

IMPLEMENTATION OF A STANDARDIZED WORKFLOW FOR THE DISCHARGE OF
PATIENTS WHO ARE HOMELESS AT A TERTIARY MEDICAL CENTER

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Dedication

This project is dedicated to my husband, Alex. Thank you for carrying me through this experience. Your support and commitment to my success was the guiding light I needed on the most difficult of days.

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I would like to acknowledge Caryn Hilmes and Ashley Shearer for their sincerity, kindness, and collaboration on this project. Thank you for bringing this project to my attention and trusting me to facilitate its implementation. Throughout this experience, I have been in awe of your ability to navigate the healthcare system and advocate for change. Your work improves the lives of houseless individuals, and I can't think of more capable hands to tackle the crisis. Thank you for being champions for our most overlooked and stigmatized members of society.

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Abstract

Background: Individuals who are homeless are at risk for poor health outcomes. This population often triages their baseline needs over their medical conditions. As a result, minor conditions evolve into critical health events requiring acute medical care and readmissions. This is followed by increased rates of acute medical care usage and mortality in homeless patients. Hawaii has one of the highest rates of homelessness in the country, with 60% treated primarily at a tertiary medical center (TMC) in urban Honolulu. Resulting in an excessive and partially preventable expense for both the TMC and the state's Medicaid program. Due to this pattern and recent legislation passed in California addressing this issue, the Healthcare Association of Hawaii (HAH) has collaborated with community partners to develop a standard of care for the discharge of homeless patients to the community. **Aim:** The goal of this project was to integrate HAH's community standards of care into a standardized approach for the discharge of homeless patients from an emergency department observational unit at the TMC. This was accomplished through a collaborative effort to develop an EMR template (workflow) that met HAH's guidelines and improved staffs' efficacy in identifying and addressing biopsychosocial deficits impacting the health stabilization of homeless patients returning to the community. **Method:** Project volunteers' attendance to the workflow training were recorded. The number of homeless patients admitted to the unit, their identified biopsychosocial needs and the volunteers' ability to meet these needs were recorded. **Results:** Fifty-seven percent of volunteers were trained to utilize the workflow. One hundred percent of homeless patient encounters utilized a workflow, identified at least four biopsychosocial deficits, and addressed every deficit identified. **Discussion:** It is inconclusive if the training was necessary for the use of the workflow. Volunteers were efficient in completing workflows and addressing identified needs. As

evidenced by this project, this population exhibited high rates of deficits requiring attention for proper healthcare maintenance post-discharge.

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Introduction

The substantial number of individuals and families experiencing homelessness in Hawaii has driven legislative and community partnerships to improve outcomes for this high-risk population. In 2018, Governor David Ige signed Act 209 (18), *Relating to Homelessness*, which recognized Hawaii's growing homeless population and associated risk factors. This bill was developed to provide funding and wrap-around programming to address the biopsychosocial barriers experienced by this populace. A significant focus of this bill was to reduce the overutilization of acute medical care services resulting from the status (or condition) of homelessness. Through this bill, healthcare organizations received funding to expand their scope of care to community-based interventions, such as intensive case management, community partnerships, and medical respite homes. As healthcare in Hawaii moves towards a broader spectrum of care, patient interactions at every level will require a holistic approach to address needs extending beyond the hospital. This paper outlines the development and integration of a workflow which assisted medical personnel in identifying and addressing the needs of homeless patients to meet community standards of care during the discharge process at a Tertiary Medical Center (TMC).

Problem: Healthcare Utilization Patterns in Patients who are Homeless

The United States Department of Housing and Urban Development (HUD) (2020) annual Point-in-Time (PIT) Count for 2019 determined 567,715 individuals were considered homeless in the nation. Although an overall decline (-12.3 %) in homelessness has occurred since 2007, numbers have risen over the past three years of the PIT Count (2017-2019) (p. 9). HUD (2020) attributes the most recent (2019) annual increase to a higher percentage of unsheltered homeless counted and rising numbers of chronically homeless. Furthermore, HUD (2020) notes the

majority of growth was localized in California, which, observed a 16 percent (21, 306 individuals) increase from 2018 to 2019. In contrast to nationwide trends, the rate of homelessness in Hawaii has gradually grown since 2007, peaked in 2016 followed by a decline (National Alliance to End Homelessness, 2018; United States Interagency Council on Homelessness, n.d.). HUD (2020) notes, Hawaii has the second-highest rate of homelessness per capita, with 45 out of every 10,000 individuals considered homeless. This equates to 6,412 persons counted as homeless in the state for 2019. Oahu hosts 4,453 (or ~70 percent) of the homeless population for the state (Partners in Care, n.d.).

Between 2005 and 2010, national data on medical usage determined persons who are homeless average 5.9 visits to the Emergency Department (ED) during a 12-month period in comparison to 1.7 for non-homeless patients (Tadros, Layman, Brewer, & Davis, 2016). In the state of Hawaii, homeless patients using the ED averaged 2.6 visits annually. The Hawaii State Legislature (2018) found a considerable portion of costs were attributed to repeat visits for nonemergent or reoccurring medical conditions by homeless “super utilizers” (p. 9), which was consistent with Tadros et al.’s (2016) findings. “Super utilizers” are defined as those patients with a mental health diagnosis or substance use disorder who meet the following criteria: 1) three or more ED visits in a week or 12 or more visits in a quarter; and/or 2) three or more hospital admissions in a month (Hawaii State Legislature, 2018, p. 9). In 2015, an estimated \$146 million dollars was billed for homeless patient hospital encounters within the state (Hawaii State Legislature, 2018). Although homeless individuals make up 3.61 percent of Hawaii’s Medicaid beneficiaries, their healthcare costs account for 61 percent of the annual state Medicaid budget according to Lieutenant Governor Josh Green (n.d.).

A 2017 interview with Dr. Daniel Cheng, Assistant Chief of the ED and Medical Director of the Care Coalition at the project location, reported 11,000 ED visits were made by homeless patients in 2016 (Blair, 2017). Of those visits, fifteen percent were considered emergent, which is a sixty percent increase in total visits by homeless patients to the hospital since 2013 (Blair, 2017). During that same period (2013-2016), this TMC absorbed nearly \$40 million dollars in healthcare costs treating patients who are homeless. On average, Cheng reports the cost (billed and unbilled to insurers) of healthcare treatment for homeless patients was roughly \$90 million dollars annually at this TMC alone (Blair, 2017).

