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Discharge Nurse Role Implementation: Improving Discharge Timeliness and Patient Outcomes

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Discharge Nurse Role Implementation:

Improving Discharge Timeliness and Patient Outcomes

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Section I: Abstract

Problem: The Discharge Nurse (DN) Role Implementation project aims to reduce the delay in the discharge process and patient length-of-stay. With the current microsystem discharge process, there are observed barriers to timely discharge related to various discharge tasks and interdisciplinary communication methods.

Context: This project was implemented in a metropolitan hospital within Northern California, on a unit that serves medical-surgical, oncology, and geriatric patients. There are 35 registered nurses (RN's), eight certified nursing assistants, one charge manager, one assistant charge manager, one clinical nurse leader, and four clinical nurse specialists (oncology).

Interventions: The intended aim of this project is to establish a discharge nurse (DN) onto the unit to act as a lateral integrator and coordinator in the discharge process, and incorporate an electronic discharge checklist to aid in communication and task accountability.

Measures: The success of this implementation would be measured by HCAHPS scores, discharge information and length-of-stay (LOS) data, and hospital-specific reports (HSR's) to determine readmission rates of the microsystem.

Results: Due to limitations with time and resources, this project was not implemented on the unit. However, the expected outcomes include a reduction in time between actual discharge time and time of discharge orders, improved patient satisfaction scores, and a reduction in readmission rates and hospital costs.

Conclusion: While the intervention could not be implemented, the data collected from this project supports the value and need for a DN on the unit in order to address the barriers to timely discharge that were identified.

Discharge Nurse Role Implementation: Improving Discharge Timeliness and Patient

Outcomes

The healthcare system today has demonstrated marks of progress in improving patient

care in several areas including, but not limited to, reductions in hospital-acquired infections,

improved hygiene practices, and reduced fall risk. While the quality of treatment at the bedside is

crucial to better health outcomes, our systems must also not neglect the importance of successful

and timely discharge to support such outcomes. Research has shown that delays in discharge

have led to increased inpatient complications such as hospital-acquired infections and even

increased mortality rate (Holland et. al, 2016).

Because the natural and historical emphasis of the nurse role is to focus on daily bedside

responsibilities, efforts to follow through with timely discharge tasks are made second-priority,

which hurts the follow-through of care for patients seeking to return home with optimal health

status (Pirani & Sabza, 2010). In addition to impacting the health outcomes of patients, the

discharge process has also damaged the satisfaction and work efficacy of staff. It has been

determined that inadequate training in discharge preparation and education has impacted the

performance of hospital staff, such as medical residents, as demonstrated by increased feelings of

anxiety and inadequacy around the task (Ackermann et. al, 2019). The discharge process often

lacks standardization that can lead to improved efficiency and is also very time-consuming,

leading to feelings of reluctance to take on the full and thorough responsibility of the discharge

process.

Delayed discharge also brings financial burden to the hospital. Increased length-of-stay

(LOS) for patients shows to be a large contributor to high hospital expenditures related to the

discharge process. Aside from increased operational costs related to poor patient flow, another

reason for this association is due to the increased adverse events (AE's) that patients are

susceptible to with longer stays in the hospital (Hauck & Zhao, 2011). Delays to discharge have

the potential to take up 9% of hospital costs and 10% of hospital days (Kim et. al, 2011). This

may add up to $2,455,703 per year in hospital cost related to discharge delays (Rojas et. al,

2018). Given the staggering financial and health impacts associated with discharge delays, this

project was initiated to address this gap in discharge process quality within the microsystem and

improve patient satisfaction and health outcomes.

Problem Description

Within our microsystem, discharges occur with an average frequency of two discharges

per day. The discharge process is first initiated by a physician order, which approves the

commencement of the process and also delegates various discharge tasks to interdisciplinary

team members. These tasks may include medication reconciliation by inpatient pharmacy,

medication teaching, physical therapy/occupational therapy consult, discharge teaching and plan-

of-care, and transport set-up. Coordination with the case management team is also integrated into

the process to fulfill any requests for home health services (e.g., physical therapy, occupational

therapy, and social worker-related services), finalize patient housing status, and address any

social support needs. Patients are often seen waiting for long durations for their discharge orders

to be completed and for transport to come pick them up. Other circumstances result in idle

waiting time between discharge tasks, leading the patient to stay additional days in the hospital.

According to the National Healthcare Quality and Disparity Report, the state of California

is far from benchmark in regards to patients receiving good communication and discharge

information. The most recent California quality indicator (2018) for poor discharge

communication and teaching is 11.6, while the benchmark values at 7.7, leaving the state with a

50.3% distance from the benchmark goal. (Agency for Healthcare Research and Quality, n.d.).

Poor interdisciplinary collaboration and patient preparation creates barriers to smooth discharge

that need to be addressed within California's microsystems.

Currently in our microsystem, there is no specific team member that is solely responsible

for the discharge process, such as a discharge nurse. The various discharge tasks are performed

by the healthcare team members that are involved in each case, and communications are fulfilled

through the hospital EHR. In order to evaluate the role of discharge nurse, some valuable metrics

within the project's microsystem related to discharge include admission criteria, length-of-stay

data, EHR discharge timestamps, readmission rates, and HCAHPS scores. These metrics are

significant to providing insight on the discharge process and its effectiveness of the discharge

nurse role within the microsystem.

