selected articles were evaluated using Johns Hopkins Evidence-based Practice (JHEBP) research evidence appraisal tool (Johns Hopkins Medicine, 2017).

There are five levels of evidence outlined in the JHEBP tool. Level I is an experimental study including a randomized controlled trial (RCT) or systematic review of RCTs. Level II is a quasi-experimental study which includes a combination of RCTs and quasi-experimental studies, or quasi-experimental studies only. Level III is a non-experimental study or a qualitative study. Level IV is an opinion of respected authorities or nationally recognized expert committees/consensus panels based on scientific evidence; this level also includes clinical practice guidelines. Level V is based on experimental and non-research evidence including

literature reviews, quality improvement, program or financial evaluation, and case reports (Johns Hopkins Medicine, 2017.) The articles were rated at a strength range of level III through IV and quality level A/B (see Appendix B for the evaluation table).

Synthesis of Literature

Monash et. al (2017) conducted a cluster randomized controlled trial study to determine the impact of standardized bedside rounds and found that medicine teams can implement a standardized, patient-centered, time-saving rounding model that leads to increased patient satisfaction by attending rounds. Patients reported increased satisfaction with bedside rounds and felt more cared for by their medicine team (Monash et. al (2017). This study can be rated as LI A using the JHEBP research appraisal tool.

A mixed method study found that standardized and structured MDR can improve care coordination, patient assessments of care quality, and patient LOS (Lau & Dhamoon, 2017). This study can be rated as LI A using the JHEBP research appraisal tool.

Gausvik et. al (2015) conducted a qualitative and quantitative mixed method study and found that 100% of the staff that used a structured interdisciplinary bedside rounds (SIBR) understood the patient plan for the day compared to 74% of the staff who did not utilize the structured rounds. This study can be rated as LI B using the JHEBP research appraisal tool.

A retrospective study by Oshimura, Downs, & Saysana (2014) concluded that family-centered rounds (FCR) involving multidisciplinary rounds improved the number of patient discharges. This study can be rated as L III A using the JHEBP research appraisal tool. Ratelle et. al (2018) emphasize that bedside rounds can significantly improve patient care experience. This systematic review study used eight randomized study and is rated as L II B.

In summary, the selected articles highlighted evidence-based research supporting the need for a structure and standardize MDR at bedside. Structured rounds consistently led to

improved outcomes across several measures including patient satisfaction, timely discharges, care team engagement and participation, communication, and patient care outcomes.

Rationale

Using change theory management to implement and sustain changes in healthcare can greatly improve the odds of success. As a master's educated nurse generalist, the Clinical Nurse Leader (CNL) as a lifelong learner and valuable member of the healthcare profession, recognizes the value of the pursuit of knowledge and skills in order to change healthcare practices and outcomes (American Association of Colleges of Nursing, 2013). While no perfect theory exists to guide all changes, the CNL utilized the Kotter theory to implement improvement in MDR (see Appendix C). Finkelman (2016) describes eight steps in Kotter's theory to lead organizational change.

In step one, Kotter describes the need to create a sense of urgency to motivate people to leave their comfort zone and willingly participate in the change. In step two, a powerful guiding coalition is created to gain the stakeholders support and agreement through change. Developing the specific vision and strategy to make the change happens during step three. In step four, the vision is communicated and spread throughout the organization, so stakeholders can be empowered and likely to commit to the to the change being implemented. In step five, barriers throughout the change process need to be identified and removed. Step six generates short term wins to build staff morale and a sense of success. Sustaining acceleration is step seven where gains are consolidated and changes made must be push forward. The final stage for Kotter's model is step eight which is instituting change by firmly settling the change into the culture of the organization. At this point, the CNL should evaluate changes made to determine success.

AIM of the Project

The CNL as clinician and outcomes manager will increase primary nurse participation and engagement during daily Multidisciplinary Rounds (MDR) to enhance care coordination and improve patient care outcomes.

Global Aim. To standardize the current MDR process in one Medical-Surgical unit to enhance interdisciplinary team communication and coordination of care with the aim to deliver higher-quality care, better patient care experience, and reduce cost.

Specific Project Aim. The aim of this project is to increase bedside primary nursing participation in MDR best practices from 50% to 80% in one Med-Surgical Unit within a community hospital in Northern California by December 1, 2018.

Methods

The choice of methodology is critical to align improvement activities with outcomes.

Context

The Continuity of Care Services Department (COCSD) is a clinical microsystem that provides high-quality care, enhanced patient satisfaction, and reduced hospital costs through effective collaboration across the care continuum. Optimizing patient care outcomes requires a nurse (PCC) within the care continuum department to assess, diagnose, and treat the supporting microsystem. Assessment of this microsystem was completed using the Dartmouth Microsystem 5Ps Assessment Tool that includes the Purpose, Patient/Customer, Professional, Processes, Patterns, and Metrics that Matter (The Dartmouth Institute, 2015). Understanding how the unit operates and knowing the professionals and processes of care inside the microsystem are integral to improving care quality (Harris, Roussel, & Thomas, 2018).

Microsystem Assessment

Assessment and reassessment of this medical-surgical microsystem was completed using the Dartmouth Microsystem 5Ps Assessment Tool that includes the Purpose, Patient/Customer, Professional, Processes, Patterns, and Metrics that Matter (The Dartmouth Institute, 2015).

Purpose. A 40-bed med-surgical unit in Northern California currently has an existing MDR structure that involves the HBS, primary nurse, and PCC. The MDR model was implemented at this hospital three years ago to positively transform care at the bedside to enhance communication and efficiencies in patient care coordination. Teplitsky, Reyes, Misajet, & Winarsky (2018) emphasized that daily bedside multidisciplinary rounds are key to reducing the patient daily rate (PDR), avoidable days, and care costs across Northern and Southern Kaiser Permanente. According to the Institute for Healthcare Improvement (IHI), (2018), MDR ensures a high level of communication and collaboration between doctors, nurses, and other members of the care team. The benefits of daily MDR include achieving timely discharges, decreasing bed turnover, creating satisfactory patient care experiences, and optimizing teamwork.

Patient/Customer. Gaining deeper knowledge about the patients that the microsystem serves can enrich all members' design of care and services (Dartmouth, 2015). The 40-bed Medical-Surgical unit in this hospital provides quality care for patients with acute illnesses, as well as post-operative surgical care for the adult population. Approximately, 61% of the inpatient population in this hospital are averaging over 65 years of age and older. The current MDR practice model encourages the patient and family caregivers to ask questions. Patient and family involvement will ensure that they understand how to properly manage their care.

Professional. The Continuum of Services Department consists of nurse care coordinators (18.6 FTE), social workers (9.2 FTE), social worker manager (1 FTE), nursing manager (1 FTE), nursing director (1 FTE), chief utilization management physician (1 FTE), and an administrative

assistant (1 FTE). In addition, the 40-bed Medical-Surgical Unit consists of five primary RNs assigned each day and one unit assistant department Manager. The continuum of care department team works together to meet the patients' needs by engaging in the direct care process. The current MDR practice model in place requires a triad of participation from the HBS, Primary RN, and Patient Care Coordinator.

Processes. The assessment revealed that the MDR process for the PCC staff daily bedside rounding is a team-based structure rather than unit-based where every PCC is paired up with a hospital-based specialist (HBS) (see Appendix D for team-based assignment sheet). For bedside MDR, one primary RN might partner with up to five HBS' and five PCCs. The HBS/PCC counterparts often conduct bedside rounds simultaneously making it impossible for one primary RN to attend all their respective MDR's. Furthermore, the primary RNs were not able to participate with bedside roundings as the time conflicts with direct patient care and med pass. The primary nurses were often not provided the opportunity by physicians to report patient care progress. This lack of involvement leads to lower primary nurse MDR participation and frustration.

Pattern. The CNL observed that the current MDR time is not standardized causing inefficient workflow. With a physician team-based structure, MDR will depend on physicians' time schedules. A physician may want to round between 8:30AM-10:00 AM. The bedside rounds per patient can range from 7 minutes to 20 minutes, and the MDR can last up to three hours. With inefficient MDR time scheduling, the PCC cannot coordinate time well and is ultimately unable to complete expected daily tasks which causes further delays in care transitions.

Metrics that Matter. The metrics that matter at this hospital include improving timeliness of patient discharges, optimizing patient care experience, and reducing patient care delays resulting in inpatient avoidable days (see Appendix E for metrics that matter diagram).

Because the current MDR model is not structured, avoidable inpatient days are increasing. The lack of 100% participation and lack of reporting standards due to inefficient MDR leads to suboptimal communication and fragmented care coordination.

Strengths, Weaknesses, Opportunities, Threats (SWOT) Analysis

A SWOT analysis is a tool utilized to perform a simple, yet strong, needs assessment for a potential project. A SWOT analysis was completed early in this project (see Appendix F for SWOT Analysis). The strengths of the MDR process in the med-surgical unit included the ability for the PCC and HBS to function as a team and do the daily bedside roundings at the bedside. Despite the lack of current triad participation from the HBS, PCC, and RN, the goals of care are discussed with the patient daily. The main weakness identified is the lack of MDR structure causing suboptimal communication and fragmented care coordination. The other weakness is the poor quality and reliability of the MDR. Some of the HBS' do not engage the primary RN to report patient care progress causing nurses to not value and attend MDR. A major opportunity for this improvement project is to enable for the CNL to educate nurses and teams involving evidence-based practices. Optimizing the MDR process can enhance communication and collaboration, thereby, improving patient care outcomes. Threats to standardizing the MDR process can lead to dissatisfaction from primary nursing as attending daily bedside rounds can potentially interfere with medication pass and patient care time.

Budget Analysis

An additional PCC can enhance care coordination and reduce avoidable/care delays. Direct cost for hiring a 1.0 full-time equivalent (FTE) PCC is approximately $202,800 (including annual salary and benefits). This additional PCC is expected to exclusively focus on reducing inpatient avoidable days by improving patient care delays and follow-up on transitional care

referrals needed for safe and timely discharges. No indirect costs are incurred since additional administration would not be required (see Appendix P for Budget Analysis).

Cost Benefit Analysis

A current need in the continuum of care department is to strengthen the inefficient interdisciplinary team workflow. While efforts to optimize the MDR take shape, a cost-benefit analysis (CBA) is used to determine options that provide the best approach to achieve benefits while preserving savings (Penner, 2017). Based on current hospital data, the average cost for one avoidable inpatient day is $3,800. The hospital avoidable inpatient days are increasing up to 67 days per month resulting in losses approaching $3 million in 2017. The additional hired PCC can directly influence certain types of avoidable days specifically due to continuum of care and nursing care delays. Both these types of avoidable days totaled 20 per month on average which could equate to a 30% reduction assuming the PCC eliminated these types of avoidable days. The projected savings in reducing days from 67 per month to 47 would be approximately $709,200 per year. The cost benefit analysis indicates that hiring the additional PCC warrants consideration (see Appendix U for cost benefit analysis calculation).

Intervention

Three evidenced-based interventions were utilized to standardize MDRs including the following elements:

1. Standardize the MDR time structure to improve primary nurse participation and enhance inefficient workflow (see Appendix Q for standardized MDR workflow).
2. Implement an MDR communication tool for the HBS, RN, and PCC to promote effective team collaboration with the aim to deliver safe care and improve patient care outcomes (see Appendix R for standardize communication).

3. Provide educational training for implementing a standardized measure to the PCC, HBS, Primary RN, and Nurse Managers.

Study of Intervention

Rapid cycle testing was incorporated utilizing the Plan-Do-Study-Act (PDSA) methodology during implementation and evaluation. The PDSA cycle is a useful tool for testing a change by developing a plan to test the change (Plan), carrying out the test (Do), observing and learning from the consequences (Study), and determining what modifications should be made to the test (Act) (IHI, 2018). Standardizing the current MDR process must use the PDSA method to implement the changes for improvement (see Appendix G for PDSA). PDSA cycle is a structured approach to quality improvement and can help practices successfully implement changes needed to improve patient care and quality outcomes.