The increase in inappropriate (nonemergent) ED visits and associated costs have motivated healthcare agencies statewide to address the specific needs of this population. The high cost of homeless patient care has encouraged acute healthcare facilities to seek methods to improve continuity of care and prevent inappropriate ED visits. For patients who are homeless, this often means providing or connecting with wrap-around services to improve health outcomes and quality of life. As a result, healthcare facilities have expanded their care models to deliver healthcare services that are also patient-centered and holistic. The Healthcare Association of Hawaii (HAH) has gathered input from medical organizations and insurance providers to develop a community standard of care to address these principles. This input established a discharge checklist for homeless patients returning to the community following an acute or nursing facility admission. This checklist seeks to close gaps in care by identifying patient barriers to health stabilization. Healthcare organizations are expected to adopt these recommendations into their current work practices.

The statewide development of a standard of care for the management of homeless patient discharges to the community indicates a need for staff education and practice change at this

TMC to align with HAH’s proposed community standards. Currently, discharge processes are at the discretion of the discharging personnel and do not follow the proposed community standard of care outlined by HAH. This incongruency perpetuates gaps in care due to a lack of standardized processes to identify population-specific barriers that impact continuity of care and health outcomes.

Literature Search Strategy

A literature search utilizing CINAHL and PubMed databases was performed in April of 2019. Keywords used were “homeless OR houseless,”¹ “discharge OR readmission,” and “healthcare OR health.” The search results were filtered to produce articles written in English and published between 2012-2019 to account for the expansion of the United States’ healthcare delivery through the implementation of the Affordable Care Act. However, due to limited research on the subject of discharge planning concerning homelessness, dates of the search were expanded to 2007-2020. This search period was applied because it coincided with the implementation of the HUD PIT counts, which began in 2007.

A total of 407 articles were reviewed using this method. Articles were excluded if the sample studied a specific subpopulation of homelessness which was not generalizable to the population of interest, i.e., adults living as homeless in the state of Hawaii utilizing acute medical care at this TMC, interventions were external to the acute care setting, interventions were outside the scope of practice for an acute care registered nurse/social worker/case manager, or

¹ The term “houseless” is a preferred term in some groups to refer to individuals experiencing homelessness as defined by HUD. Harris-Talley notes the term is utilized to provide person-centered language which expands upon the definition of a “home” to include a sense of belonging, feeling or space one resides in (as cited in Seattle Weekly, 2017). For the purposes of this paper and project, the HUD definition of homelessness will be utilized to refer to those who designate themselves as “homeless” or “houseless.”

required significant financial investment. Of the reviewed articles, 15 were identified as applicable to this project. A review of article references and citations obtained from HAH provided additional sources of information on standards of care, expert opinion, federal/state legislative action, and government reports. A final search across all mediums was conducted in February of 2020 to ensure relevant research published after April 2019 was included in this paper.

The literature sources were graded using the Mosby's Levels of Evidence, which consists of seven levels based on research design (See Appendix A, Figure 1) (Ackley, Swan, Ladwig, & Tucker, 2008). The sources were then organized and abridged for relevant information using a literature matrix (see Appendix B, Figure 2).

Literature Synthesis

“Homelessness”, as defined by HUD (2020), is a term used to describe those who do not reside in a “fixed” habitable living space approved for long-term residential use. Individuals living in shelters (long term, transitional or emergency), public spaces, hotels/motels, abandoned buildings, cars, tents, and those fleeing domestic violence or intermittent stays with family/friends are defined as homeless according to HUD's current criterium established in 2012. Whether sheltered or unsheltered, the experience of homelessness and heightened exposure to risk factors impacts health outcomes (Levitt, Culhane, Degenova, O'Quinn, & Bainbridge, 2009).

Impacts of Homelessness on Health

Individuals who are homeless are more likely to experience chronic health conditions, open wounds, respiratory complications, substance abuse and mental illness (Levitt et al., 2009; Karaca, Wong, & Mutter, 2013; Lebrun et al., 2013; National Health Care for the Homeless

Council, 2011). Commonly, these diagnoses present as comorbidities in the individual (Levitt et al., 2009). Homeless individuals are more likely to be exposed to and contract communicable diseases due to shared spaces, open wounds, insect bites, and reduced access to clean water and hygiene products (Martins, 2008). Furthermore, poor nutrition and chronic stress associated with homelessness decrease the body's ability to combat infection (Levitt et al., 2009).

Researchers in the United States have documented that homeless men and women have a high likelihood of dying near the age of 50 (Baggett et al., 2013). This is consistent with Honolulu Chief Medical Examiner's findings, Dr. Masahiko Kobayashi. Dr. Kobayashi reports 54 as the average age of mortality among Oahu's homeless population (as cited in Nakaso, 2020). Dr. Kobayashi found the total number of deaths continues to rise annually, with 127 expiring in 2019. This is in addition to the previous Chief Medical Examiner, Dr. Christopher Happy's report of 373 homeless deaths between 2014 and 2018. (as cited in Ladao, 2019). This is nearly 30 years younger than the state's average age of mortality. In a five-year retrospective study comparing homeless individuals to low-income counterparts, Morrison (2009) found mortality was 1.6 times greater in homeless individuals when controlling for demographics, medical conditions, and healthcare utilization. In those who had drug-related hospitalizations, it was seven times greater. Oahu's premature homeless deaths are consistent with Baggett et al.'s (2013) analysis of mortality trends which cite higher rates of death caused by substance misuse, disease, violence and lack of sanitation leading to infection in comparison to the general public (Ladao, 2019, Nakaso, 2020).

Barriers to Health Management and Recovery

Individuals experiencing homelessness report several barriers to managing their health. This population often finds themselves triaging their needs with nutrition, shelter, and clothing

taking precedence over health due to necessity (Martins, 2008; Rae & Rees, 2015). Health maintenance behaviors are minimized in comparison to the immediate baseline needs of the individual. Minor illnesses and poorly managed chronic conditions in earlier stages evolve into health crises, which result in emergency care utilization and inpatient stays (Doran et al., 2013; Martins, 2008). Additionally, patients report delayed treatment seeking due to previous experiences of discrimination from healthcare providers based on their socioeconomic status (Martins, 2008; Rae & Rees, 2015; Thornton, Koshiba, & Lee-Ibarra, 2017; Wen, Hudak, & Hwang, 2007).