Available Knowledge

The PICOT question formed for this project asks, "In medical-surgical patients in a large

metropolitan hospital (P), how does implementing a new role of discharge nurse and

supplemental discharge checklist (I) compared to not adding a new role of discharge nurse and

checklist (C) affect average length of stay (O) within 6 months (T)?" To address this question

with evidence-based research, we utilized the following research databases: CINAHL Complete,

PubMed, DynaMed, and Cochrane Database of Systematic Reviews. Some keywords that were

used include *discharge protocol, patient discharge, discharge management, lateral integration,*

delayed discharge, discharge barriers, length-of-stay, quality improvement, discharge efficiency,

and discharge coordinator. Six articles were selected based upon relevance to the topic of

discharge barriers and implementation of a discharge coordinator/EHR discharge checklists.

These articles were evaluated using the Johns Hopkins Nursing Evidence-Based Practice

Research Evidence Appraisal tool (Dang & Dearholt, 2018).

       The implementation of a discharge coordinator has been applied in previous

microsystems including, but not limited to, pediatrics, ICU, and emergency department. Within a

critical care unit (CCU), a study done by Logsdon & Little (2020), indicated that the

establishment of a discharge coordinator increased timely discharges before noon by

approximately 13% in comparison to after noon. The responsibilities assigned to the discharge

coordinator include managing a standardized discharge checklist, providing any relevant

education, and preparing home care/social/financial needs alongside case management and the

social worker. Qualitative data was also gathered to reveal that patient and family understanding

of teaching improved, as well as positive feedback from staff regarding perception of discharge

efficiency. Additionally, results showed a decrease in patient LOS. Chaboyer, et. al (2004) and

Petitgout (2015) also collected similar results from the implementation of a discharge liaison in a

unit-based setting in regards to improved staff perceptions and involvement in the discharge

process as it related to the support and collaborative effort the discharge liaison nurse provided.

       A study done on a unit that served an elderly patient population implemented discharge

management protocols in efforts to reduce rehospitalizations and institutionalizations (Steeman,

et. al, 2006). Being that the geriatric population is more at risk for such outcomes after

discharge, this study demonstrated that the specified delegation of leadership to a social worker

or social work department nurse established as discharge manager helped to improve geriatric

patient outcomes and enhance plan-of-care. Steeman, et. al (2006), however, did suggest that the

scope of a geriatric specialist or clinical nurse may result in better understanding of the patient

population and provision higher-quality patient teaching. This insight into discharge

management for the geriatric population and the further recommendation to involve clinical nurse roles into the process builds a foundation to the project we will implement in our medical-surgical/geriatric unit.

In supplementation to the discharge nurse coordinator role, a literature review has also been done on standardized discharge checklists in various hospital settings. Buckler, et. al (2017) implemented a standardized discharge process protocol for the microsystem's electronic medical record (EMR) and cross-population of team notes/status updates. Their findings consisted of lower mortality rates among patients, LOS data, and improved HCAHPS scores and bed turn-over time. Similarly, a discharge checklist was established and evaluated in a pediatric acute care cardiology unit (PACCU) to standardize discharge criteria and ensure timely documentation of tasks. The results included decreased patient LOS and reduced medical charges related to delays in discharge (Madsen, et. al, 2021).

Rationale

The conceptual framework that will shape this project is Chaos Theory, which presents the idea that an organization too rigidly structured may ultimately fall apart, due to the natural progression toward organizational disorderliness (Fragouli, 2016). Most processes within an organization are complex and non-linear, often relying on multi-faceted flows of operation. In order to adapt successfully to the unpredictable nature of certain processes, an organization must be equipped to respond well to change. Instead of establishing more rigid operations, the Chaos Theory prioritizes adaptability and autonomy of the team members while putting emphasis on pattern recognition, relationship development, and alignment of purpose in order to optimize the natural flow of operations. While the discharge process is characteristic to having unpredictability in regards to timeliness and task requirements, it is beneficial to incorporate the

principles of Chaos Theory into this project in order to appropriately develop the role and responsibility of DN in the microsystem as it relates to streamlining discharge. The implementation of a DN can aid in coordinating operations among team members, and serve as an adaptable center for communications for the ever-shifting discharge process.

The role of the clinical nurse leader (CNL) offers itself as an ideal candidate for the DN, as it relates to the function of a lateral integrator for the microsystem's healthcare team. The CNL is a masters-prepared nurse equipped in management, finance, leadership, and quality improvement skills developed by the American Association of Colleges in Nursing (AACN). One of the responsibilities of a CNL is to oversee care operations among the entire healthcare team. Their role is unique to other nurse manager roles because their scope of practice places them as a bridge between manager and clinician. As a lateral integrator, the CNL coordinates care and communication between interdisciplinary members and aids in the direct care of patients at the bedside as needed by the team (Begun & White, 2006). Lateral integration of care will be a key strength to the development and execution of the DN, and recruitment of a CNL as DN will best direct the intervention toward our discharge goals.