PDSA Cycle # 1

The first PDSA introduced and educated primary nurses about the importance on MDR attendance and team communication. The CNL attended Professional Practice Committee (PPC) staff meetings and departmental morning shift huddles to educate nurses about their respective roles and the information each role is expected to discuss on rounds each day. A new communication tool stimulated team involvement and role clarification during daily rounds (see Appendix R for Communication tool). This communication tool provides a framework for discussion for each respective role. and allow patients to better interact with the team. The patient and their families are encouraged to participate and ask questions about their care.

PDSA Cycle # 2

The second PDSA focused on developing consistent schedules for starting and ending daily rounds on this microsystem. The MDR start time is standardized at 9:30 AM and ends at the same time each day at 11:30 AM. Every patient encounter should only take seven to ten

minutes unless the patient needs emergent medical attention. In addition to standardizing MDR schedules, providing the primary nurses adequate lead time to participate in rounding is also very important. The new standardized MDR process guides the PCC to notify the primary RN 2-3 minutes before each patient care encounter.

Measurement Strategy

There are several measurements to collect in optimizing the MDR at bedside. The evidence-based intervention to standardize MDR was implemented the first week of August, and the outcome measures were collected over a three-month period. After implementing the new structured and standardized MDR process, the rounds completion data and satisfaction questionnaires from healthcare providers, patients, and family members were obtained (see Appendix I for healthcare provider questionnaires). Measuring the number of MDR's being done reliably and timely is one important measures to collect through daily chart reviews and the primary RN participation log sheet (see Appendix J for MDR participation log). MDR triad participation is documented on a daily multidisciplinary progress note in the patient chart. Another important element to collect is to measure patient care experience and the patients understanding of the plan of care (see Appendix K for the patient surveys). Patient understanding of his or her care goals indicates effective communication and team collaboration during MDR at bedside. Data is collected through HCAHPS care transitions scores as measured by the Centers for Medicare & Medicaid Services (see Appendix N for data on HCAHPS).

Measures

Measurement is a critical part of testing and implementing changes. According to the Institute of Healthcare Improvement (IHI) (2018), measurements tell a team whether the changes they are making lead to improvement.

Family of Measures. A set of five measures were identified to complete the project evaluation: one outcome measure, three process measures, and one balancing measure (see Appendix H for Project Charter). The outcome measure is the primary nurse participation and engagement in MDR. Data was obtained from the daily MDR primary RN participation log (see Appendix J for daily MDR nurse participation) and chart reviews. The target goal for primary RN participation in MDR is from 50%-80% by December 1, 2018.

The first process measure involves tracking increased timeliness of discharge. The process to track the improvement will include measuring the increased timeliness of discharge by 3:00 PM from 52% to 65% by December 1, 2018. The data will be collected from the volume utilization tracker daily. A secondary process measure monitored discharge transition scores as reflected in the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS). The quarterly HCAHPS survey metric for patient care experience related to care transition is currently at a level score of 2, below the target of 4 stars as measured by the Centers for Medicare & Medicaid Services (see Appendix N for data on HCAHPS). The third process measure addresses avoidable inpatient hospital days. This quality care improvement initiative is to reduce avoidable days from 67 per month to 47 per month. Measuring the number of care delays resulting in avoidable days will be collected daily in the volume utilization tracker provided from the business and finance department from this hospital. The target goal is to reduce the care delays to 20 per month.

Lastly, the balancing measure addresses satisfaction surveys targeting primary nurses. While standardizing the MDR process can improve nursing participation and engagements, the changes may negatively impact nursing satisfaction during the change management process. Attending MDR may take primary RN's time away from patient care. Measuring the number of

MDR's being completed reliably and timely (see Appendix I for healthcare provider questionnaires).

Ethical Considerations

Nurses play a major advocacy role for ensuring safe and quality care to all patients. The MDR quality improvement project will promote the nursing code of ethics and beneficence. According to American Nurse Association (ANA) beneficence is the core principle of patient advocacy and promotes the well-being of the patient (ANA, n.d.). Standardizing the MDR care model can promote beneficence by advocating for safe, efficient, and effective quality of patient care. Beneficence requires healthcare professionals to treat their patients in a way that provides maximum benefit to the patient. Monitoring patients for clinical deterioration, understanding care processes, and performing countless tasks to ensure patient safety are also essential skills for nurses to provide high-quality care (Agency for Healthcare Research and Quality, 2017). The CNL as an outcomes manager will advocate that the patient, families, and other health care team members are well informed and are included in daily care planning. Nurses and other healthcare providers must work together as a team and communicate effectively to the patient and their families. Nurses and healthcare providers play an important role in ensuring patient safety by providing effective communication and collaboration.

Results

The findings identified included four categories: 1) primary RN MDR participation; 2) timeliness of discharge; 3) impact/value of MDR bedside rounding in patient care delays; and 4) patient care experience. After implementing a strategy to standardize the MDR process, data were collected over three months, and several metrics reflected improvement in the MDR practice.

Outcome Measure Findings

Primary nurse participation increased from 50% to 88% and was characterized by more genuine authenticity and enthusiasm (see Appendix S for more data on primary nurse participation). The consistent participation has increased the nurses' sense of empowerment and their involvement in patient care planning. Enhanced primary nurse engagement resulted in a more effective MDR process. Organizational metrics related to patient care delays, avoidable inpatient days, and timeliness in discharge all improved. Avoidable inpatient days decreased from 67 to 25 days per month. Of the 20 primary RN interviews conducted before and after the new MDR process implementation, respondents felt that attending rounds improved team communication and collaboration (see Appendix T for more information on the Primary RN interviews). The team was able to discuss patient goals of care for the day, plan for the patient stay, and the anticipated plan for discharge. For example, if a patient needs to receive an education session on diabetes, the primary nurse makes sure the diabetes teaching will be done at least one to two days before the discharge. Timeliness of discharge slightly improve from 52% to 57% during the three month implementation phase. Since MDR is done at the bedside, the patients and their caregivers are encouraged to ask questions and understand the goals of care. Of the 20 individual patient interviews on the impact and value of the MDR rounding, 18 patients verbalized understanding of their goals of care and expected discharge date. Two of the 20 patient interviews stated that the goals of care were not clear during MDR due to complexity of care; however, the patients and their caregivers fully understood the plan of care once patient care coordination returned to further discuss the goals and plan (see Appendix K for more information on the patient interview). Patients stated, "Doctors and nurses came together as one. They showed concern and empathy towards our care." The quarterly HCAHPS survey metric for patient care experience related to care transition increased from 2 to 4 stars as measured by the

Centers for Medicare & Medicaid Services (see Appendix N for more data on the HCAHPS). Introduction of a standardized MDR model resulted in positive patient, team, and organizational outcomes. The projected savings for reducing inpatient avoidable days led to a cost benefit estimated to be $709,200 in savings per year.

Discussion

Communication and collaboration are paramount for safe care and positive outcomes. To ensure better communication and efficient care coordination, an MDR must have structured triad participation from the HBS, RN, and PCC which adheres to national and organizational best practices. A structured and standardized MDR has the potential to transform bedside care and improve patient care processes to be more accurate, timely, and integrated. According to the National Quality Forum (2018), effective care coordination has been associated with higher-quality care, improved efficiency, better patient experiences, and reduced costs. Implementing a standardized MDR process will enhance interdisciplinary team communication and coordination of care with the goal to deliver higher quality care, better patient care experiences, and reduced costs.

Summary

The overall global aim of this project was to standardize the current MDR process in one Med-Surgical unit to enhance interdisciplinary team communication and coordination of care with the aim to deliver higher-quality care, better patient care experience, and reduce cost. With proper implementation, standardizing MDR practices can elevate the delivery of patient care to a level that increases staff and patient satisfaction and drives metrics that support the financial future of the organization. When the MDR team comes together to review the goals for the patient's episode of care and agrees on what that plan is, the team can deliver safe patient care. Together, the patient care team can identify issues and generate safe interventions.

Key Findings

The intervention selected to address the most common barrier to nursing attendance is to standardize MDR time scheduling and communication. Currently, nurses and providers are often opposed to attending patient rounds due to limited time. Nurses mainly focus on completing patient care tasks before their shifts end. Notifying the primary RN before rounding enhanced nursing participation and engagement. Contacting each bedside nurse 2-3 minutes before initiation of the patient encounter likely provided the primary nurses enough time to complete tasks and prepare for the MDR rounding at bedside.

Limitation/Barriers

The impact of an effective MDR in timeliness of discharge did not significantly improve (see Appendix M for discharge data). There are many variables affecting the discharge hour once the order has been written. According to nursing managers, pharmacy and transportation arrangement continue to be the main reasons for discharge delays. Other reasons for discharge delays included nursing responsibility to meet the demands in patient care workloads assigned. The major barriers encountered in adhering to the MDR model practice were related to primary nurses' time constraints and the nurses' perception of the need to contribute to the decision-making process. Furthermore, the primary nurses were not likely to participate with the MDR at bedside because staff nurses perceived that the time of rounds conflicted with the med pass time. Team members involved agreed that although triad involvement was vital for the MDR, all had acknowledged that attending rounds is not always possible especially with high hospital census trends and increased volume of workloads.

Key Success Factors

The PDSA method contributed to a successful implementation in standardizing the MDR practice at bedside. Having a small test of change and understanding what worked well and what

needed to be redefined before implementation were key success factors during this improvement project. Allowing team members to give input and feedback promoted a positive and interactive culture; therefore, progress and improvement were possible. As the weeks of the implementation progressed, more team members could verbalize the importance of adhering to the MDR. Other success factors include increasing awareness and promoting the evidence-based MDR practice. Highlighting the quality improvement purpose and supporting the distinct role for each discipline promoted a desire for the team to enhance the MDR practice at bedside. Recognizing and rewarding the staff for their efforts to participate and engage with the MDR reflected the most important success factors for implementing the new standardized MDR.

Lessons Learned

Key lessons learned in this quality improvement project included the fact that implementing an evidenced-based intervention to standardize MDRs requires multidimensional solutions. As an outcomes manager, daily continuous listening and exploring opportunities for what was going well and what was not helped overcome the challenge to improving the MDR process. Our duties as nurses and providers are to provide the best care possible to our patients; however, the care delivery system is not always structured to do so. Despite the best of provider intentions, inpatient care limitations are often systematic and lead to poor patient care outcomes. A deliberate and careful approach is needed to develop and execute an appropriate change strategy to improve patient care outcomes. This CNL can help leverage communication across the care continuum by optimizing the use of MDRs in the hospital. All providers should embrace care models such as the MDR to emphasize high levels of communication and team coordination to improve patient outcomes. Multidisciplinary team rounds can foster this type of high level communication provided feedback is openly shared and truly considered.

Conclusion

The role of multidisciplinary rounds has never been more vital to the success of healthcare organizations. Standardizing the MDR bedside practice in this Northern California community hospital is a quality of care improvement project that will significantly reduce barriers in providing safe quality care. Promoting effective communication and patient care coordination supports the needs for safe and timely discharges, meets metrics that matter, and improves patient care experience. Optimizing the MDR practice is a feasible venture. Providing structure around MDR communication and scheduling is an intervention that does not incur direct costs but offers the potential to significantly enhance care delivery outcomes. Enhanced communication will also likely lead to better primary nurse understanding and engagement in MDR. By improving communication and reducing redundancy, cost reductions, and patient-centered care can be achieved. When collaboration is improved among the healthcare teams, avoidable delays can be reduced and positively affect the length of stay. The goal of a structured and standardized MDR process is to improve team engagement and to promote safe quality care while optimizing organizational outcomes.