Hospital staff report limited time, waitlists, and overburdened community resources as barriers to effective resource connection during discharge (Thornton et al., 2017). Discharges to the community impact the likelihood of recovery and treatment plan compliance since standard practice recommendations are not always feasible for this population (National Health Care for the Homeless Council, 2011). Patients who are homeless report lost or stolen medical supplies, unhygienic conditions, inability to rest and return to a high-risk environment as impacting their ability to recover (Zaretsky, Flatau, Spicer, Conroy, & Burns 2017). Patients returning to the community post-discharge, find social networks disbanded and belongings destroyed or stolen (Martins, 2008). Qualitative studies based on interviews describe this process as a cycling of resource deficits resulting in poor health maintenance, which leads to acute medical crises (Martins, 2008; Rae & Rees, 2015; Thornton et al., 2017). Homeless patients have a high incidence of returning to hospitals within 30 days of discharge due to this cycle (Doran et al., 2013; Saab, Nisenbaum, Dhalla, & Hwang, 2016; Tadros et al., 2016).

Approaches focused solely on medical provision through insurance coverage and Primary Care Provider (PCP) assignments are ineffective in reducing high rates of inappropriate ED

utilization and treatment costs (Wang et al., 2015; Zaretsky et al., 2017). Interviews and studies highlight resource deficits commonly take priority even after hospital discharge (Martins, 2008; Rae & Rees, 2015, Thornton et al., 2017). Providing patients with financial access to healthcare does not negate the risk factors or barriers to health maintenance and readmission (Wang et al., 2015).

HAH's Safe Discharges for Homeless Patients

On September 30th, 2018, California legislators passed bill SB-1152 amending the Health and Safety Code, which required medical facilities to provide a standardized discharge planning process for homeless patients. In anticipation of Hawaii's state legislators proposing a similar bill, HAH used this event as a trigger to develop a community standard of care for homeless discharges. Referred to as a "checklist," the ten-item guide seeks to address immediate biopsychosocial deficits of this population during discharge from skilled nursing facilities (SNF) and hospitals (see Appendix C, Figure 1). The checklist addresses the following areas during discharge: 1) food security; 2) clothing; 3) medications; 4) vaccinations; 5) medical equipment/supplies; 6) post-discharge visit summary; 7) transportation; 8) community resources; 9) insurance status; and 10) mental health evaluation. Eligible medical institutions are expected to utilize this guide as a "minimum standard" to develop workflow processes addressing homeless discharge planning (Healthcare Association of Hawaii, 2019. p. 1).

Literature Critique

The Literature on the impacts and barriers of homelessness utilized descriptive design studies identifying populations trends related to health conditions, mortality rates, and health care utilization. The research included retrospective and prospective data collection ranging from one

day to five years. No long-term studies were found which examined the impact of these variables on the participant group.

Gaps in the Literature

Information is lacking on the biopsychosocial needs of homeless patients. A systematic process that acute care providers can quickly use to gather this information is needed to ensure efficient and timely care to the homeless population in an acute care setting.

Intervention

This project integrated HAH's *Safe Discharges for Homeless Patients* checklist into the TMC's current practices during discharge. This was accomplished by formatting the checklist into an Electronic Medical Record (EMR) template or 'workflow' titled *Safe Discharge Workflow for Patients who are Homeless* (see Appendix C, Figure 2). The workflow was made accessible by the use of a 'SmartPhrase,' which was a code or phrase directly linked to specific templates or information in the patient's EMR. This tool allowed EMR users to add relevant information to a patient's chart quickly. For this project, the 'SmartPhrase' ".homelessdischarge" was used. Registered Nurse Case Managers (RN-CM) and Social Workers (SW) working at project site were provided access to the 'SmartPhrase.' The Doctor of Nursing Practice (DNP) student provided 30-minute audiovisual training to RN-CM's and SW's formally assigned to the Clinical Decision Unit (CDU). The presentation included background, project details, and training on template utilization. Following training completion, the template was made available for use. RN-CM's and SWs utilized EMR flagging of homeless patients, chart reviews, and HUD's (2012) homeless criteria to identify patient encounters warranting workflow utilization. Additionally, unit protocols previously in place required CDU Registered Nurses (RN) to complete SW referrals when a known homeless patient arrived in the unit. Upon the upcoming

discharge of an identified homeless patient, the RN-CM or SW, launched and completed the *Safe Discharge Workflow for Patients who are Homeless*. SWs acted as the lead author of the workflow. However, when a SW was not available or required assistance, the unit's assigned RN-CM would assist in the completion of the template. Throughout the project implementation, weekly email correspondence was initiated by the DNP student to reinforce project goals and guidelines, address barriers, answer questions, and provide/receive updates on progress.

Conceptual Framework

The Iowa Model Revised (2015) (see Appendix D, Figure 1) was utilized as a conceptual framework for this practice change. The Iowa Model was created to improve healthcare delivery through the utilization of evidenced-based research to implement practice change (Buckwalter et al., 2017). The model follows seven steps to determine if practice change is warranted and whether it applies to the setting or organization. Utilizing a feedback method, the model is flexible and allows the opportunity for reevaluation and modifications before a finalized practice change is established within an organization (Buckler at al., 2017).

PICO Question

Among patients who are homeless and discharged from the TMC's CDU (P), will the implementation of a standardized workflow meeting the HAH community standard of care for the discharge of homeless patients (I) in comparison to standard discharge practice (C) improve medical professionals' efficacy in identifying and addressing the biopsychosocial needs of homeless patients (O)?

Methods and Procedures

Purpose Statement, Goals, and Objectives

The purpose of this evidence-based quality improvement project was to integrate HAH's *Safe Discharges for Homeless Patients* checklist into an EMR workflow that provided a standardized approach for staff in the identification of homeless patients' biopsychosocial deficits and methods to meet these needs. The goal of this project was to determine if the workflow and accompanying training improved the professional's' efficacy in identifying and addressing the biopsychosocial needs of homeless patients. The project objectives included: (1) by the third week of December 2019, develop and integrate HAH's guidelines into an EMR template ready for medical staff utilization; (2) by the end of December 2019, 85% of qualifying medical staff responsible for discharges in the CDU will attend in-person training for the workflow; (3) between January 1st and February 7th, 2020, 75% of homeless patient discharges will show a record of utilizing the workflow; (4) between January 1st and February 7th, 2020, 75% of identified biopsychosocial needs outlined in the workflow will have documentation of being met by discharging staff. All project objective percentages were chosen based on typical criteria for benchmarking goal success. A detailed review of project objectives, processes and timeline can be found in Appendix E (Figures 1 & 2).