Specific project aim

The specific aim for this project is to reduce discharge delays and length-of-stay of medical-surgical/oncology patients through the implementation of a discharge nurse and discharge checklist by the end of six months.

Section III: Methods

Context

For this project implementation, we will be studying discharge outcomes on a medical-surgical, oncology, and geriatric specialized unit in a metropolitan hospital in Northern

California. As indicated by the unit description, there are three common patient populations.

Medical-surgical patients often present with common diseases such as pneumonia, appendicitis,

etc., oncology patients visit this unit for chemotherapy treatment, and the geriatric patients that

are admitted often come for medication management or are awaiting placement into a care

facility. This variety in treatment and patient demographic implies that there is prevalent

diversity in the types of discharge that occur in this microsystem. The unit is staffed with 35

registered nurses (RN's), eight certified nursing assistants, one charge manager, one assistant

charge manager, one clinical nurse leader, and four clinical nurse specialists (oncology). After

gathering data from staff, it is found that the average LOS on this unit is seven days and the

average number of discharges and admissions per day is two each. Aside from bedside care,

admissions and discharges are frequently large tasks that occur on this unit. Discharges occur

usually later in the day and often are executed in a disorganized and frantic manner. There is a

common demonstration of the inability to enforce the process and expectations of discharge

among all levels of care, which contributes to the delays that occur for this microsystem.

Time-Motion Study

A time-motion study was performed on the unit and the process of discharge was

observed by our quality improvement team in the effort to improve the discharge process and

patient outcomes. Data on the components of the discharge process and timestamps of tasks were

collected from the hospital's electronic medical record (EMR) and accumulated in an Excel

spreadsheet. Team members also observed the discharge process on the floor and collected

qualitative data in regards to discharge tasks such as medication teaching and patient belonging

retrieval. This time-motion study was executed between August 30th, 2021 and October 30th,

2021, with a total of twenty patients that were discharged. Some patients that were excluded

from the data include patients that were admitted into the ED, but never transferred to the unit of

study, and patients that were admitted but had indeterminate discharge times. Data that was

collected from the EMR include patient diagnosis, discharge order time (time that the physician

first entered the discharge order into the EMR); actual time of discharge; pharmacist, physical

therapist and case management consultations, and homeless status upon discharge.

Staff Interviews

Staff interviews were also performed to gather qualitative feedback on their perception of

the current discharge process and perceived barriers associated with discharge delays. This was a

random selection, however our aim was to interact with as many interdisciplinary team members

involved in discharge as possible. The professionals that we encountered include two case

managers, three registered nurses, one inpatient pharmacist, and one charge nurse. Questions that

were inquired about included role identification in regards to the discharge process, description

of discharge responsibilities, perceived barriers to discharge, and perceived benefits to

implementing a DN role in the microsystem.

A root-cause analysis (RCA), as displayed by a fishbone diagram (Appendix C) was

performed post-data collection to determine all areas of impact in regard to discharge timeliness.

Data taken to complete the RCA include the admission and discharge process and provider/staff

interviews.

A SWOT analysis was conducted to determine the feasibility of implementing the quality

improvement intervention (Appendix B). It was concluded that the hospital could successfully

implement the DN intervention given the availability of government grants, the microsystem's

goal of holistic care, and the strength of the specialty staff on the unit in relation to the particular

patient population at hand. These factors will contribute to the onboarding of the DN role intervention.

Ethical Considerations

This project has been approved as a quality improvement project by faculty using QI review guidelines and does not require IRB approval.

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Section IV: Results

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In producing the RCA fishbone diagram, several factors were identified that contributed to discharge delays, including poor interdisciplinary communication practices, insufficient timeliness for EMR order updates, poor EMR interface for easy access to all discharge documents, lack of accountability among team members regarding timeliness of tasks, improper tracking of patient belongings, and missing or inappropriate assignment of transport equipment for each discharge. A big factor in the delays of discharge was idle waiting time in relation to task handoff or pre-authorization necessities for certain procedures.

For insight into our quality improvement implementation, continuous observations, and admissions and LOS data provide insightful guidance for the direction of work for planned discharges. Pertinent to this project, meeting the criteria for admission is indicative of appropriate LOS and, consequently, effective and efficient discharge process. Some units such as cardiac intensive care unit, with cardio thoracic surgical team, neurosurgical, vascular and ENT surgical teams all met the criteria 100% of the time during the months of September 1st, 2021 to November 1st, 2021 . That indicates that critical care patients with a clear singular diagnosis, plan of care and discharge placement meet criteria in a predictable manner.

On general medical surgical wards (Table 1) not one team met the criteria in the same time period. For example, of six medicine teams, only 59% were meeting criteria. That means that in nearly 60% of the time these patients should not be admitted into the hospital.