In conclusion, MDR Matters! This improvement project has demonstrated that primary nurse authentic and enthusiastic participation in MDR can significantly impact both the quality of team communication and patient-centered care. Furthermore, the pivotal role of MDR can lead to substantial cost savings for the sponsoring organization.

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Appendix A

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CNL Project: Statement of Non-Research Determination Form

Student Name: Alma Alcantara

Title of Project: Improving primary nurse participation and engagement during multidisciplinary rounds to enhance care coordination with the aim to increase timeliness of patient discharges and reduce inpatient avoidable days.

Brief Description of Project:

A) Aim Statement: By December 1, 2018, the aim of this project is to increase adherence to the Regional KP MDR best practices to increase bedside primary nursing participation in MDR from 50% to 80%, improve timeliness of discharge from 52% to 65%, and reduce avoidable days from 67 per month to 47 in one Med-Surgical Unit within a community hospital in Northern California.

B) Description of Intervention:

- MDR must have structured triad participation from HBS, RN, and PCC that adheres to national and organizational best practices. This engagement will enhance communication and care coordination.
- Standardizing the MDR process by using structured MDR communication tool. This process will allow for an authentic communication to occur so team member involve feel comfortable raising questions, issues, and concern.
- Implement a regularly structured and scheduled MDR.
- Redesign patient care boards to include estimated date and time for discharge.
- Increase Assistant Nurse Managers participation and support in improving primary nurse adherence with MDR.

C) How will this intervention change practice?

- To increase awareness and adherence to Kaiser Permanente (KP) best practices.
- To improve metrics that matter through timely and reliable MDR.

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X This project meets the guidelines for an Evidence-based Change in Practice Project as outlined in the Project Checklist (attached). Student may proceed with implementation.

☐This project involves research with human subjects and must be submitted for IRB approval before project activity can commence.

Comments:

EVIDENCE-BASED CHANGE OF PRACTICE PROJECT CHECKLIST *

Instructions: Answer YES or NO to each of the following statements:

Project Title:	**YES**	**NO**
The aim of the project is to improve the process or delivery of care with established/ accepted standards, or to implement evidence-based change. There is no intention of using the data for research purposes.	X	
The specific aim is to improve performance on a specific service or program and is **a part of usual care**. ALL participants will receive standard of care.	X	
The project is **NOT** designed to follow a research design, e.g., hypothesis testing or group comparison, randomization, control groups, prospective comparison groups, cross-sectional, case control). The project does **NOT** follow a protocol that overrides clinical decision-making.	X	
The project involves implementation of established and tested quality standards and/or systematic monitoring, assessment or evaluation of the organization to ensure that existing quality standards are being met. The project does **NOT** develop paradigms or untested methods or new untested standards.	X	
The project involves implementation of care practices and interventions that are consensus-based or evidence-based. The project does **NOT** seek to test an intervention that is beyond current science and experience.	X	
The project is conducted by staff where the project will take place and involves staff who are working at an agency that has an agreement with USF SONHP.	X	
The project has **NO** funding from federal agencies or research-focused organizations and is not receiving funding for implementation research.	X	
The agency or clinical practice unit agrees that this is a project that will be implemented to improve the process or delivery of care, i.e., **not** a personal research project that is dependent upon the voluntary participation of colleagues, students and/ or patients.	X	
If there is an intent to, or possibility of publishing your work, you and supervising faculty and the agency oversight committee are comfortable with the following statement in your methods section: *"This project was undertaken as an Evidence-based change of practice project at X hospital or agency and as such was not formally supervised by the Institutional Review Board."*	X	

ANSWER KEY: If the answer to **ALL** of these items is yes, the project can be considered an Evidence-based activity that does NOT meet the definition of research.

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IRB review is not required. Keep a copy of this checklist in your files. If the answer to ANY of these questions is **NO**, you must submit for IRB approval.

*Adapted with permission of Elizabeth L. Hohmann, MD, Director and Chair, Partners Human Research Committee, Partners Health System, Boston, MA.

STUDENT NAME (Please print): Alma Alcantara

Signature of Student: *Alma Alcantara*

DATE 5/27/18

SUPERVISING FACULTY MEMBER NAME (Please print): Margaret Williams

Signature of Supervising Faculty Member

DATE

Appendix B

Evaluation Table

PICOT Question: In one hospitalized adult medical-surgical unit (P), does a triad participation with an Hospital Based Specialist (HBS), Patient Care Coordinator (PCC), and primary RN during a bedside multidisciplinary round (I) versus no triad participation (C) enhance interdisciplinary team communication and care coordination to improve timeliness of discharge and avoidable hospital days (O) by December 1, 2018 (T).

Study	**Design**	**Sample**	**Outcome/Feasibility**	**Evidence Rating**
Institute for Healthcare Improvement. (2018). How to guide: multidisciplinary rounds. Retrieved from http://www.ihi.org/resources/Pages/Tools/HowtoGuideMultidisciplinaryRounds.aspx	Consensus Guidelines	None	Provides guidelines for initiating multidisciplinary rounds. Provides fundamentals for forming the team, setting aims, and testing changes on a small scale	IV A
Bender, M., Mann, L., & Olsen, J. (2011). Leading transformation: Implementing the clinical nurse leader role. Journal of Nursing Administration, 41(7-8), 296-298. Retrieved from http://faculty.sites.uci.edu/ncrc/files/2016/01/49.pdf	Consensus Paper-implementing the clinical nurse leader role	None	Useful in providing how to implement the CNL role to improved patient care delivery systems by using Kotter's Eight Change Phases model as a guide.	IV A
Agency for Healthcare Research and Quality. (2016). Priorities in focus-care coordination. Retrieved from https://www.ahrq.gov/workingforquality/reports/priorities-in-focus/care-coordination.html	Consensus Guidelines	None	Provides recommendation for all	IV A

			stakeholders to promote effective communication and coordination of care across the health care system by focusing on improving the quality of care transitions and communications across care settings.	
National Quality Forum. (2018). Prioritizing measure gaps: care coordination. Retrieved from http://www.qualityforum.org/ProjectDescription.aspx?projectID=73282	Consensus Guidelines	None	Provide guidance on priorities for performance measure development and endorsement to address higher-quality care, improved efficiency, better patient experience, and reduced costs	IV A
Dhamoon, A. & Lau, C. (2017). The impact of a multidisciplinary care coordination protocol on patient-centered outcomes at an academic medical center. *Journal of Clinical Pathway,3*(4), 37-46. Retrieved from https://www.journalofclinicalpathways.com/sites/default/files/2018-04/jcp0517RR_Dhamoon.pdf	Mixed Method Research	409 Bed Tertiary teaching hospital. The study included three general medicine telemetry units; two 24-bed units; and one 16-bed unit	The study findings indicate that implementation of a standardized MDR protocol can improve care coordination, patient assessments of care quality, and patient LOS. Scores on patient-centered measures of quality improved	L 1 A/B

			after the intervention. Physician survey responses improved in 9 out of 11 measures, and nurse survey responses improved in 12 out of 14 measures, which related to communication, patient safety, and work- flow. Mean LOS decreased from 4 hospital days to 3.6 hospital days, representing a 10% relative reduction.	

Monash, B., Najafi, N., Mourad, M., Rajkomar, A., Ranji, S., Fang, M., Glass, M., Milev, D., Ding, Y., Shen, A., Sharpe, B., & Harrison, H. (2017). Standardized attending rounds to improve the patient care experience: a pragmatic cluster randomized controlled trial. *Journal of Medicine, 12*(3), 143-149. Retrieved from https://www.journalofhospitalmedicine.com/sites/default/files/jhm012030143_0.pdf	Cluster randomized controlled trial.	1200 patients admitted to the medicine service.	Patients in the intervention arm reported increased satisfaction with AR (4.49 vs 4.25; P = 0.01) and felt more cared for by their medicine team (4.54 vs 4.36; P = 0.03). Although the intervention shortened the duration of AR by 8 minutes on average (143 vs 151 minutes; P = 0.052), trainees perceived intervention AR as lasting longer and re- ported lower satisfaction with intervention AR. Useful for healthcare team in adopting a standardized, patient-centered, time-saving rounding model that leads to increased patient satisfaction with AR and the perception that patients are more cared for by their medicine team	L I A

Gausvik, C., Lautar, A., Miller, L., Pallerla, H., & Schlaudecker, J. (2015). Structured nursing communication on interdisciplinary acute care teams improves perceptions of safety, efficiency, understanding of care plan and teamwork as well as job satisfaction. *Journal of Multidisciplinary Healthcare, 8*(0), 33-37. doi: 10.2147/JMDH.S72623	Qualitative and quantitative mixed method study	The study examines staff perceptions of the SIBR process on an acute care for the elderly (ACE) unit in a 555-bed metropolitan community hospital awarded Magnet certification in 2011 for excellence in nursing innovation and practice in Cincinnati, OH. Survey results were collected from 24 SIBR staff (patient-/family-centric ACE unit) and 38 control unit.	100% of the staff whom used a structured interdisciplinary bedside rounds (SIBR) understood the patient plan for the day compared to 74% of the staff who did not utilize the structured rounds. Understanding the goal of a patient's care can improve care outcomes. This was a useful study on staff perception on SIBR process and the effects of SIBR on staff communication.	LI B

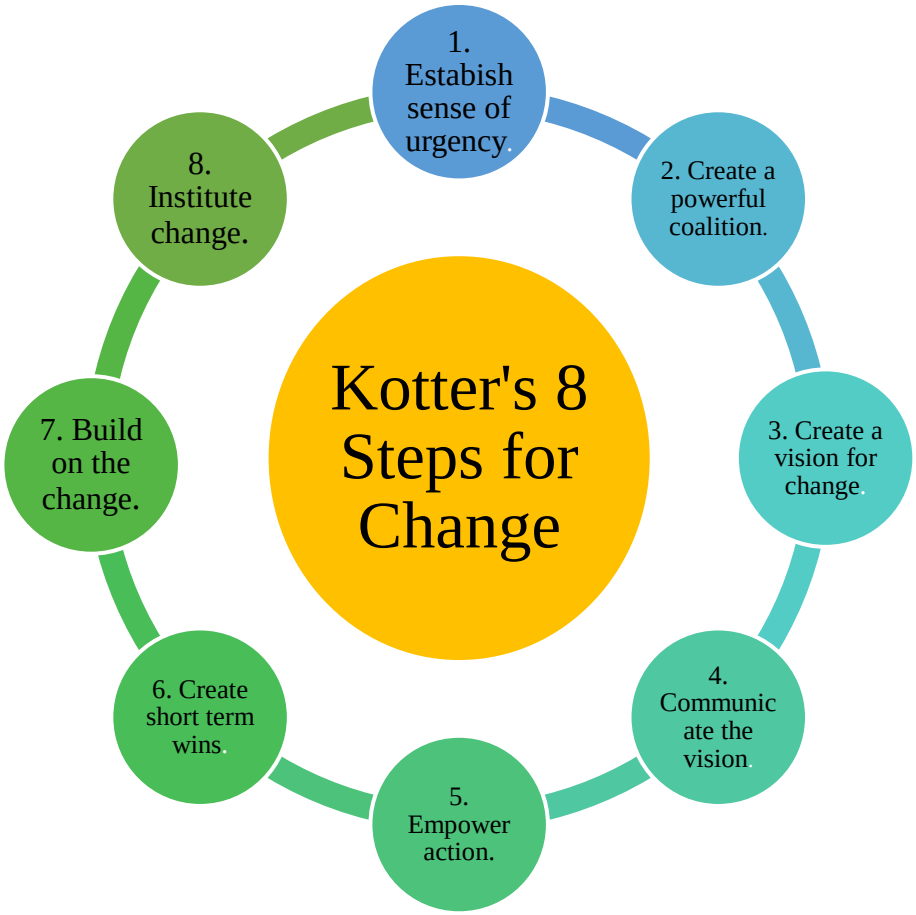
Oshimura, J. M., Downs, S. M., Saysana, M. (2013). Family-centered rounding: can it impact the time of discharge and time of completion of studies at an academic children's hospital? *Journal of the American Academy of Pediatrics, 4*(4), 228-232. doi:10.1542/hpeds.2013-0085	Retrospective Study	Retrospectively compared the timing of patient discharges from July 2007 to June 2008 (before FCR) versus those from July 2008 to May 2009 (after FCR) on the pediatric hospital medicine service	Before FCR, 40% of patients were discharged before 3:00 PM (n = 912). After FCR, 47% of children were discharged before 3:00 PM (n = 911) (P = .0036). Time from order entry to study completion for MRIs and EEGs decreased from 2.15 hours before FCR (n = 225) to 1.73 hours after FCR (n = 206) (P = .001). The objective of this study was to determine the impact of FCR on time to discharge for pediatric patients	L III A