Location

This evidenced-based quality improvement project was implemented at a TMC in urban Honolulu. This hospital has the most utilized ED in the state, with nearly 70,000 medical visits annually (Farinas, 2017). Sixty percent of ED homeless encounters across the state occurred at this location. Between July 2018 and June 2019, the TMC's ED documented 6,261 encounters for the 2,408 patients flagged as homeless in the EMR. This is an average of 17 ED encounters

per day by homeless patients (A. Shearer, personal communication, July 1, 2019). Alternatively, this indicates an annual average of 2.6 ED visits by patients who are flagged as homeless in the TMC's EMR system. The workflow was piloted in the CDU, which is a 14-bed observational unit, utilized for those patients awaiting determination of admission to the hospital or discharge from the ED.

Stakeholders

A series of meetings were conducted with content experts and a representative team of personnel to discuss the goals and logistics of the project. The attendees reviewed and provided feedback on the feasibility and efficacy of the *Safe Discharge Workflow for Patients who are Homeless* prior to launch. All parties endorsed the implementation of the project on the CDU and the designation of RN-CMs and SWs as the personnel responsible for completing the workflows.

Volunteers

This project utilized a purposive convenience sample of medical personnel employed in the TMC's CDU². Daily, one RN-CM and one SW worked as a team to cover the unit. There were two RN-CMs and two SWs, totaling four staff, formally assigned to the unit. These teams alternated covering the unit depending on scheduling and staff assignments. However, RN-CMs and SWs hospital-wide often covered shifts in the CDU due to staffing limitations and scheduling changes occurred. Inclusion criteria were as follows: (1) employed as an RN-CM or SW at the TMC; and (2) assignment to cover the unit for at least one shift. Due to an inability to predict which RN-CM and SW may be covering the unit, the PowerPoint training was disbursed to RN-CMs and SWs hospital-wide. Personnel who were not working in the capacity of RN-CM

² The DNP student was not an employee of the hospital.

or SW, such as Unit Manager, Registered Nurse, Medical Assistant, Provider, etc. were not eligible for inclusion. Although other medical professionals in the CDU were ineligible for inclusion, an electronic document describing the intent, background, and project timeline was distributed to create awareness of the project, increase interprofessional collaboration, and staff buy-in.

Approval from the University of Hawaii at Manoa

This DNP project involved making judgments about a program to improve or further develop program effectiveness and inform decisions about future programming within an organization (University of Hawaii Human Studies program, personal communication, August 2, 2018). All of these tasks were related to quality improvement and did not produce generalizable knowledge. Due to the aforementioned above, this project did not require an IRB application and review.

Approval from the Tertiary Medical Center

This proposal was approved by the student's DNP Committee and submitted to the TMC's Research and Institutional Review Committee (RIRC) for confirmation that this project did not require Institutional Review Board (IRB) review or approval. The RIRC found the project was not considered human subjects research and was authorized to move forward with implementation (see Appendix F, Figure 1).

Gathering and Organization of Findings

Information gathered to evaluate the project's ability to meet process objectives were as follows: 1) the number of staff meeting inclusion criteria that attended workflow training; 2) the number of eligible staff unable to participate in training; 3) the number of homeless patient

encounters that resulted in discharge to the community from the CDU; 4) the number of completed workflows; 5) recorded responses to each item on the completed workflow.

The DNP student counted staff training attendance. The number of completed workflows by RN-CMs and SWs unable to attend training were also counted. The number of homeless patients admitted to the CDU and discharged to the community was recorded by the DNP student's content experts using an EMR function (already in use), which identified homeless patients in their medical records. Additionally, those patients not identified before admission were later flagged in the EMR. Patients not discharged to the community following treatment in the CDU were excluded from the sample. This included but was not limited to: (1) patients under the custody of law enforcement; (2) transfer to a different unit or medical facility; (3) leaving Against Medical Advice (AMA). The total number of completed workflows was recorded via a prospective review of the EMR system. Workflows were considered incomplete and excluded from the sample if the EMR template was not closed properly. Successful completion required personnel to select an answer option for each of the 10 items. Refusals from patients to cooperate during the administration of the workflow or a staff's inability to meet identified needs due to resource limitations did not disqualify workflows from inclusion in the sample. Instead, RN-CMs and SWs were asked to identify these limitations in the comments portion of the workflow. All protected health information (PHI) and patient identifiers were removed from the workflow before data collection. Options selected under each workflow item were placed into a table for organizational and evaluation purposes of the data collected.

Results

Data Analysis

Collected data from process objectives (two through four) were analyzed with frequency and percentage to determine outcomes of this evidenced-based quality improvement project's process objectives. RN-CM and SWs training attendance rates were compared to the total number of eligible personnel that completed workflows during this pilot. The number of completed workflows and homeless patient admissions in the CDU were calculated to determine the percentage of homeless encounters that utilized the workflow. The frequency of patients identified biopsychosocial deficits was measured against the documented action, e.g., the RN-CM/SW's selected response to each workflow item. This was utilized to provide a percentage of the itemized, and overall, patient-identified biopsychosocial needs met (or not met) during the encounter.

Process Objective Outcomes

Training. A total of four staff (two RN-CMs and two SWs) presumed to be the primary RN-CM or SW assigned to the unit during implementation were invited to attend training. One-hundred percent of those asked participated in live training with the student. Three additional RN-CMs/SWs covered the unit during this time and were not trained. Of the seven RN-CMs and SWs working in the unit throughout implementation, 57 percent were trained to utilize the workflow.

Workflow utilization. Six patients identified via EMR flagging as homeless were admitted to the CDU, one of these patients accounts for two encounters. An additional two patients were categorized as homeless during their inpatient stay in the unit. Of the eight identified homeless patients encounters admitted to the CDU and discharged to the community,

100 percent of encounters utilized the *Safe Discharge Workflow for Patients who are Homeless*. The eight workflows were analyzed to determine patients identified biopsychosocial needs and staffs' responses to each item. Rates of biopsychosocial needs identified ranged four to six items per patient; thus, 100 percent of encounters identified at least four deficits. Of those identified, staff recorded meeting 100 percent in every workflow eligible for evaluation.

Evaluation of Workflow Response Trends

Beginning with the highest incidence of needs identified/met in descending order, rates are as follows: 1) 100 percent of encounters provided food, access to medications upon discharge (in hand or electronic/written prescription), scheduled follow-up appointments and resource connection via SW consult; 2) all patients were offered transportation, 62 percent of encounters accepted; 3) 38 percent were provided behavioral health consultations due to mental health status presentation; 4) 25 percent accepted offered vaccinations; 5) 13 percent were provided requested clothing; 5) None required durable medical equipment (DME) or insurance coverage.