Criteria for Hospitalization Among Med Teams 1-6

Treating Specialty	Review Type	Number Meeting Criteria	Number NOT Meeting Criteria	Total	% Meeting Criteria	% Not Meeting Criteria
MED TEAM 1	Adm	20	20	40	50.00%	50.00%
MED TEAM 2	Adm	21	16	37	56.76%	43.24%
MED TEAM 3	Adm	20	16	36	55.56%	44.44%
MED TEAM 4	Adm	24	13	37	64.86%	35.14%
MED TEAM 5	Adm	27	20	47	57.45%	42.55%
MED TEAM 6	Adm	4	2	6	66.67%	33.33%

Table 1. Med Teams 1-6 demonstrate meeting admission criteria only by 50-60% of the time. This indicates error upon admission qualification, which affects patient LOS and appropriate discharge process as a result.

In addition, all of the surgical patients except those in the vascular treatment specialty who were receiving care on medical surgical teams also failed to meet admission criteria, though to a lesser degree (Table 2). The percentage of meeting criteria for admission among the treating specialties ranged from 0%-95.83%, however most percentages fell between 50%-80%.

Criteria for Hospitalization Among Treating Specialties

Treating Specialty	Review Type	Number Meeting Criteria	Number NOT Meeting Criteria	Total	% Meeting Criteria	% Not Meeting Criteria
ORAL SURGERY	Adm	4	1	5	80.00%	20.00%
ORTHO-SURG	Adm	46	2	48	95.83%	4.17%
PLASTIC SURGERY	Adm	1	1	2	50.00%	50.00%
SURG(GEN)	Adm	19	11	30	63.33%	36.67%
SURG(GEN) TCU	Adm	3	3	6	50.00%	50.00%
SURG(GEN) TELE	Adm	0	1	1	0.00%	100.00%
SURG(VASC)	Adm	12	2	14	85.71%	14.29%
VASCULAR	Adm	1	0	1	100.00%	0.00%

Table 2. Treating teams demonstrate meeting admission criteria only by an average of 50-80% of the time.

Average LOS data also shows a drastic departure from interqual criteria, which further

indicates inadequate discharge planning. For example, the average LOS for patients with type 2

diabetes mellitus with diabetic peripheral angiopathy and gangrene is 15 days, where the

criterion for appropriate LOS values at 12 days. The average LOS for hypertensive heart and

chronic kidney disease with heart failure and stage 1 through stage 4 chronic kidney disease, or

unspecified chronic kidney disease is nine days versus the interqual criteria of 3 ½. These are a

few examples of extended length of stay signifying failure to progress to discharge due to a

variety of reasons.

The discharge planning process itself is significantly longer than established guidelines.

Despite the hospital protocol requiring discharges to occur prior to 11am, on average only 20%

of discharges occur in that time frame. 50% of discharges occur between 1pm – 5pm and the

remaining discharges occur after 5pm. The average discharge time from the physician's order to

patient exit is six hours, complicated by various discharge arrangement plans. Medications,

prosthetics and rehabilitative services (home occupational, physical and speech therapy) takes an

average of four hours to arrange, transportation is delayed between two to four hours due to

variable transportation scheduling with OWEL transport company and a host of other

complications such as incomplete or inappropriate orders, errors or duplications in medication

orders, prescription of non-formulary medications, additional tests ordered and delayed,

rehabilitation evaluation incomplete further delay discharge.

Implementation

Given this data, there is support for the implementation of the DN role and discharge

checklist. Due the time constraints and barriers to onboarding, we were not able to implement

this project onto the unit. However this would be our hypothetical implementation plan

according to the data we collected regarding the gaps we found in discharge planning and

process.

Two components are sought to be implemented to address the delays in discharge in this

microsystem. The first component consists of standardizing an electronic discharge checklist

within the EMR. The discharge criteria will include alerts for discharge-related orders and

interdisciplinary status notes that cross-populate to all fields where each team member can access

and stay up to date. This allows for faster communication practices and establishes a central hub

for all involved staff members to see the tasks that have been completed or are still awaiting

completion. Some factors to address upon establishing this checklist include accounting for the

logistics of updating the EMR software, financial considerations regarding technical/IT

maintenance and software updates, and ensuring program compatibility. Lastly, we will need to

evaluate readiness to use this new technology and gather departmental buy-in across units. This

will require educating staff and leadership, establishing training and practice sessions to increase

comfortability with the software updates, and continuous collection of staff feedback regarding

its use.

The second component to this quality improvement project will be to implement a

discharge nurse role and establish the scope of practice so that it integrates well with current staff

processes. Some factors to consider for this implementation include funding for the position and

support for the hiring process. To ensure that the implementation is substantial and long-standing

for adequate evaluation of the intervention, we would aim to secure funding for at least five

years, with continuous tracking of performance to justify funding per year. The hiring interview

process would be executed by a team of departmental heads involved in discharge, including

pharmacy, transport, case management, nursing, etc.

The intervention timeline for the DN role integration will span a minimum of three years. In the first PDSA cycle, the initial eight weeks will consist of the new DN shadowing each department involved in the discharge process, including pharmacy, case management, transportation, etc. In weeks 9-24, the DN will begin collecting data related to improving the discharge process. Weeks 25-32 will involve the analysis of data, identification of needs for support or improvement, and development of these changes (including the onboarding of the EMR discharge checklist). In week 33-48, the DN will implement the newly formulated protocol related to their role in discharge and initiate the process of collecting data on the outcomes of the protocol. Weeks 49-52 will involve analysis of the DN protocol outcome data and further recommendations in improving the discharge DN protocol within the microsystem. The second year will be the initiation of the second PDSA cycle and implementation of new adjustments to the protocol. Each following PDSA cycle will span 16 weeks to allot for opportunities to adjust the DN role and discharge protocol. By the third year of implementation, the DN role will continue to cycle several PDSA's to further enhance the role and its impact on the discharge process. We will perform cost analysis of the DN role and justify funding as needed.