Ratelle, J., Sawatsky, A., Kashiwagi, D., Schouten, W., Erwin, P., Gonzalo, J., Beckman, T., & West, C. (2018). The effect of bedside rounds on patient-centered outcomes: a systematic review and meta-analysis [abstract]. *Journal of Hospital Medicine.* Retrieved from https://www.shmabstracts.com/abstract/the-effect-of-bedside-rounds-on-patient-centered-outcomes-a-systematic-review-and-meta-analysis/	Systematic Review and Meta-Analysis	Twenty-nine studies (21,447 patients) met inclusion criteria, including eight randomized controlled trials (2,310 patients). The majority of studies (n=23, 79.3%) were conducted in the United States, and general medical wards were the most frequent study setting (n=10, 34.5%). Bedside rounds were most often interprofessional (n=22, 75.9%) and involved health professions trainees (n=26, 89.7%)	The objective was to determine whether BR, when compared to other forms of hospital ward rounds, improve patient-centered outcomes including patient care experience. The study found that bedside rounds increased patient care experience but not patient care outcomes.	L II B

Note: Adapted from Johns Hopkins Medicine (n.d.). The key finding of this literature search indicates that a standardize approach for implementing MDR represents a best practice to optimize team participation (Dhamoon & Lau, 2017).

Appendix C

Kotter's Theory of Change



Note: From Bender, Mann, & Olsen, 2011; Finkelman, 2016.

Appendix D

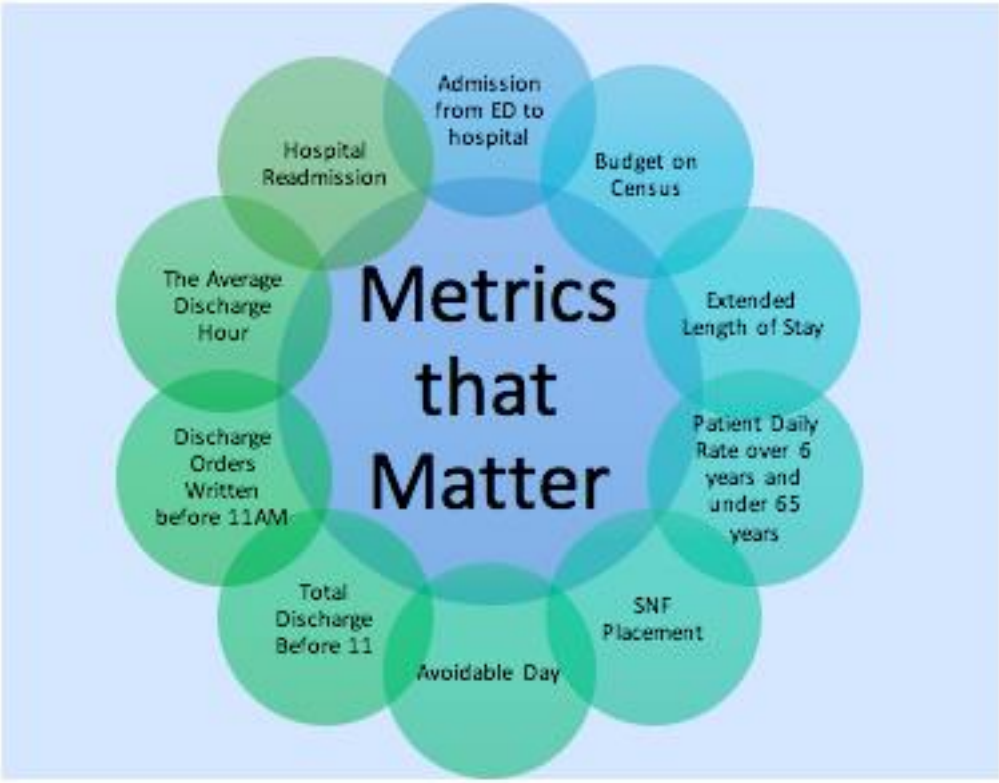
Team-Based HBS/PCC Daily Assignment

TEAM	HBS	PCC
R-1	MD-1	PCC-1
R-2	MD-2	PCC-2
R-3	MD-3	PCC-3
R-4	MD-4	PCC-4
R-5	MD-5	PCC-5
R-6	MD-6	PCC-6
Total	HBS=6	PCC=6

Chart: Table created by author 9/2018

Appendix E

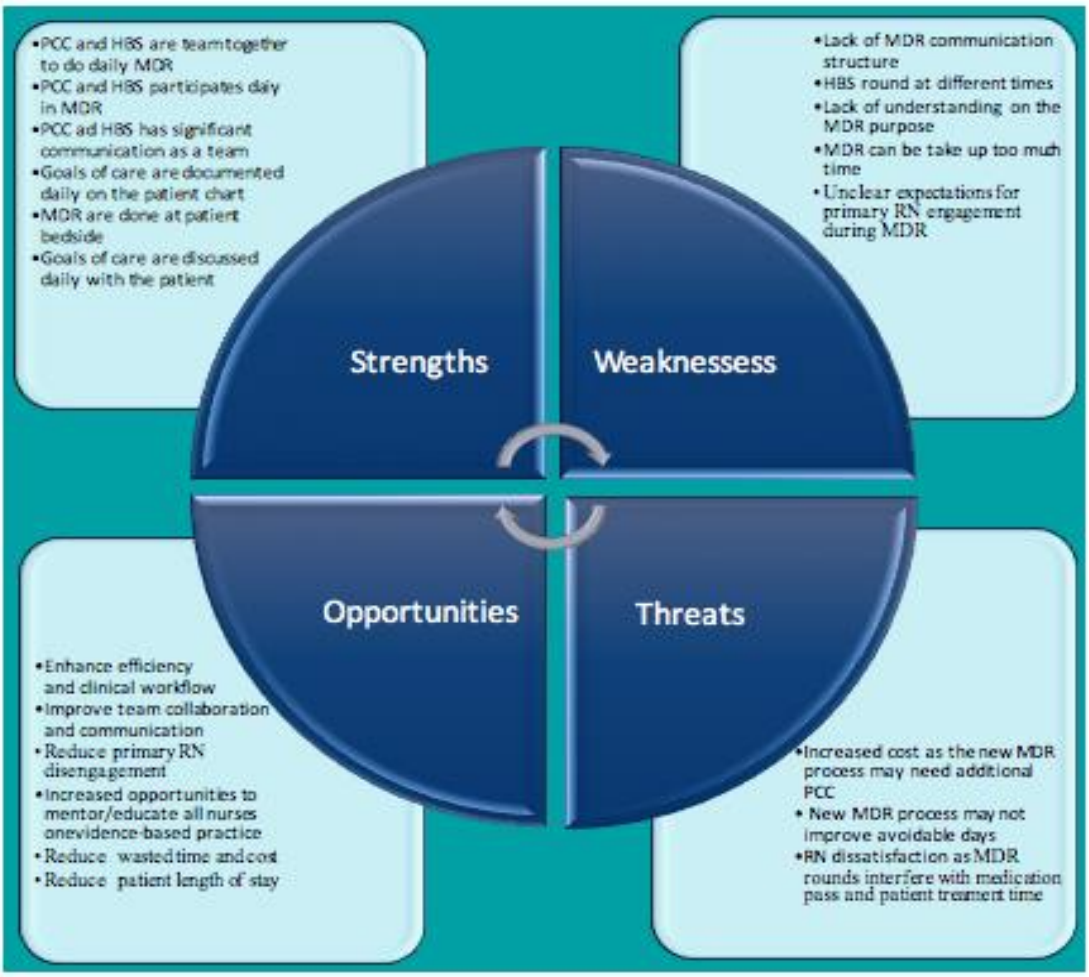
Metrics that Matter



Note: Pictorial created by author 7/2018

Appendix F

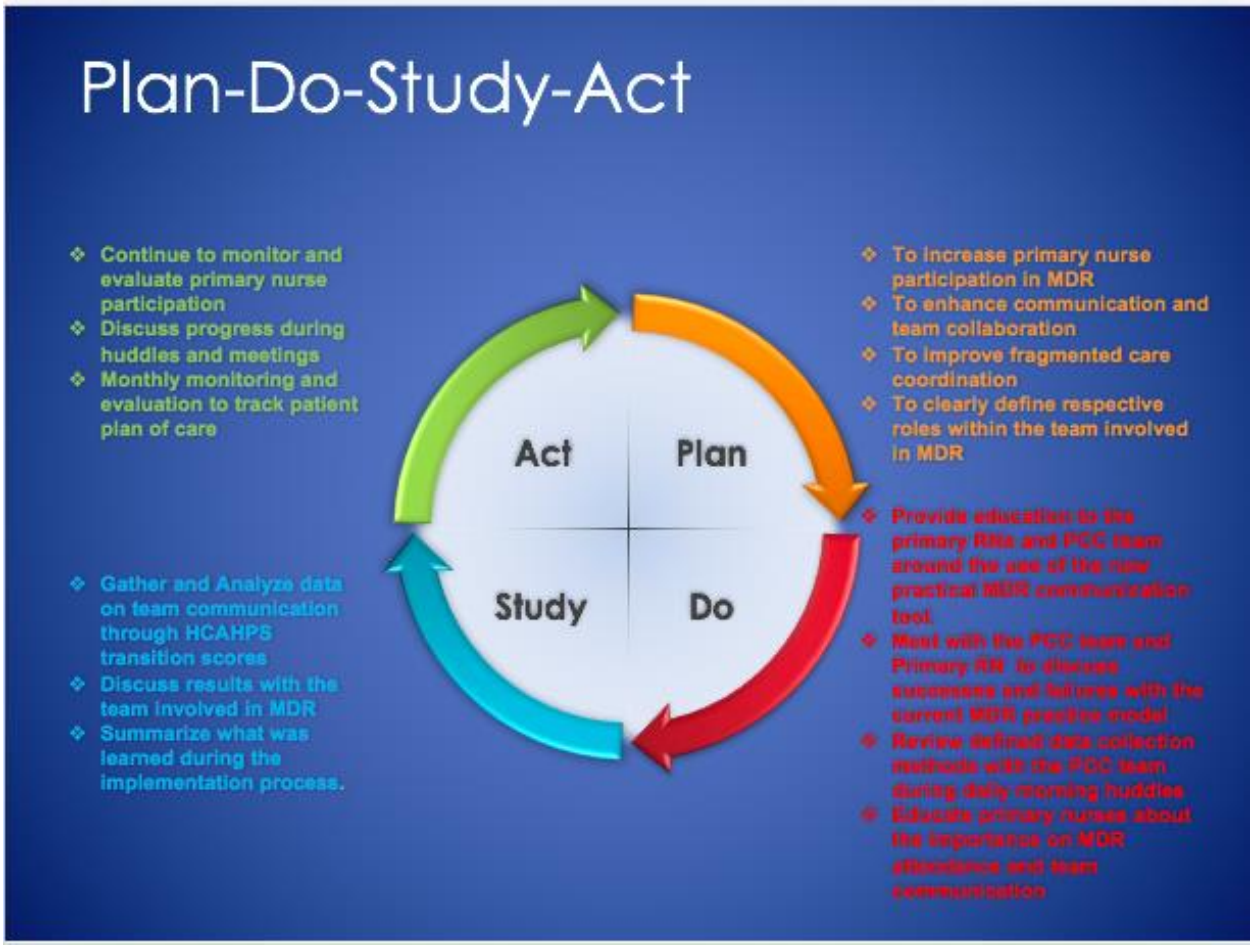
Strengths, Weaknesses, Opportunities, Threats (SWOT) Analysis