Discussion and Recommendations

The outcomes of this project indicated that homeless patients frequently exhibit a high level of biopsychosocial deficits that can be addressed during their admission. Ability to meet patients' needs by RN-CMs and SWs excelled in the utilization of the workflow. However, the recorded inability to meet needs due to staffing or resource limitations could also be beneficial in the future for the justification of improved resource allocation. Those medical professionals tasked with utilizing the workflow should be made aware of the projects context and intent to increase staff buy-in. Reassurance, informal gestures of support and open dialogue are tools which can foster rapport and build interprofessional collaboration. Project overseers should also be cognizant of workflow utilizers'(medical personnel) time constraints and reinforce with staff

that the purpose of this workflow is to improve efficacy rather than monitor or hinder their performance.

Due to unanticipated staffing changes, the 85% training objective for RN-CMs and SWs responsible for discharge in the CDU was not met. Despite this, all homeless patient admissions resulted in the utilization of the workflow and addressed the identified needs of the patient. This outcome may indicate high rates of user error because 63% of workflows were completed by untrained staff, or it may indicate the template's user-friendliness and lack of need for formal training. To assess the template's ease of use, it is advised that future project implementors develop a short informal questionnaire for feedback from users. This survey should be utilized periodically throughout implementation to provide real-time training and adjustments that meet staff's training needs. If formal training were to be eliminated in future use, peer-to-peer template training would also be an acceptable approach that could utilize this informal survey technique. In either scenario it would be essential to integrate HUD's (2012) definition of homeless into a questionnaire during the initial admission process to ensure patients meeting the criterion are not excluded. This criterion could also be included at the top of the workflow, or periodically reinforced with those responsible for identification or referrals to RN-CMs or SWs. A potential repercussion of broadening medical staff and the organizations' definition of homelessness (as defined by HUD) is an increased number of identified homeless and their corresponding resource deficits. Project implementors should be prepared for this influx and collaborate with hospital administrators, existing hospital programs and community partners to develop plans to meet these needs. Alternatively, this workflow could serve a secondary use due to its ability to address several social determinants of health and could be utilized to assess all patient admissions and their corresponding resource deficits.

As evidenced by this project, this population exhibited high rates of baseline needs for proper healthcare maintenance. Although some items of the workflow may have been considered standard practice or intuitive for the inpatient setting, discharging personnel did not have a standardized process to ensure these items were addressed before patients left their care. This was especially true for those patients who were admitted in-between shifts or for a limited time, which is often the case in the ED or CDU. This issue may be further compounded for patients admitted in the evening and released before mid-morning due to limited food service and outpatient pharmacy hours. To resolve this, food should be offered to patients at least once during every admission. Furthermore, effort should be made to provide all patients' discharge medications to them 'in-hand'³ via the hospital's internal pharmacy to reduce health maintenance barriers.

Limitations

The primary limitation of this project was the DNP student's lack of employment at the TMC in the CDU. This restricted the student's ability to closely monitor the project's progress or barriers in real-time because results (related to workflows outcomes) required removal of all PHI by a third party. Compounding this, was the inability to predict, monitor or control unexpected staffing changes within enough time to schedule additional training sessions. This resulted in a limited number of trained staff completing workflows. An additional barrier was the varying definitions of "homelessness" utilized by experts and laymen.

³As noted in the *Safe Discharge Workflow for Patients who are Homeless*, antibiotics were required to be handed to discharging homeless patients. Seventy-one percent of patients were provided with medications 'in-hand' during discharge.

DNP Essentials

This project met The Essentials of Doctoral Education for Advanced Nursing Practice (American Association of Colleges of Nursing, 2006) by providing an evidence-based quality improvement project to identify and holistically address a community need (see Appendix G, Figure 1). The DNP student collaborated, educated, and lead staff through the implementation of the said project using advanced practice nursing interventions. They then evaluated project outcomes for the purpose of knowledge sharing and dissemination of results to other healthcare models.

Conclusion

In conclusion, this evidenced-based quality improvement project displayed promising outcomes for the implementation of a standardized discharge workflow during homeless patient discharges. Informal feedback from users reported satisfaction with the workflow, its ability to guide them in meeting HAH's proposed community standards of care and assist them in identifying/addressing homeless patients' needs before discharge (C. Hilmes, personal communication, February 18, 2020). This project exceeded three out of four proposed process objectives: 1) successful development and integration of a discharge workflow meeting the HAH's proposed community standard for homeless discharges; 2) 100% utilization of workflows in all homeless patient encounters; 3) 100% of identified biopsychosocial deficits were addressed by discharging staff. This project did not meet its process objective of training at least 85% of staff responsible for homeless patient discharge. However, the efficacy of both trained and untrained RN-CMs and SWs ability to address areas of need is remarkable, as evidenced by the aforementioned workflow outcomes.

References

- Ackley, B.J., Swan, B.A., Ladwig, G., & Tucker, S. (2008). *Evidence-based nursing care guidelines: Medical-surgical interventions*. (p. 7). St. Louis, MO: Mosby Elsevier
- American Association of Colleges of Nursing (AACN). (2006). The essentials of doctoral education for advanced nursing practice [website]. Retrieved from <https://www.aacnursing.org/Portals/42/Publications/DNPEssentials.pdf>
- Baggett, T., Hwang, S., O'Connell, J., Porneala, B., Stringfellow, E., Orav, E., . . . Rigotti, N. (2013). Mortality among homeless adults in Boston: Shifts in causes of death over a 15-year period. *JAMA Internal Medicine*, *173*(3), 189-95.
- Blair, A. (2017). Hawaii's largest hospital cracking under strain of homeless crisis. *Hawaii News Now*. Retrieved from <https://www.hawaiinewsnow.com/story/34480564/hawaiis-largest-hospital-cracking-under-strain-of-homeless-crisis/>
- Buckwalter, K. C., Cullen, L., Hanrahan, K., Kleiber, C., McCarthy, A. M., Rakel, B. . . .Tucker, S. (2017). Iowa Model of Evidence-Based Practice: Revisions and validation. *Worldviews on Evidence-Based Nursing*, *14*(3), 175-182. doi:10.1111/wvn.12223
- California State Legislature (2018). *Hospital patient discharge process: homeless patients, SB-1152*
- Doran, K. M., Ragins, K. T., Iacomacci, A. L., Cunningham, A., Jubanyik, K. J., & Jenq, G. Y. (2013). The revolving hospital door: Hospital readmissions among patients who are homeless. *Medical Care*, *51*(9), 767–773. doi:10.1097/MLR.0b013e31829fafbb
- Farinas, J. (2017) The lifeline of Hawaii. *Midweek*. Retrieved from <http://www.midweek.com/the-lifeline-of-hawaii/>