If these interventions were implemented into our microsystem, we would expect to see an overall reduced discharge process time related to several factors. The discharge checklist and DN role will improve communication practices and habits among interdisciplinary staff as it relates to better EMR functions and collaborative support by the DN. We would also see an increased positive perception of the discharge process by staff in correlation to the increased feeling of support and readiness to fulfill tasks. As a result of these interventions, we would also see decreased LOS for patients in the medical-surgical population, as well as decreases in discharge delays from the time the discharge was ordered to the time the patient actually left. The ultimate

goal would be to see improved patient outcomes as it relates to lower readmission and institutionalization rates of discharged patients.

Cost Analysis

Because we were not able to implement this project on our unit, a literature review was performed to estimate the cost analysis of the DN role implementation and determine its financial justification. First we will discuss the determined costs of delayed discharge. Thomas, et. al (2005) determined that an average estimate for costs related to delayed discharge can value at $2,455,703, depending on microsystem. In California, the average hospital cost per day is $3,726, with the average discharge delay to be approximately six additional hospital days (Rojas, et. al, 2018). In our microsystem, it is reported that an excess hospital day takes an extra $300 in added costs if care is not warranted. According to the outcomes of the study done by Petitgout (2015), implementing a discharge coordinator decreased the average patient LOS by approximately 1.5 days. If this outcome were to be carried out on our unit, the hospital would save an average of approximately $5,000 per discharged patient. With an average number of discharges on our unit being two, implementing a DN may potentially save $10,000 a day, and $3,650,000 a year. Given this large amount of cost savings, it would be hypothetically justified to preserve the role of DN on the unit and continue funding the implementation.

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Section V: Discussion

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Evaluation

In order to determine the success of our interventions, we would intend to collect feedback from patients on perception of the discharge process and understanding of discharge teaching through patient surveys given toward the end of their hospital stay. Patient satisfaction would also be evaluated through obtaining HCAHPS scores. These measures will help inform

patient outcomes and satisfaction after implementation. Staff surveys would also be handed out

to gauge attitudinal changes and comfortability with the discharge process after implementation

of the DN role and discharge checklist. Quantitative outcomes include gathering data on rates of

readmission, discharges before noon, and comparing LOS data to standard hospitalization/LOS

criteria. This data will determine the effectiveness of the implementation in improving the

discharge process financially and practically.

Discussion

While we were unable to implement our DN intervention, this study offered valuable data

in regards to understanding the correlation between the discharge process and overall patient

outcomes. Not only is the effectiveness and appropriateness of discharge impactful to the health

of the patient, but also affects hospital budgeting and staff workflow. Although the change was

not conducted, it would be beneficial to consider implementing more time for training and

educating staff on the role of DN to ensure smooth and appropriate integration of that role into

the discharge process. Barriers to integration that can be foreseen include inadequate education

of staff and uncertainty around the role of DN. Since the optimization of the DN role as a lateral

integrator and support depends on the acceptance and comfortability of staff members, it will be

crucial to allot adequate time and effort into the training and onboarding phases of the

intervention. The duration of training and teaching would be evaluated and adjusted in future

PDSA cycles once this project can be implemented.

Nursing Relevance

While this project focused on implementation of the DN role and reducing discharge

delays, the ultimate purpose is to improve patient outcomes as it relates to readmission rates and

hospital-acquired complications that could arise with delayed and un-standardized discharges.

This project reflects the nursing principle of beneficence in that the goal of quality improvement is to provide the best form of care to the patient and prioritize their health and best interest. The discharge process is not isolated to the later portion of a patient's care; instead it begins at the time of admission and persists throughout one's visit to the hospital. The overall intent of the discharge process is to prepare the patient to leave the hospital with the proper preparation and plan of care. Therefore, it is important to ensure that the process is thorough, efficient, and executed well by the interdisciplinary team.

CNL Relevance

The discharge nurse's role is intended to bridge the gaps in care and communication when it comes to the discharge process. Being that the discharge process is complex and multi-faceted, it is highly beneficial to implement a role that helps to coordinate tasks, communication, orders, and ensure adequate teaching and support for patients. The discharge nurse role reflects a core characteristic of CNL's as a lateral integrator. The CNL is trained and educated in leadership and management, as well as equipped to evaluate processes on the system level, which is necessary for the DN role as it aims to evaluate the discharge process and coordinate care in a streamlined fashion for the enhancement of patient outcomes and microsystem processes.

The CNL also works to prioritize quality improvement within their microsystem, which will influence the execution of their role as DN as they seek to improve the discharge operations and identify gaps and barriers to efficient processes. The DN must know how to evaluate the systems, gather and analyze data, and make recommendations for interventions that may improve the current operation. Additionally, the DN must know how to communicate, educate, and disseminate findings to the team members they work with, so as to increase engagement and

support for interventions that desire to be implemented. The role of the CNL reflects these

qualities in leadership, collaboration, and quality improvement that will prove helpful in

developing and executing the DN role.