Note: Pictorial created by author 7/2018

Appendix G

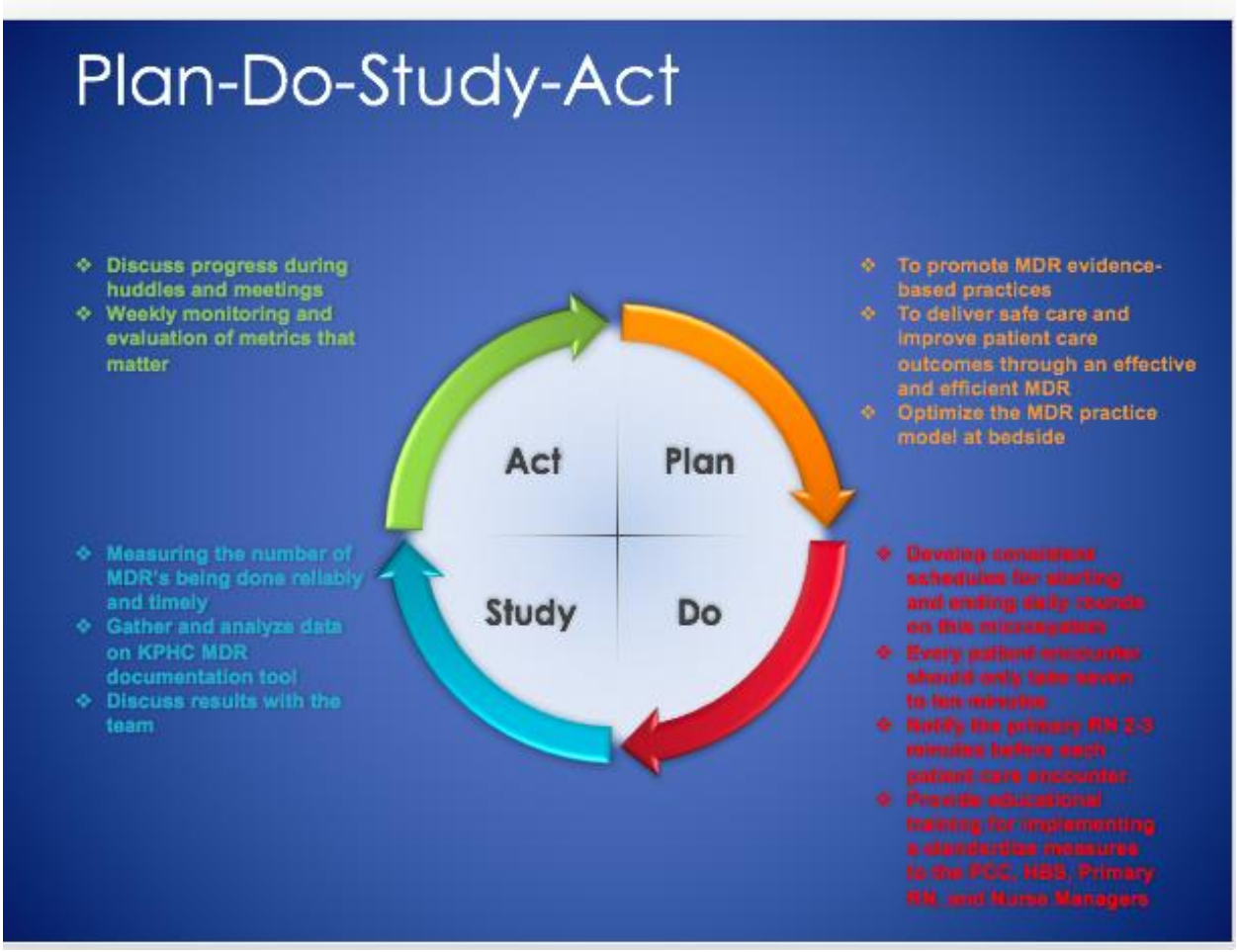
PDSA# 1 MDR Attendance



Note: Chart created by author 8/2018

Appendix G

PDSA #2 MDR Schedules



Note: Chart created by author 9/2018

Appendix H

Project Charter

Title of Project: Improving Primary Nurse Participation during Daily Multidisciplinary Rounds (MDR) to Enhance Care Coordination and Improve Patient Care Outcomes.

Project Charter: The CNL as clinician and outcomes manager: Improving primary nurse participation and engagement during daily Multidisciplinary Rounds (MDR) to enhance care coordination and improve patient care outcomes.

Global Aim: To standardize the current MDR process in one Med-Surgical unit to enhance interdisciplinary team communication and coordination of care with the aim to deliver higher-quality care, better patient care experience, and reduce cost.

Specific Aim: The aim of this project is to increase bedside primary nursing participation in MDR best practices from 50% to 80% in one Med-Surgical Unit within a community hospital in Northern California by December 1, 2018.

Background:

Multidisciplinary Team Rounding (MDR) is a model that many hospital clinicians have implemented to enhance team communication and coordination of care to improve patient care and fiscal outcomes. According to the Institute for Healthcare Improvement (IHI), (2018), MDR ensures a high level of communication and collaboration between doctors, nurses, and other members of the care team (IHI, 2018). Kaiser Permanente South San Francisco (KSSF) currently has an existing MDR structure that involves the Hospital Based Specialist (HBS), primary nurse, and Patient Care Coordinator. The MDR model was implemented in KSSF three years ago by KP Regional to positively transform quality care at the bedside; however, primary nurses continue to demonstrate low participation rates that cause substantial levels of disengagement and dissatisfaction during the process of care coordination. A two-month long microsystem assessment of the Med-Surgical Unit in Kaiser South San Francisco (KSSF) using the Dartmouth Institute (2015) Microsystem Assessment Tool revealed that primary nursing attendance in Multidisciplinary Rounds (MDR) is consistently at 50% participation (See Appendix C). The Clinical Nurse Leader as an outcome manager assessed nursing MDR participation during the morning shift over two months and observed that primary nurses were often not provided the opportunity by physicians to report patient care progress. This lack of involvement leads to lower primary nurse MDR participation. According to KSSF Hospital Administration/Business Strategy &Finance, timely discharge is trending downward and currently averages 52% per day. The current time of MDR is not standardized causing inefficient workflow in the PCC department and dissatisfaction from primary nursing. The lack of 100% participation and lack of reporting standards during MDR leads to suboptimal communication and fragmented care coordination.

Sponsors

Continuity Service Director	
Chief of Utilization Management	

Goals

1. Standardize the MDR time structure to improve primary nurse participation and enhance inefficient workflow.
2. Implement an MDR communication tool for the HBS, RN, and PCC to promote effective team collaboration with the aim to deliver safe care and improve patient care outcomes.
3. Standardize a daily PCC progress note in Health Connect to facilitate communication and collaboration, thus provide consistent documentation of the patient's goals of care and barriers to discharge.
4. Provide educational training for implementing a standardized MDR to the PCC, HBS, Primary RN, and Nurse Managers
5. To achieve efficient MDR to improve hospital metrics that matter including patient care experience, timely discharge, and reduced avoidable days.

Measure

Measure	Data Source	Target
Outcome		
Increase primary bedside nursing participation in MDR from 50% to 80% by December 1, 2018.	MDR Documentation in Health Connect	80%
Process		
Reduced Avoidable days from 67 per month to 47 per month.	Daily Volume Utilization Tracker	30% (20 avoidable day per mth)
Achieve acceptable response rates from monthly surveys regarding MDR test of change.	Gather and collect data from at least 50% of primary nurses, their assigned patients and attending hospitalist surveyed.	100%
Increase timeliness of discharge by 12:00PM from 52% to 65% by December 1, 2018	Daily Volume Utilization Tracker	65%
Balancing		
Negative impact on nursing satisfaction during change management process to improve adherence to current MDR policy and procedure.	Monitor primary nurse perception and satisfaction regarding the value of increasing participation in MDR.	100%

Team Members

PCC Team Champion	
Assistant Nurse Managers	
Patient Care Coordinator Team	
Frontline Nurses	
Patients	

References

Institute for Healthcare Improvement. (2018). How to guide: multidisciplinary rounds. Retrieved from http://www.ihi.org/resources/Pages/Tools/HowtoGuideMultidisciplinaryRounds.aspx

The Dartmouth Institute (2015). Microsystem assessment Tool. Retrieved from http://www.clinicalmicrosystem.org.

Measurement Strategy

Population Criteria: Primary RN, PCC, and HBS in a 40 bed Med-surgical are included in the population to attend daily MDR at the bedside. Patient and family members also encouraged to participate during MDR.

Data Collection Method: A structured MDR communication tool is completed daily in the electronic patient chart. The Patient Care Coordinator will document all pertinent information about the patient treatment plan, goals of his/her care, and expected date of discharge. Statistical data of the primary nurse participation and clear documentation on goals of patient care will be collected through the MDR communication tool via health connect. In addition, the hospital daily Utilization Trackers can provide metrics that matter daily including avoidable days, total discharges before 12:00 PM, and discharge orders written before 10:00AM. Patient care experience data will be obtained from the Quality Department.