- Hawaii State Legislature. (2018). *Relating to homelessness: Act 209 (18), SB2401 SD2 HD1 CDI*.
- Healthcare Association of Hawaii (2019, February 28). *Safe discharges meeting summary*.
- Karaca, Z., Wong, H., & Mutter, R. (2013). Characteristics of homeless and non-homeless individuals using inpatient and emergency department services, 2008. *Statistical Brief #152*, 1–14.
- Ladao, M. (2019). Hundreds of homeless die over last five years, medical examiner says. *Star Advertiser*. Retrieved from <https://www.staradvertiser.com/2019/06/05/breaking-news/hundreds-of-oahu-homeless-died-over-last-five-years-medical-examiner-says/>
- Lebrun-Harris, L. A., Baggett, T. P., Jenkins, D. M., Sripipatana, A., Sharma, R., Hayashi, A. S., ... Ngo-Metzger, Q. (2013). Health status and health care experiences among homeless patients in federally supported health centers: Findings from the 2009 Patient Survey. *Health Services Research, 48*(3), 992–1017. doi:10.1111/1475-6773.12009
- Levitt, A., Culhane, D., Degenova, J., O'Quinn, P., & Bainbridge, J. (2009). Health and social characteristics of homeless adults in Manhattan who were chronically or not chronically unsheltered. *Psychiatric Services (Washington, D.C.), 60*(7), 978-981.
- Lieutenant Governor of the State of Hawaii. (n.d.). Homeless in Hawaii: Facts and resources. Retrieved from <https://ltgov.hawaii.gov/homeless-in-hawaii-facts-and-resources/>
- Martins, D. C. (2008). Experiences of homeless people in the health care delivery system: A descriptive phenomenological study. *Public Health Nursing, 25*(5), 420–430. doi:10.1111/j.1525-1446.2008.00726.x

- Morrison, D. S. (2009). Homelessness as an independent risk factor for mortality: Results from a retrospective cohort study. *International Journal of Epidemiology*, 38(3), 877–883. doi:10.1093/ije/dyp160
- Nakaso, D. (2020). Deaths of homeless people continue to climb on Oahu. *Star Advertiser*. Retrieved from <https://www.staradvertiser.com/2020/01/16/hawaii-news/deaths-of-homeless-people-continue-to-climb-on-oahu/>
- National Alliance to End Homelessness. (2018) *State of homelessness: Homelessness by state. Hawaii*. Retrieved from <https://endhomelessness.org/homelessness-in-america/homelessness-statistics/state-of-homelessness-report/hawaii/>
- National Healthcare for the Homeless Council. (2011). *Homelessness health: What's the connection?* Retrieved from https://www.nhchc.org/wpcontent/uploads/2011/09/Hln_health_factsheet_Jan10.pdf
- Partners in Care: Oahu's Continuum of Care. (n.d.). *The Oahu 2019 point in time count*. Retrieved from <https://static1.squarespace.com/static/5db76f1aadb3e44fb77280f1/t/5db7630b76c7c6401d148a8/1572566619123/PIC+2019+Oahu+PIT+Count+Report+-+FINAL.pdf>
- Rae, B. E., & Rees, S. (2015). The perceptions of homeless people regarding their healthcare needs and experiences of receiving health care. *Journal of Advanced Nursing*, 71(9), 2096–2107. doi:10.1111/jan.12675
- Saab, D., Nisenbaum, R., Dhalla, I., & Hwang, S. W. (2016). Hospital readmissions in a community-based sample of homeless adults: A matched-cohort study. *Journal of General Internal Medicine*, 31(9), 1011–1018. doi:10.1007/s11606-016-3680-8

- Seattle Weekly. (2017). Why Kirsten Harris-Talley makes a point of using the word 'houselessness'. *Seattle Weekly*. Retrieved from <https://www.seattleweekly.com/news/why-kirsten-harris-talley-makes-a-point-of-using-the-word-houselessness/>
- Tadros, A., Layman, S. M., Brewer, M. P., & Davis, S. M. (2016). A 5-year comparison of ED visits by homeless and nonhomeless patients. *American Journal of Emergency Medicine*, 34(5), 805–808. doi:10.1016/j.ajem.2016.01.012
- Thornton, G., Koshiba, J., & Lee-Ibarra, J. (2017). *Touchpoints of homelessness: Institutional discharge as a window of opportunity for Hawai`i's homeless*. Retrieved from <https://humanservices.hawaii.gov/wp-content/uploads/2018/02/Touchpoints-of-Homelessness-Report-Final.pdf>
- U.S. Department of Housing and Urban Development. (2012). Homeless Definition. *HUD Exchange*. Retrieved from https://files.hudexchange.info/resources/documents/Homeless-Definition_Recordkeeping-RequirementsandCriteria.pdf
- U.S. Department of Housing and Urban Development. (2020). *The 2019 annual homeless assessment report (AHAR) to congress part 1: Point-in-time estimates of homelessness*. Retrieved from <https://files.hudexchange.info/resources/documents/2019-AHAR-Part-1.pdf>
- United States Interagency Council on Homelessness (n.d.). *Hawaii Homelessness Statistics*. Retrieved from <https://www.usich.gov/homelessness-statistics/hi/>
- Wang, H., Nejtek, V. A., Zieger, D., Robinson, R. D., Schrader, C. D., Phariss, C., ... Zenarosa, N. R. (2015). The role of charity care and primary care physician assignment on ED use in homeless patients. *American Journal of Emergency Medicine*, 33(8), 1006–1011. doi:10.1016/j.ajem.2015.04.026

Wen, C. K., Hudak, P. L., & Hwang, S. W. (2007). Homeless people's perceptions of
welcomeness and unwelcomeness in healthcare encounters. *Journal of General Internal
Medicine*, 22(7), 1011–1017. doi:10.1007/s11606-007-0183-7

Zaretsky, K., Flatau, P., Spicer, B., Conroy, E., & Burns, L. (2017). What drives the high health
care costs of the homeless? *Housing Studies*, 32(7), 931–947.

doi:10.1080/02673037.2017.1280777

Appendix A

Figure 1. Mosby's Levels of Evidence

Level of evidence (LOE)	Description
Level I	Evidence from a systematic review or meta-analysis of all relevant RCTs (randomized controlled trial) or evidence-based clinical practice guidelines based on systematic reviews of RCTs or three or more RCTs of good quality that have similar results.
Level II	Evidence obtained from at least one well-designed RCT (e.g. large multi-site RCT).
Level III	Evidence obtained from well-designed controlled trials without randomization (i.e. quasi-experimental).
Level IV	Evidence from well-designed case-control or cohort studies.
Level V	Evidence from systematic reviews of descriptive and qualitative studies (meta-synthesis).
Level VI	Evidence from a single descriptive or qualitative study.
Level VII	Evidence from the opinion of authorities and/or reports of expert committees.