Future Directions

The goal for this project is to determine the effectiveness of the DN role and discharge

checklist in reducing discharge delays and improving patient outcomes. Should substantial

evidence support the effectiveness of the intervention, we would implement the DN role into

various other microsystems within the hospital and study how successful the role is implemented

among other patient populations and complex discharge plans. The standardization of the DN

role may help to incorporate the CNL into microsystems on a more expansive level, in which the

healthcare system of today may begin to identify the CNL role as essential to its function and

provision of care.

Section VI: References

Ali Pirani, S. S. (2010). Prevention of Delay in the Patient Discharge Process. *Journal For Nurses in Staff Development (JNSD), 26* (4), E1-E5. doi: 10.1097/NND.0b013e3181b1ba74.

Begun, J. W., Tornabeni, J., & White, K. R. (2006). Opportunities for improving patient care through lateral integration: The clinical nurse leader. *Journal of Healthcare Management*, *51*(1), 19–25. https://doi.org/10.1097/00115514-200601000-00005

Buckler, L. T., Teasdale, C., Turner, M., Schadler, A., Schwieterman, T. M., & Campbell, C. L. (2017). The patient-centered discharge—an electronic discharge process is associated with improvements in quality and patient satisfaction. *Journal for Healthcare Quality, 39*(3), 136–143. https://doi.org/10.1111/jhq.12091

Chaboyer, W., Foster, M., Kendall, E., & James, H. (2004). The impact of a liaison nurse on ICU nurses' perceptions of discharge planning. *Australian Critical Care, 17*(1), 25–32. https://doi.org/10.1016/s1036-7314(05)80047-5

Dang, D., & Dearholt, S. L. (2018). Johns Hopkins nursing evidence-based practice: Model and guidelines (3rd ed.). Theta Tau International

Fragouli, E. (2016). Leading Business Organizations in the Global Era: Decision Making in Chaos and Crisis Situations. *Journal of Economics and Business*, *19*(2).

Hauck, K. & Zhao, X. (2011). How Dangerous is a Day in Hospital?. *Medical Care, 49* (12), 1068-1075. doi: 10.1097/MLR.0b013e31822efb09.

Holland, D. E. , Pacyna, J. E. , Gillard, K. L. & Carter, L. C. (2016). Tracking Discharge Delays. *Journal of Nursing Care Quality, 31* (1), 17-23. doi: 10.1097/NCQ.0000000000000141.

Kim, C. S., Hart, A. L., Paretti, R. F., Kuhn, L., Dowling, A. E., Benkeser, J. L., & Spahlinger, D. A. (2011). Excess hospitalization days in an academic medical center: perceptions of hospitalists and discharge planners. *The American journal of managed care*, *17*(2), e34–e42.

Logsdon, K. D., & Little, J. M. (2020). Evaluation of Discharge Coordinators and their effect on discharge efficiency and preparedness. *Journal of Pediatric Health Care, 34*(5), 435–441. https://doi.org/10.1016/j.pedhc.2020.04.008

Madsen, N. L., Porter, A., Cable, R., Hanke, S. P., Hoerst, A., Neogi, S., Brower, L. H., White, C. M., & Statile, A. M. (2021). Improving discharge efficiency and charge containment on a pediatric acute care cardiology unit. *Pediatrics, 148*(3). https://doi.org/10.1542/peds.2020-004663

National Healthcare Quality and Disparities Reports, California Benchmark Details. Agency for Healthcare Research and Quality. (n.d.). Retrieved December 9, 2021, from https://nhqrnet.ahrq.gov/inhqrdr/California/benchmark/table/All_Measures/All_Topics#far.

Petitgout, J. M. (2015). Implementation and evaluation of a unit-based discharge coordinator to improve the patient discharge experience. *Journal of Pediatric Health Care*, *29*(6), 509–517. https://doi.org/10.1016/j.pedhc.2015.02.004

Rojas, G. A., Turner, S., Pizzo, E., Hudson, E., Thomas, J., & Raine, R. (2018). Impact and experiences of delayed discharge:A mixed-studies systematic review. *Health Expectations*, *21*(1), 41–56. https://doi.org/10.1111/hex.12619