Data Definition

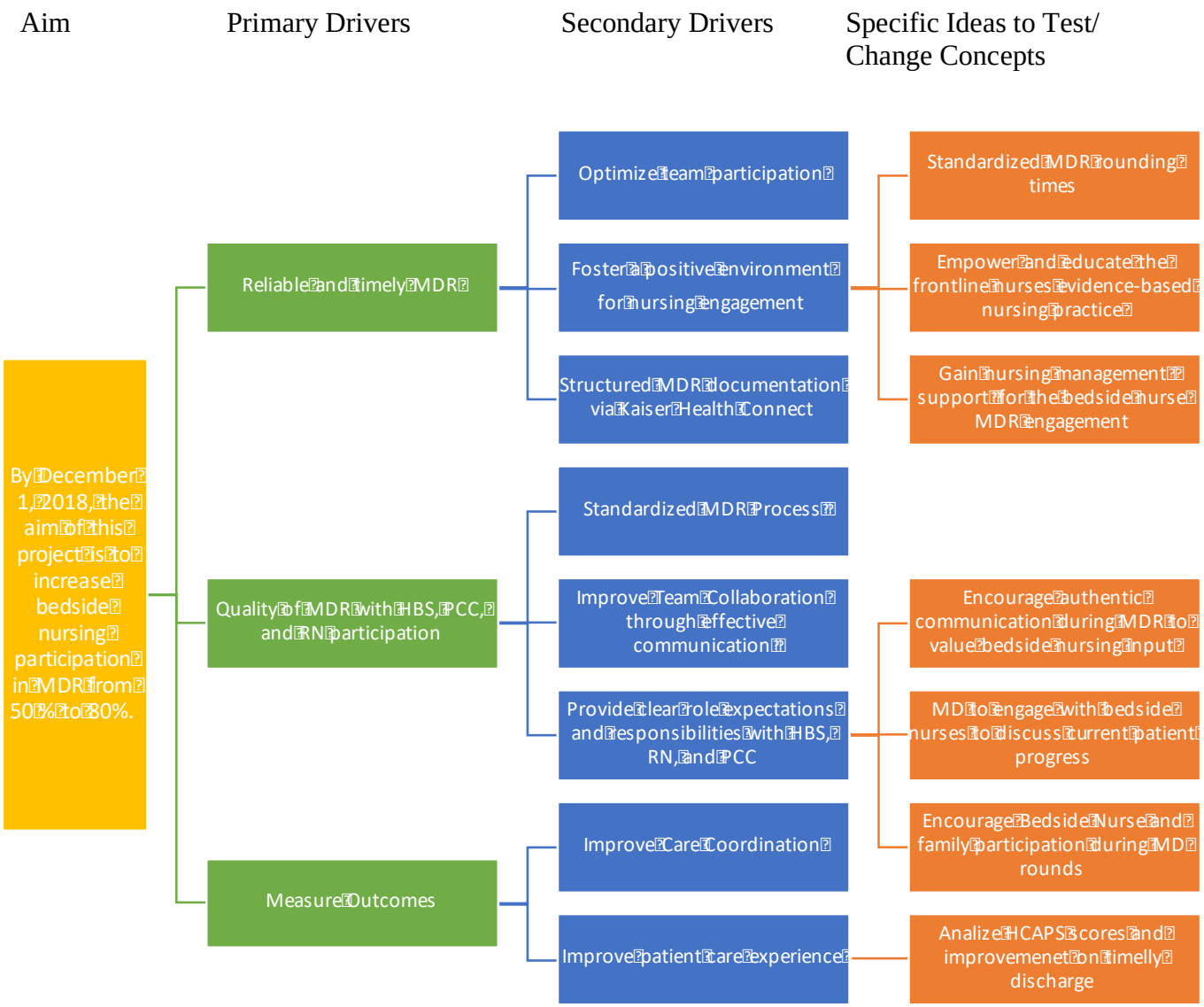
Data Element	Definitions
Continuum of Care Service Department (COCSD)	The (COCSD) is a clinical microsystem that provides high-quality care and reduced hospital costs through effective utilization across the care continuum.
Daily Volume Utilization Tracker	Tracks metrics that matter daily including patient daily rate, total discharges before 12:00 PM, daily census, readmissions, Medicare patients, SNF placement, and discharge orders written before 9:00AM.
HCAHPS Star Rating	A CMS rating applied to quality of care for consumers. Hospital Consumer Assessment of Healthcare Providers and System (HCPAPS) is a patient satisfaction survey required by the Centers for Medicare and Medicaid Services for all hospitals in the United States. The survey is conducted for patient who received care in an adult inpatient unit. It is based on a 1-5 STAR rating system. All surveys are analyzed, and the linear score is translated into a STARS rating.
PCC/MDR Communication Note	Structured PCC/MDR communication tool that is completed daily in patient chart. A clinically focused handoff tool used to provide all pertinent information on a patient goals of care including time of rounding, estimated date of discharge (EDD), actual day of discharge (ADD), and barriers to discharge.

Multidisciplinary Rounding Triad Participant	The PCC, HBS, and Primary RN are responsible for following MDR best practices at the patient bedside.
Observational Data	PCC will gather and collect data from the primary nurses, their assigned patients and attending hospitalist surveyed

Measure Description

Measure	Measure Definition	Data Collection	Goal
Reliable and timely MDR	N=# of patients seen between 9:30 AM-11:30AM during MDR D= # of patients assign with the HBS/PCC for the day	Daily Chart Review in health connect	100%
Quality of MDR triad participation with HBS, PCC, and RN	N= # of patients seen with triad participation from HBS, PCC, and RN D= # of patient assign with the HBS/PCC the day	Daily Chart Review in health connect Assistant Manager to audit primary RN participation in MDR	80%
Improve patient goals of care discussion in preparation for discharge	N= # of patients seen for the day D= # of patients seen for the day with a documented daily goal of care discussion	Daily Chart Review in health connect	100%
Improve patient care experience	N= # of patients who can verbalize understanding of their current care progress D= # of patient seen for the day.	Daily Chart Review in health connect HCAPS Communication scores	100% 4 Star
Increase timeliness of discharge by 12:00PM from 52% to 65% by December 1, 2018	N= # of patients with discharge order before 9:30am D= # of patient discharge before 12PM	Daily Volume Utilization Tracker	65%
Reduced Avoidable days from 67 per month to 47 per month	N=# of patients seen for the day N=# of patients with care delays and reported avoidable days	Daily Volume Utilization Tracker MIDAS Avoidable Day Matrix Report	30% (20 avoidable day per mth)

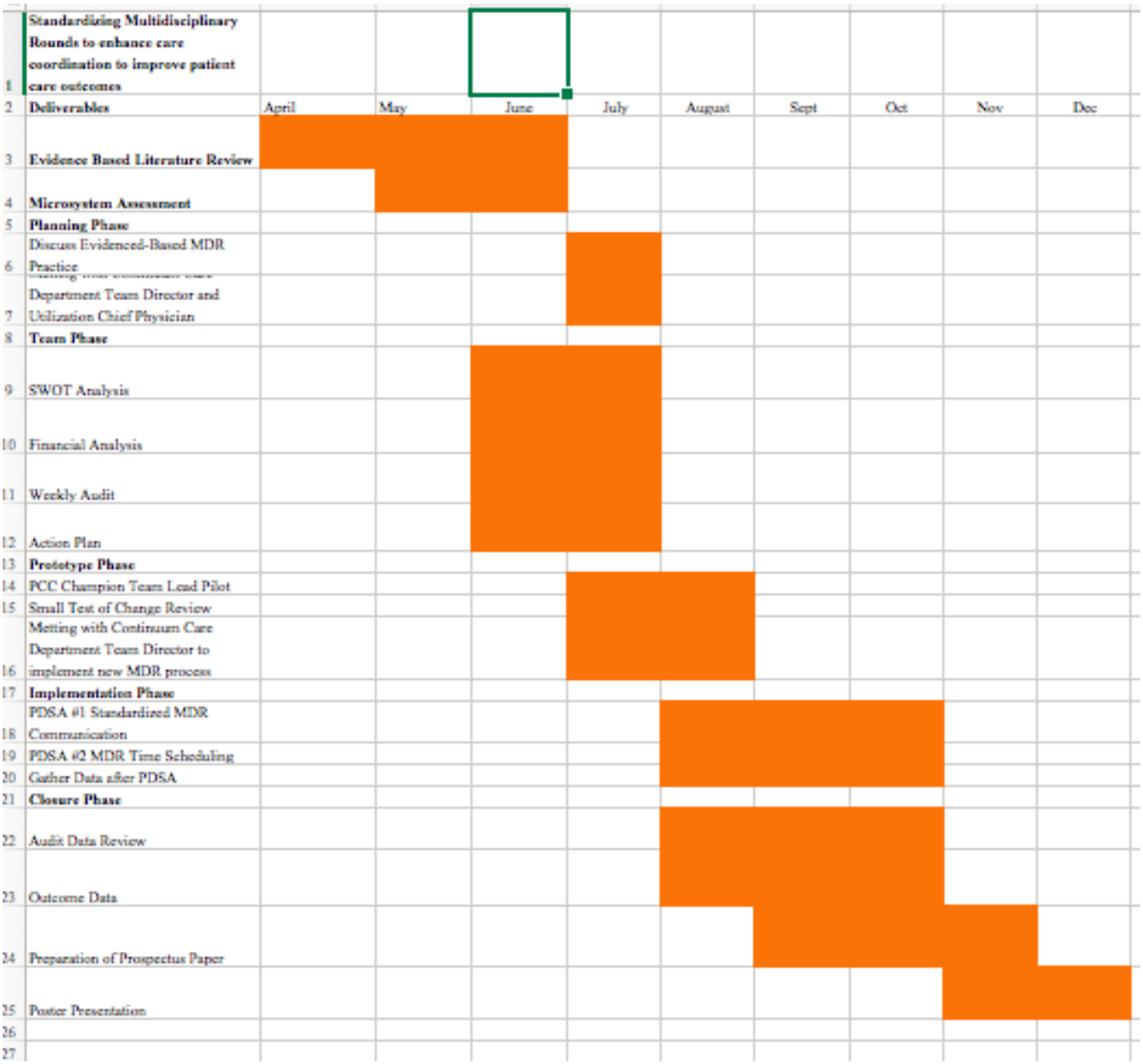
MDR Driver Diagram



Intervention: Develop a strategy to standardize MDR consisting of the following elements:

1. The triad team including HBS, PCC, and Primary RN will be introduced to a new standardized communication tool.
2. Standardize a daily PCC progress note in Health Connect to facilitate communication and collaboration, thus provide consistent documentation of the patient's goals of care and barriers to discharge.
3. Standardize a daily PCC progress note in Health Connect
4. Provide Educational training for implementing a standardize MDR to the PCC, HBS, and Primary RN
5. Standardize the MDR time Structure

Project Charter Timeline



CNL Competencies

1. **Outcome Manager/Clinician**- the CNL can enhance coordination of care and improve timeliness of safe patient discharges. By leading interdisciplinary cooperation, the CNL can improve patient care coordination by emphasizing quality of care from admission to discharge.
2. **Advocate**- The CNL will improve patient satisfaction and safety by emphasizing team focus on patient centered care during daily multidisciplinary bedside rounding.
3. **System Analyst/Risk Anticipator**- Facilitate educational sessions during huddle can help create an understanding and cooperation among other healthcare providers, PCC, and primary nurses to improving MDR. Management should also be engaged to discuss developing better ways to improve primary nurse adherence to MDR participation. Embrace and promote the CNL role to improve quality of patient delivery and patient

care. Continue to lead initiatives and efforts in providing safe and quality care by promoting effective communication during MDR.