Figure 1: Mosby's levels of evidence, levels one through seven. Levels are determined by the strength of the evidence based on research methods and study design. Evidence with the greatest strength is graded with a lower number and vice versa by B. J. Ackley, B.A. Swan, G. Ladwig, & S. Tucker, (2008). Evidence-based nursing care guidelines: Medical-surgical interventions. (p. 7). St. Louis, MO: Mosby Elsevier.

Appendix B

Figure 1. Literature Matrix

Level of Evidence	Theme	Year	Author(s)	Title	Aim/Purpose	Outcomes	Time Frame
IV	Pop. Dem.	2013	Baggett, T., Hwang, S., O'Connell, J., Porneala, B., Stringfellow, E., Orav, E., . . . Rigotti, N.	Mortality among homeless adults in Boston: Shifts in causes of death over a 15-year period	To determine causes of death in homeless group	HIV/AIDS deaths have reduced. However, mortality rates remain the same d/t increasing opioid related deaths. 25-44 y/o w/ 8-9x higher death rates r/t to substance use, heart disease and suicide. 45+ with highest mortality rates r/t to cancer, heart disease, chronic respiratory illness and substance use.	5 Years
N/A	ED Utilization Patterns/ Setting	2017	Blair, A.	Hawaii's largest hospital cracking under strain of homeless crisis	Discussion of homeless crisis financial impact on QMC	N/A	N/A
VII	Discharge Practices	2018	California Hospital Association (CHA)	California Hospital Discharge Planning for Homeless Patients	Handbook developed as an easy to read guide for d/c planning homeless as a result of state legislative changes	Discharge handbook for medical facilities providing background on bill, requirements of bill and resources to assist in transition.	N/A
N/A	Legislation	2018	California State Legislation	Hospital patient discharge process: homeless patients SB-1152	To amend the health and safety code to require a written and standardized discharge practice for homeless patients.	Passed. Effective Jan 2019.	N/A
IV	Pop. Dem.	2004	Cheung, A. M., & Hwang, S. W	Risk of death among homeless women: A cohort study and review of the literature	To collect data on mortality rates of homeless women and compare with previous academic research	"Excess mortality is far greater among homeless women under age 45 years than among older homeless women. Mortality rates among younger homeless women often approach or equal those of younger homeless men. Efforts to reduce deaths of homeless women should focus on those under age 45"	2.6 Years
IV	ED Utilization Patterns/ Pop. Dem	2001	D'Amore, J., Hung, O., Chiang, W., & Goldfrank, L.	The epidemiology of the homeless population and its impact on an urban emergency department	To characterize the homeless adult population of an urban emergency department (ED) and study the medical, psychiatric, and social factors that contribute to homelessness.	"In the study population homelessness was associated with a history of significantly higher rates of infectious disease, ethanol and substance use, psychiatric illness, social isolation, and rates of ED utilization"	8 weeks
IV	ED Utilization	2013	Doran, K. M., Ragins, K. T., Iacomacci, A. L., Cunningham, A., Jubanyik, K. J., & Jenq, G. Y.	The revolving hospital door: Hospital readmissions among patients who are homeless	The aim of the study was to determine 30-day hospital readmission rates among patients who are homeless and examine factors associated with hospital readmissions in this population.	Homeless patients have higher rates of readmission, especially when discharged to the street or shelter.	4 Months
N/A	ED Utilization/ Setting	2017	Farinas, J.	The Lifeline of Hawaii	Overview of QMC Emergency care services	N/A	N/A

Level of Evidence	Theme	Year	Author(s)	Title	Aim/Purpose	Outcomes	Time Frame
IV	Healthcare Utilization/ Pop.Dem	2000	Gelberg, L., Andersen, R. M., & Leake, B. D.	The behavioral model for vulnerable populations: Application to medical care use and outcomes for homeless people	To define/determine variables predicting healthcare utilization and health outcomes using a longitudinal prospective design.	Homeless have higher rates of vision impairment, LE problems, & TB. HTN rates were similar to general population. Participants displayed reduced health literacy which impacted their willingness to seek care.	8 Months
IV	Healthcare Utilization	1997	Gelberg, L., Gallagher, T. C., Andersen, R. M., & Koegel, P.	Competing priorities as a barrier to medical care among homeless adults in Los Angeles	To assess competing barriers which impact appropriate healthcare utilization	Patients with higher frequency of substance are less likely to have a regular source of care and more likely to prolong time before seeking care.	2 years
N/A	Legislation	2018	Hawaii State Legislature	Relating to Homelessness, Act 209	State legislation to provide funding for Ohana Zones and ED Pilot Program	Effective July 1, 2018	N/A
VII	Discharge Practices	2019	Healthcare Association of Hawaii (HAH)	Safe discharges for homeless patients	"This document serves as a minimum community standard regarding the safe discharge to the community from acute and post-acute facilities for individuals identified as homeless, including children of homeless parents. This checklist is intended for homeless individuals for whom placement cannot be found, or, for homeless individuals who choose not to take advantage of placement recommendations" (HAH, 2019)	10 Item Checklist	N/A
IV	Pop. Dem.	2000	Hwang, S. W.	Mortality among men using homeless shelters in Toronto, Ontario	To compare mortality rates among men using homeless shelters and the general population in Toronto, Ontario, and to determine whether mortality rates differ significantly among men using homeless shelters in Canadian and US cities.	Men using homeless shelters in Toronto were more likely to die than men in the city's general population.	3 years
IV	Pop. Dem.	1997	Hwang, S. W., Orav, E. J., O'Connell, J. J., Lebow, J. M., & Brennan, T. A	Causes of death in homeless adults in Boston	To determine causes of death in homeless group	Homicide was the leading cause of death in men 18-24, AIDS the leading cause of death in men and women, cancer and heart disease the leading cause of death in men ages 45-64.	5 years
IV	ED Utilization Patterns/ Government Report	2013	Karaca, Z., Wong, H., & Mutter, R.	Characteristics of homeless and non-homeless individuals using inpatient and emergency department services, 2008	To provide an overview of hospital usage by homeless in 10 states during 2008.	Highest usage for cardiac, respiratory and pregnancy related diagnosis.	1 Year