Steeman, E., Moons, P., Milisen, K., De Bal, N., De Geest, S., De Froidmont, C., Tellier, V., Gosset, C., & Abraham, I. (2006). Implementation of discharge management for Geriatric Patients at risk of readmission or institutionalization. *International Journal for Quality in Health Care, 18*(5), 352–358. https://doi.org/10.1093/intqhc/mzl026
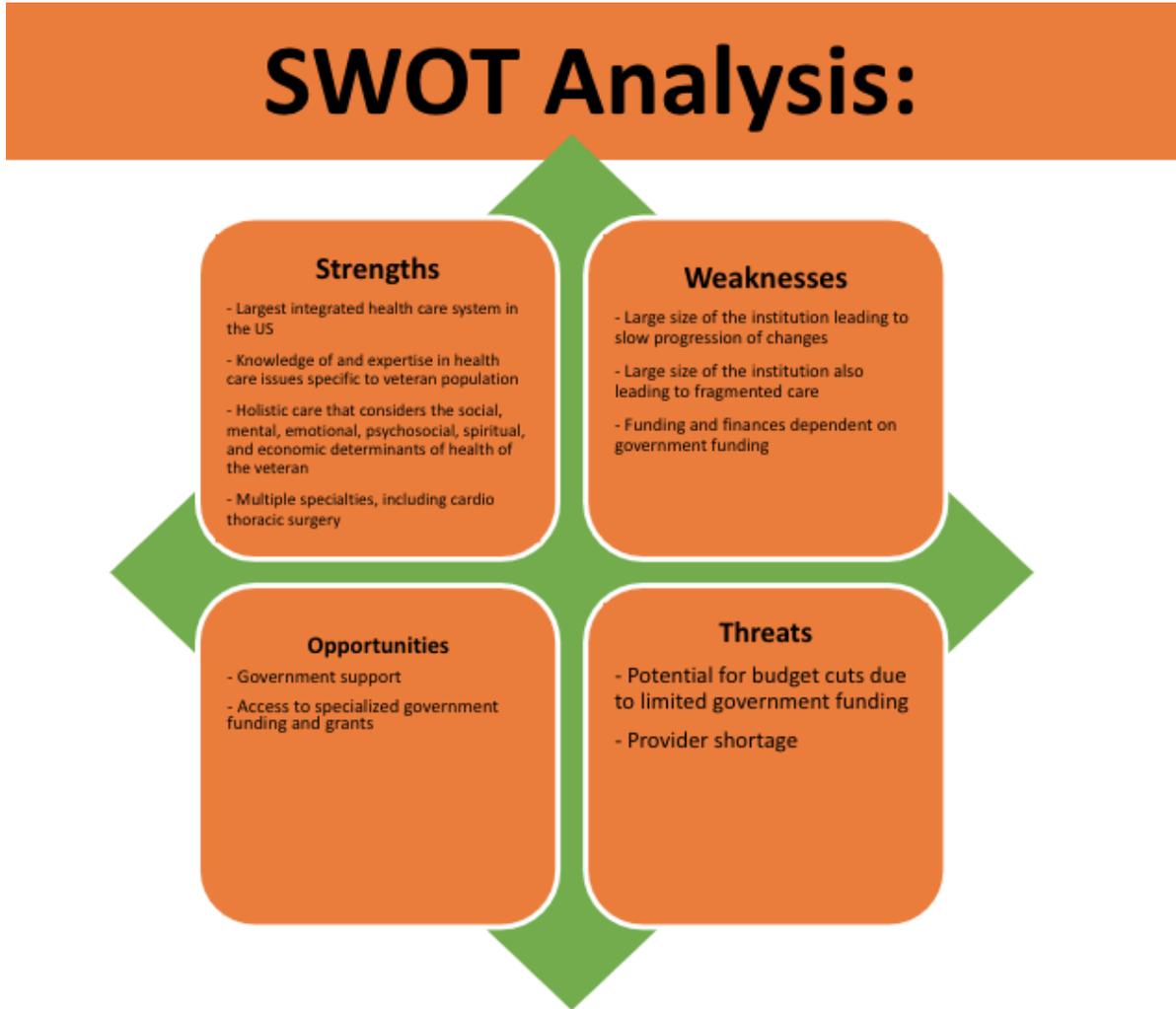
Thomas, S. N. , McGwin, G. & Rue, L. W. (2005). The Financial Impact of Delayed Discharge at a Level I Trauma Center. *The Journal of Trauma: Injury, Infection, and Critical Care, 58* (1), 121-125. doi: 10.1097/01.TA.0000130611.64983.A7.
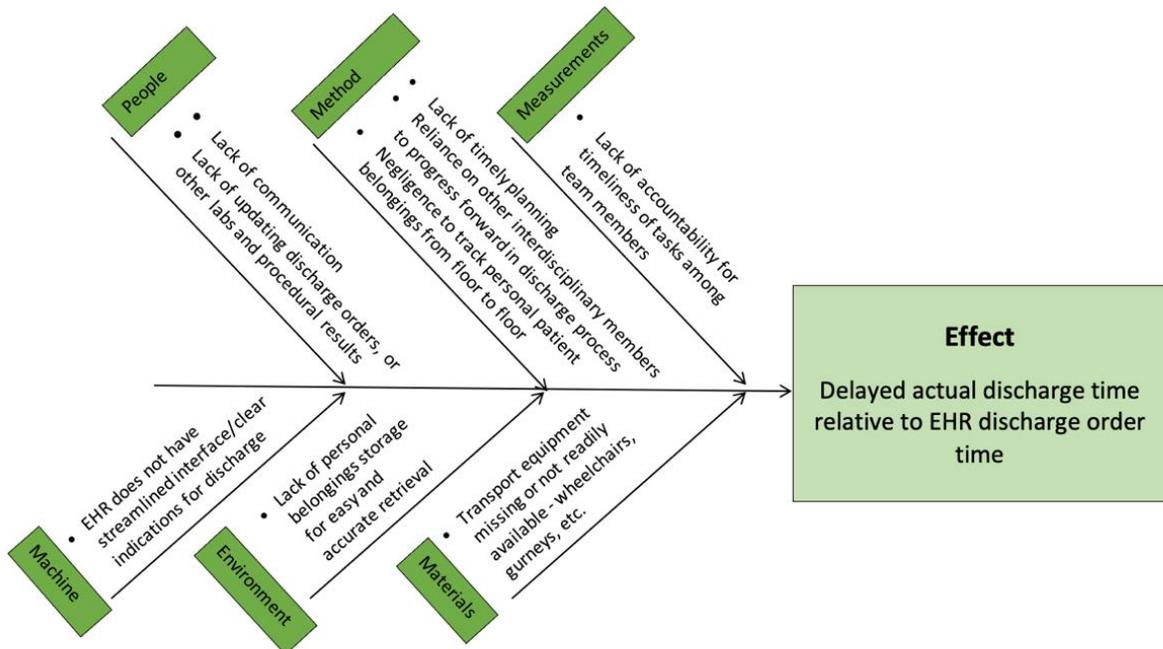
Section VII: Appendices