Appendix I

Primary RN and Patient Care Coordinator after Implementation MDR Survey

Questions	Yes	No	Primary RN	Patient Care Coordinator
How frequently does primary RN during MDR rounds lead to immediate orders? Ex: diet orders, pain medication order?	✓		20 out of 20	20 out of 20
Do you believe that MDR rounding process is effective?	✓		20 out of 20	20 out of 20
Did the physician address plan for the day and goals for the day?	✓		20 out of 20	20 out of 20
Did the physician discuss to the patient and the team the plan for discharge?	✓		20 out of 20	20 out of 20
Do you feel MDR improve team communication and collaboration?	✓		20 out of 20	20 out of 20

Note: Table created by author 9/2018

Appendix J

Daily MDR Primary Participation Log Sheet

Team	Sept 9	Sept 10	Sept 13	Sept 14	Sept 15	Sept 16	Sept 17	Sept 18	Sept 22	Sept 23	Sept 24
R-1	100%	83%	86%	86%	100%	100%	100%	100%	100%	100%	50%
R-2	100%	89%	86%	90%	100%	100%	71%	75%	70%	71%	100%
R-3	90%	71%	100%	100%	67%	60%	100%	86%	100%	100%	75%
R-4	100%	86%	100%	100%	100%	100%	83%	100%	100%	86%	88%
R-5	100%	86%	100%	100%	100%	100%	57%	86%	100%	100%	75%
R-6	60%	100%	88%	88%	67%	100%	100%	67%	64%	70%	89%

Note: Table created by author 9/2018

Appendix K

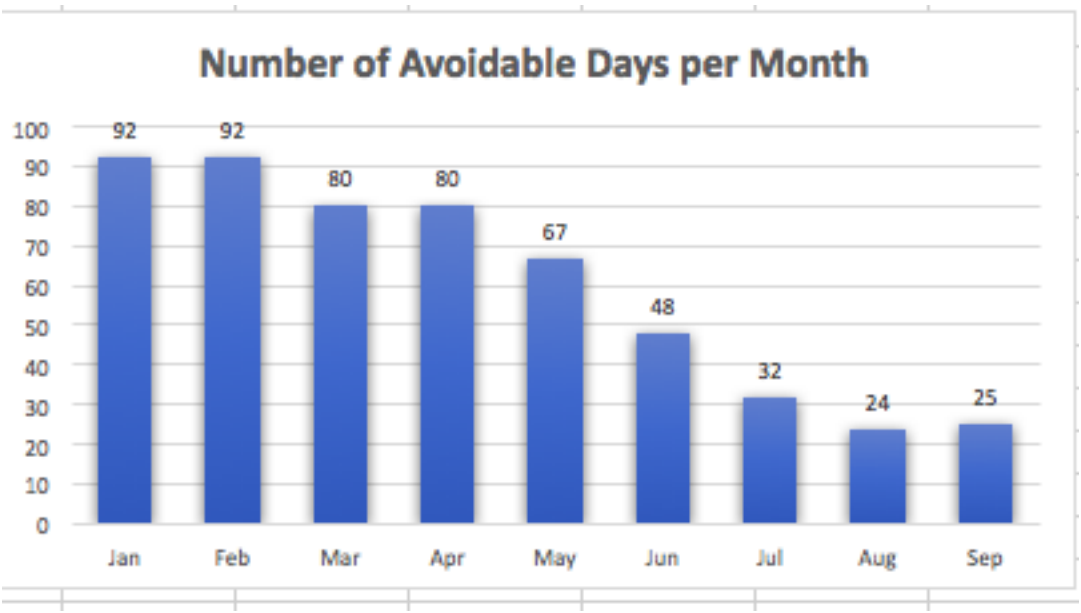
Patient Survey Post MDR Implementation Strategy

Questions	Answer
Do you understand your diagnosis and condition?	Yes=20
I am satisfied with morning rounds?	Yes=19 No=1 Feel overwhelmed with everyone in the room
Did the hospital staff inform you of the plan and goals for the day?	Yes=18 No=2 because of the complexity of patient care
There is a good communication between the medicine team and me?	Yes=18 No=2
My medicine team cares about me?	Yes=20 "Doctors and nurses came together as one. They showed concern and empathy towards my care"
My medicine team involved me in decisions, when appropriate?	Yes=20

Note: Survey and table created by author 9/2018.

Appendix L

Avoidable Days per Month



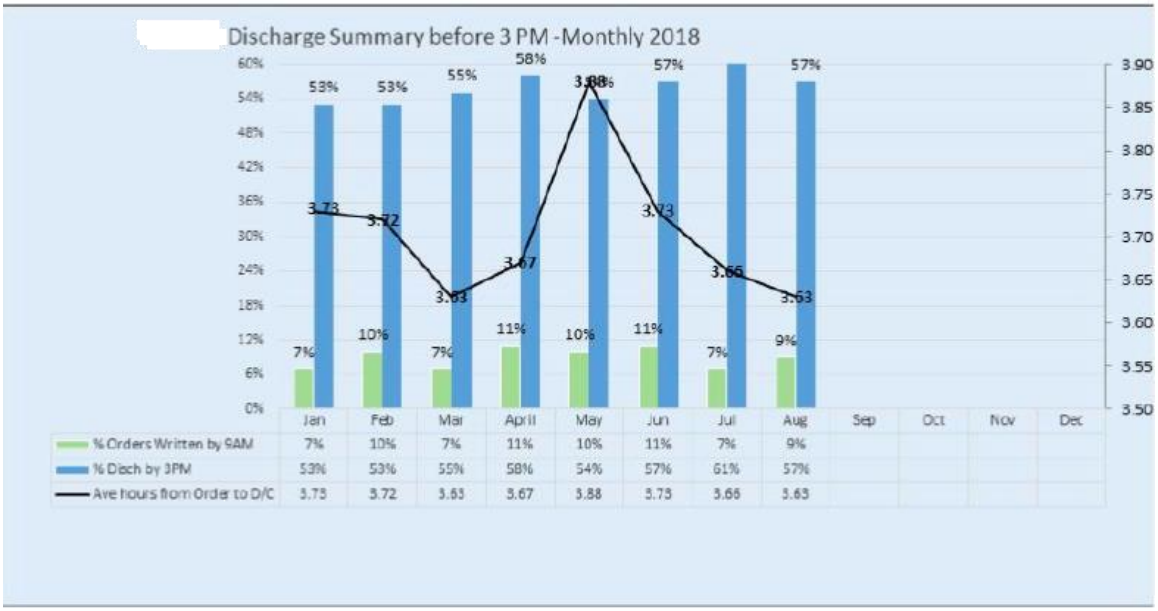
Note: Table created by author 9/2018.

Appendix M

Monthly Discharge Summary before 3PM

Discharge before 3PM

Month	Functional Area	Orders Written Before 9AM	% Orders Written by 9AM	Total Discharges	Dischs by 11AM	% Disch by 11AM	Dischs by 3PM	% Disch by 3PM	Ave hours from Order to D/C	% D/C <2 hours from Order
Jan	Adult Services	36	7%	533	10	2%	281	53%	3.73	20%
Feb	Adult Services	46	10%	461	15	3%	246	53%	3.72	22%
Mar	Adult Services	39	7%	531	15	3%	291	55%	3.63	23%
April	Adult Services	53	11%	502	14	3%	289	58%	3.67	22%
May	Adult Services	52	10%	515	19	4%	277	54%	3.88	21%
Jun	Adult Services	55	11%	501	16	3%	284	57%	3.73	20%
Jul	Adult Services	35	7%	511	15	3%	310	61%	3.66	19%
Aug	Adult Services	44	9%	482	10	2%	274	57%	3.63	20%
Sep	Adult Services									
Oct	Adult Services									



Note: Internal data compiled by the Hospital Administration/Business Strategy & Finance.

Appendix N

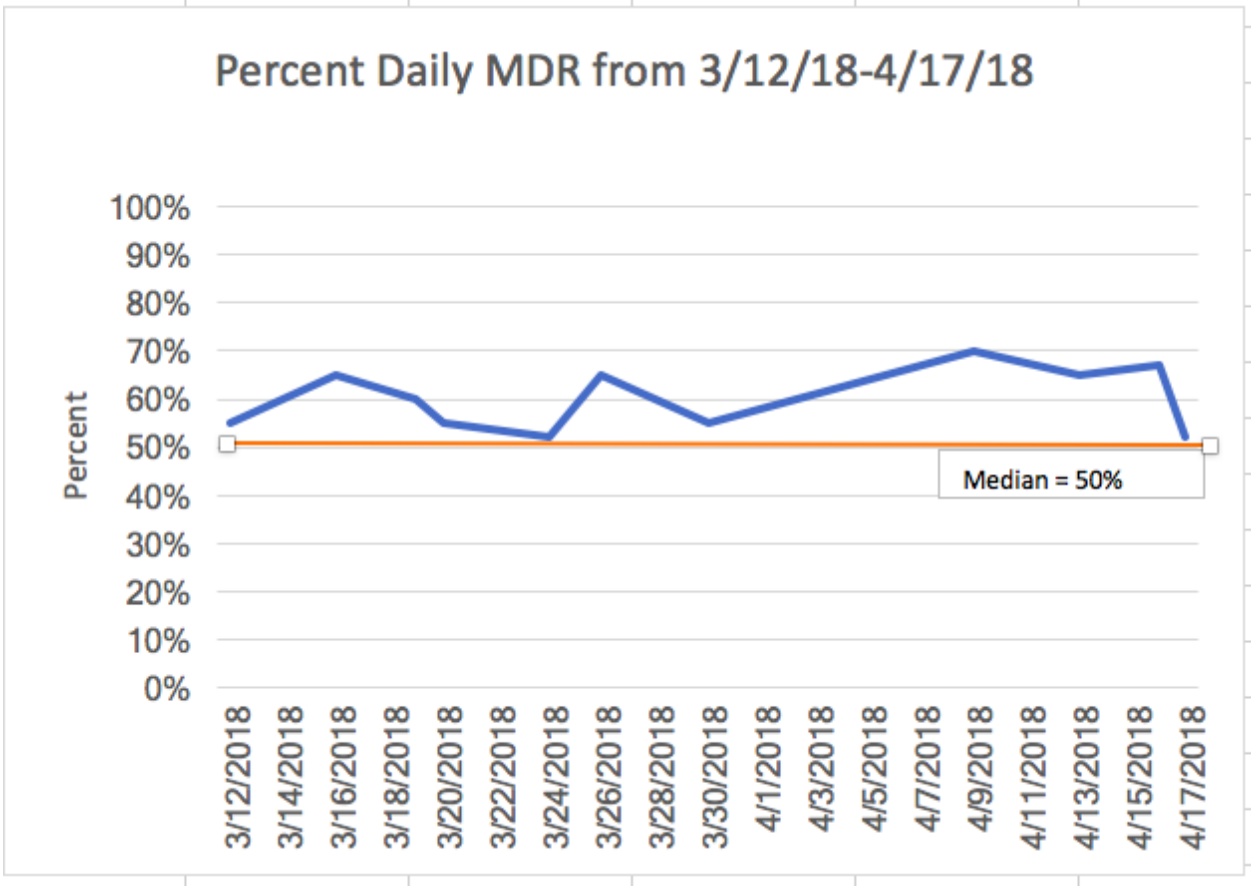
HCAHPS: Discharge and Care Transitions Report

CARE EXPERIENCE-STAR Rating	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	2018 PYDT
HCAHPS: Discharge Info	2	2	2	3	3	3	3	5			3
Talked about the help you would need	2	3	3	3	4	3	2	5			3
Received Info Regarding Symptoms	3	2	2	3	2	3	3	5			3
HCAHPS: Care Transitions	3	4	3	4	4	5	3	5			4
My preferences taken into account	2	2	2	2	2	4	2	4			2
Understanding in Managing My Health	2	4	3	4	3	5	3	5			4
Clearly Understood My Medications	4	4	4	5	5	5	4	5			5

Note: Internal data compiled from Hospital Administration.

Appendix O

Primary RN Participation Before Standardizing MDR Process



Note: Chart created by author 9/2018.

Appendix P

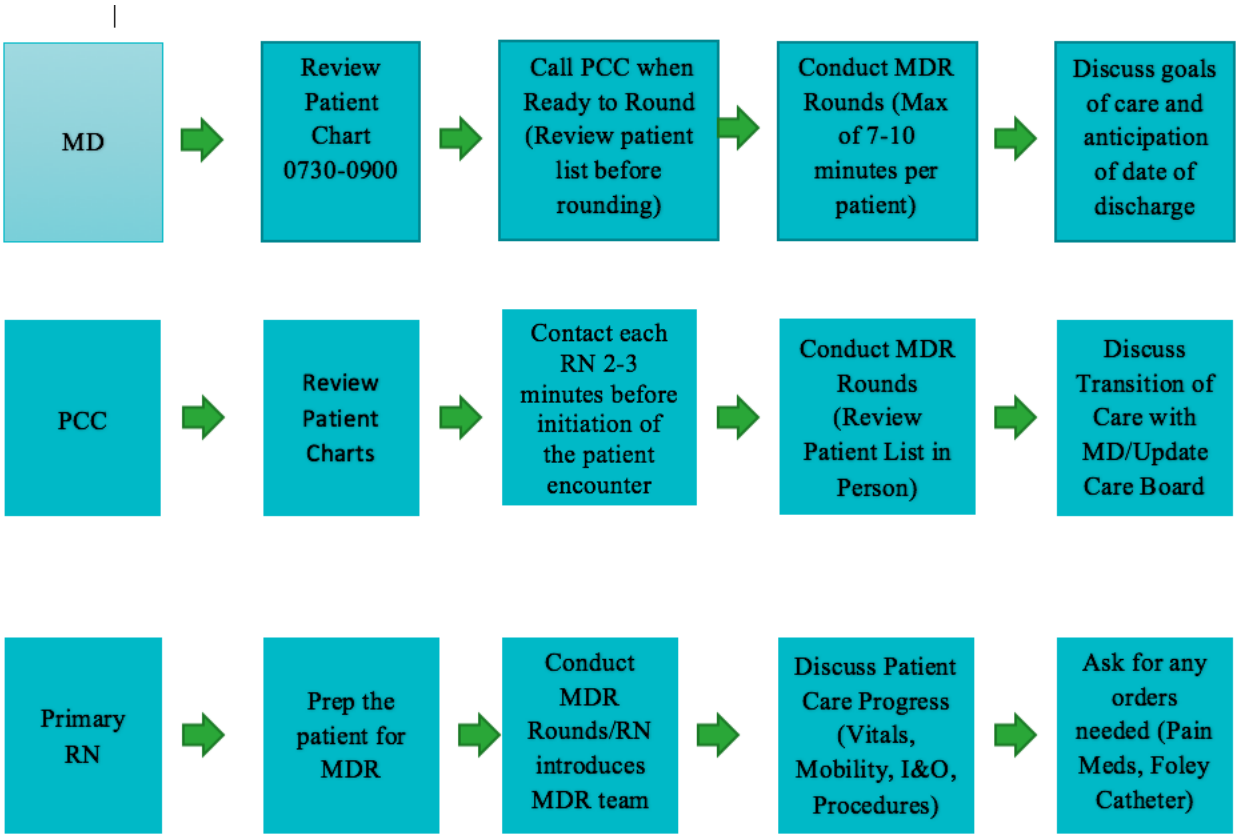
Budget Analysis

Hospital Case Management: Avoidable Days Matrix (1/1/2017-6/30/2018)				
Avoidable Day Type ($3,800/day)	**Days**	**Days/Month**	**Cost/Month**	**Cost/Year**
Admission Delay	19	1	$3,800.00	$45,600
Continuum of Care Delay	65	4	$15,200.00	$182,400
Family/Patient Delay	108	6	$22,800.00	$273,600
Financial Delay	11	1	$3,800.00	$45,600
Level of Care/Nursing Delay	279	16	$60,800.00	$729,600
Physician Order Delay	3	0	$633.33	$7,600
Post Acute Care Transfer Delay	440	24	$91,200.00	$1,094,400
Regulatory Appeals Delay	99	6	$22,800.00	$273,600
Physician/Non-Physician Service Delay	179	10	$38,000.00	$456,000
Total	**1203**	**67**	**$254,600.00**	**$3,055,200**
Expense/Cost	**Number**	**Hourly Rate+1.3 Benefit**	**Hours Worked (Annual)**	**Annual Compensation Cost**
Patient Care Coordinator	1	$97.50	2080	$202,800
Total	**1**			**$202,800**
Balance/Final Savings	**Reduced Days/Month**	**Cost/ Avoidable Day**	**Reduced Costs/Year**	**Net Annual Savings**
30% Reduced Avoidable Days Less Annual Costs	20	$3,800	$912,000	$709,200
	34	$3,800	$1,550,400	$1,347,600

Note: Table created by author 9/2018.

Appendix Q

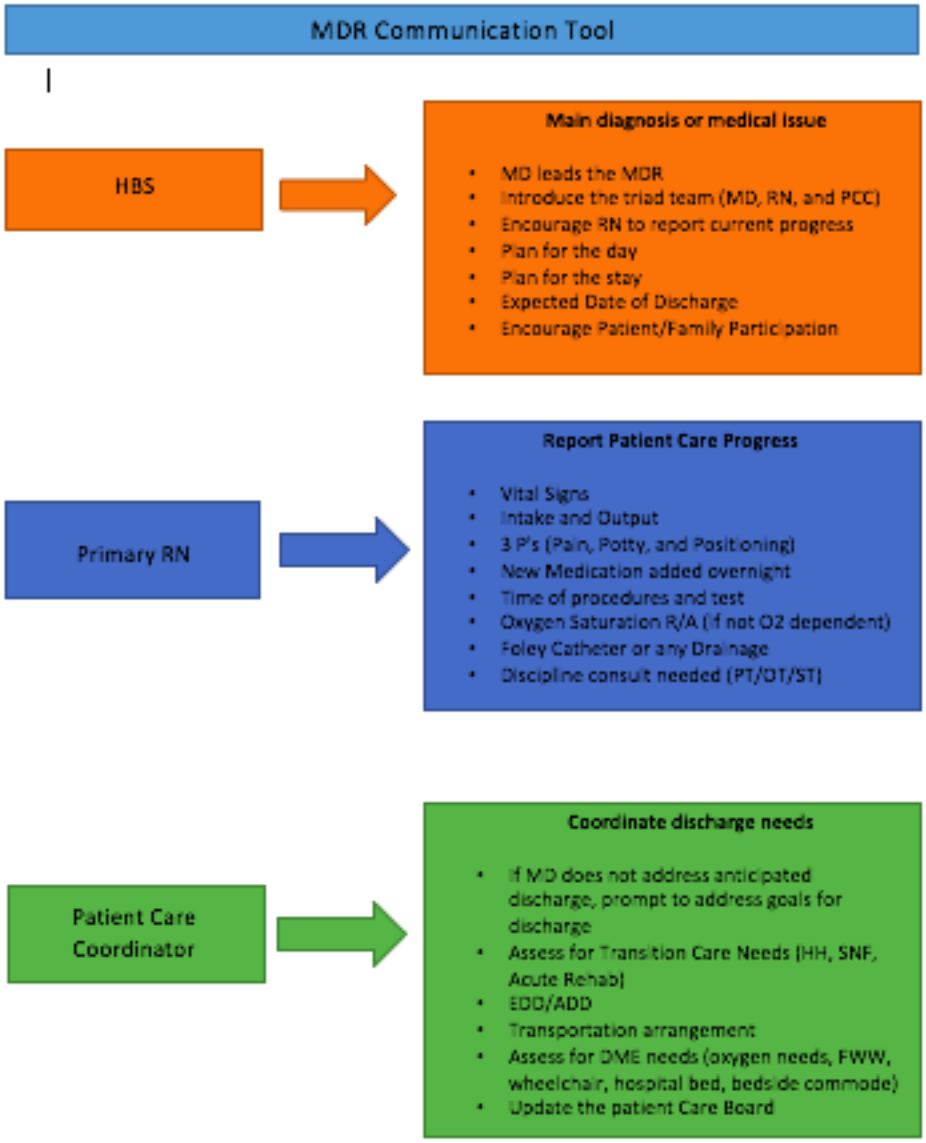
Standardized MDR Process Workflow



Note: Chart Adapted from Hospital Administration Resource Management Team.

Appendix R

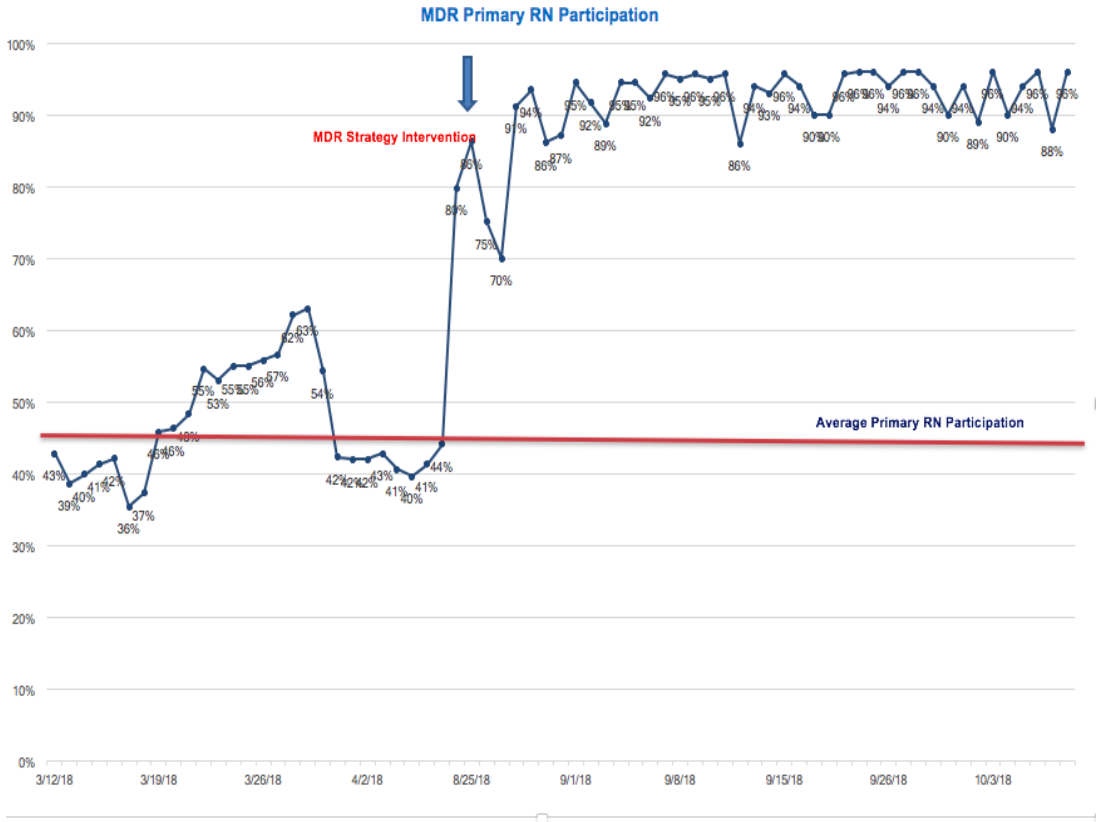
Standardize Communication Tool



Note: Pictorial created by author 8/2018.

Appendix S

MDR Primary RN Participation Post Implementation



Note: Chart created by author 9/2018.

Appendix T

Primary RN and Patient Care Coordinator Survey after Implementation

Questions	Yes	No	Primary RN	Patient Care Coordinator
How frequently does primary RN during MDR rounds lead to immediate orders? Ex: diet orders, pain medication order	✓		20 out of 20	20 out of 20
Do you believe that MDR rounding process is effective?	✓		20 out of 20	20 out of 20
Did the physician address plan for the day and goals for the day?	✓		20 out of 20	20 out of 20
Did the physician discuss to the patient and the team the plan for discharge?	✓		20 out of 20	20 out of 20
Do you feel MDR improve team communication and collaboration?	✓		20 out of 20	20 out of 20

Note: Table created by author 9/2018.

Appendix U

Cost Benefit Analysis

Cost Benefit Analysis Calculation
One Avoidable Inpatient Day=$3,800 Average Annual Avoidable Inpatient Day=804 days Average Monthly Avoidable Inpatient Day=67 days Patient Care Coordinator Annual Salary plus Benefits=$202,800 Projected Reduction avoidable inpatient day from 67 to 47=20 days=30% approximate reduction 30% x 804 x $3,800=$912,000-$202,800=$709,200 Return on Investment (ROI)=$709,200 per year

Note: Chart created by author 9/2018.