Appendix A: Staff Interviews

Position	Perceived barriers to D/C	Perceived benefits of D/C nurse
Case Manager	- Coordinating services for home health - Coordinating patient LOS with case management in relation to when to put in order for HH services	NA
Case Manager	- Limited family/social support - Housing status - Drug issues - Cognitive impairment	NA
RN	- Med team communication - Meds take the longest, minimum 2H - Transport issues (too early/too late)	- Would be helpful but [d/c is] one of the easier things to do, and NAs can help w d/c
RN	- Med delivery to bedside may take up to two hours - New meds ordered causes delay in med reconciliation - Transport type in d/c order is not appropriate - Transportation, but usually comes within 30 min of requested time - Inadequate f/u of lines & dressings - Gathering belongings - Inadequate clothing during time of d/c; coordinate with social worker/family member to obtain clothes or last resort provide paper gown	- "It might work, I don't know"
Pharmacist Intern	- Changes to meds during med reconciliation - Communication issues between provider	NA
Discharge Pharmacist	-Communication delays and long response times from any member of the team involved in discharge -Meds aren't on formulary -The discharge meds note doesn't match the orders -Clarification or signature needed but Dr. is in surgery -Patient wasn't aware they were supposed to be leaving -Patient has questions or requests med changes/refills during med consultation -Outpatient medication delivery is busy or delayed -Med order done, but note not signed -Technical issues/equipment failures -Patient relocation -Controlled substances (e.g., opioids) can complicate delivery	NA
RN	- Pharmacy slow - Missing instructions to d/c IV line or foley - System does not have good alerts to notify staff of DC orders in real time; must refresh page constantly	NA
CN	- Belongings - often lost and delays process - Miscommunication with transport - Line or foley needs to be accounted for: 1) discontinuing it requires physician order 2) if need to take home, social worker must coordinate line maintenance services (e.g. home care, outpatient appts, etc.)	NA

Appendix B: SWOT Analysis

SWOT Analysis:

Strengths

- Largest integrated health care system in the US

- Knowledge of and expertise in health care issues specific to veteran population

- Holistic care that considers the social, mental, emotional, psychosocial, spiritual, and economic determinants of health of the veteran

- Multiple specialties, including cardio thoracic surgery

Weaknesses

- Large size of the institution leading to slow progression of changes

- Large size of the institution also leading to fragmented care

- Funding and finances dependent on government funding

Opportunities

- Government support

- Access to specialized government funding and grants

Threats

- Potential for budget cuts due to limited government funding

- Provider shortage

Appendix C: Root Cause Analysis/Fishbone Diagram

Appendix D: PDSA

- DN beginning their position and forming an interdisciplinary team to create the checklist

Plan

- DN will implement the checklist and begin tracking and intervening in discharges

Do

Act

- Changes will be implemented, and a new cycle will begin

Study

- DN will start collecting data after implementation, and will use that data to analyze whether or not changes are necessary

Appendix E: Patient Survey Sample

	Never	Sometimes	Usually	Always
Your responses are very important to us and help shape the care we provide. Thank you for your time!				
Responsiveness of Nursing Staff:				
How often did nurses treat you with courtesy and respect?				
How often did nurses listen carefully to you?				
How often did nurses explain things in a way you could understand?				
After you pressed the call button, how often did you get help as soon as you wanted it?				
How often did you get help in getting to the bathroom or in using a bedpan as soon as you wanted?				
Communication about medications:				
Before giving you any new medicine, How often did hospital staff tell you what the medicine was for?				
How often did hospital staff describe possible side effects in a way you could understand?				
Discharge Information:				
Did doctors, nurses or other hospital staff talk to you about whether you have the help you needed when you left the hospital?				
Did you get information in writing about what symptoms or health problems to look out for after you left the hospital?				
Care Transition:				
Staff took my preferences and those of my family or caregiver into account in deciding what my health care needs would be upon discharge.				
I have a good understanding of the things I am responsible for in managing my health.				
I clearly understand the purpose for taking each of my medications				

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