Level of Evidence	Theme	Year	Author(s)	Title	Aim/Purpose	Outcomes	Time Frame
N/A	Pop. Dem.	2019	Ladao, M.	Hundreds of homeless die over last five years, medical examiner says	Report on homeless autopsy findings/mortality rates on Oahu	Average age of death 53 y/o. High rates of mortality by homicide, substance use and chronic disease.	5 Years
IV	Pop. Dem.	2013	Lebrun-Harris, L. A., Baggett, T. P., Jenkins, D. M., Sripipatana, A., Sharma, R., Hayashi, A. S., ... Ngo-Metzger, Q	Health status and health care experiences among homeless patients in federally supported health centers: Findings from the 2009 Patient Survey	To examine health status and health care experiences of homeless patients in health centers and to compare them with their nonhomeless counterparts.	Homeless patients had worse health status—lifetime burden of chronic conditions, mental health problems, and substance use problems—compared with housed respondents. In adjusted analyses, homeless patients had twice the odds as housed patients of having unmet medical care needs in the past year and twice the odds of having an ED visit in the past year .	1 Year
IV	Pop. Dem.	2009	Levitt, A., Culhane, D., Degenova, J., O'Quinn, P., & Bainbridge, J.	Health and social characteristics of homeless adults in Manhattan who were chronically or not chronically unsheltered	Compare chronically unsheltered and sheltered homeless cohorts' health/social characteristics	High rates of substance misuse, trauma, medical conditions. In those who were unsheltered rates were higher in addition to high rates of incarceration, military service and mental illness	1 Day
VI	Homeless Perception	2008	Martins, D.C	Experiences of homeless people in the health care delivery system: A descriptive phenomenological study	The objective of this research is to understand the experiences of homeless people within the health care system.	(1) living without essential resources compromises health; (2) putting off health care until a crisis arises; (3) encountering barriers to receiving health care to include (a) social triage, (b) feeling labeled and stigmatized, (c) a nonsystem for health care for the homeless, (d) being treated with disrespect, and (e) feeling invisible to health care providers; and (4) developing underground resourcefulness.	Not Noted
IV	Pop. Dem.	2009	Morrison, D. S.	Homelessness as an independent risk factor for mortality: Results from a retrospective cohort study	To determine if the state of homelessness is a risk factor for mortality	Homelessness is an independent risk factor for deaths, especially r/t substance use.	5 Years
N/A	Health Trends	2020	Nakaso, D.	Deaths of homeless people continue to climb on Oahu.	News article reporting on homeless mortality/morbidity rates on Oahu	N/A	1 Year
N/A	Pop. Dem.	2018	National Alliance to End Homelessness	State of homelessness: Homelessness by state. Hawaii	Interactive data report representing homeless by state	N/A	N/A

Level of Evidence	Theme	Year	Author(s)	Title	Aim/Purpose	Outcomes	Time Frame
IV	Pop. Dem.	2011	National Healthcare for the Homeless Council	Homelessness health: What's the connection?	Factsheet on Homelessness in relation to healthcare	N/A	N/A
IV	Pop. Dem.	2019	Oahu's Continuum of Care, Partners in Care.	Partners In Care Homeless Point-in-Time Count Report.	Provide count and demographics for Oahu Homeless in 2019 to track population trends	Overall decrease in homelessness. Families more likely to be in transitional/emergency shelter in comparison to singles. Highest concentration in urban honolulu (majority singles) and Waianae Coast (families). Majority of homeless Pacific Islander	1 Day
VI	ED Utilization Patterns	2015	Rae, B., & Rees, S.	The perceptions of homeless people regarding their healthcare needs and experiences of receiving health care.	To understand the perspective of the homeless about their healthcare encounters and how their experiences of receiving healthcare influence their health-seeking behaviour.	Higher need for resources (including safety) leads to medical self neglect until disease state is at crisis level, Access to care/understanding homeless circumstance/previous homelessness are important to provide care that is effective. Interpersonal relationships with care team impact patients health seeking behaviors/outcomes.	3 wks
IV	Healthcare Utilization Patterns	2016	Saab, D., Nisenbaum, R., Dhalla, I., & Hwang, S. W	Hospital readmissions in a community-based sample of homeless adults: A matched-cohort study	The objective of this study was to compare the hospital readmission rate among individuals experiencing homelessness with that of a low-income matched control group, and to identify risk factors associated with readmission within the group experiencing homelessness.	Homeless patients had nearly four times the odds of being readmitted within 30-days as compared to low-income controls matched on age, sex and primary reason for admission to hospital.	1 year
N/A	Definitions	2017	Seattle Weekly	Why Kirsten Harris-Talley makes a point of using the word 'houselessness'	Discussion on the term "houselessness" versus "homelessness"	N/A	N/A
IV	ED Utilization Patterns	2016	Tadros, A., Layman, S. M., Brewer, M. P., & Davis, S. M.	A 5-year comparison of ED visits by homeless and nonhomeless patients.	To analyze changes in ED utilization between 2005-2010 by homeless patients in comparison to nonhomeless	Approximately 679 854 visits were made by homeless patients, the majority of which were made by men (72.3%) and patients between the ages of 45 and 64 (50.5%). Homeless patients were twice as likely to be uninsured. ED visits by homeless patients had increased by 44% during the 5-year period. Arrival to the ED by ambulance increased by 14% between the study years, and homeless patients were less likely to be admitted. Visits increased despite medicaid status remaining a constant.	5 years (2005-2010)

Level of Evidence	Theme	Year	Author(s)	Title	Aim/Purpose	Outcomes	Time Frame
VII	Discharge Practices	2017	Thornton, G., Koshiba, J., & Lee-Ibarra, J.	Touchpoint of Homelessness: Institutional discharge as a window of opportunity for Hawai'i's homeless	Discussion and recommendations to utilize insitutional d/c as an opportunity to provide intervention.	Recommendations: Short/Moderate Term Goals: Ensure care coordination spans pre-and post-dis- charge, Increase availability of mobile medical clinics, community paramedics, and/or community-based drop-in centers., Create a shared homeless patient database, and support data sharing among hospitals. Expand medical respite programs. Long Term: Use housing as medical care. 38 out of 52 street inteviews had been to the hospital in the last year. Homelessness is a reflection of economic instability/inequality	N/A
IV	Pop. Dem.	2020	United States Department of Housing and Urban Development	The 2019 Annual Homeless Assessment Report to Congress Part 1: Point-In-Time Estimates of Homelessness	Provide count and demographics for U.S.homeless in 2019 to track population trends	Homelessnes trending down nationwide. Families and Veterans most improvement. Hawaii drops to 2nd highest rate per capita	1 Day
VII	Federal Reccomen dations	2016	United States Interagency Council on Homelessness	Partnering With Hospitals to End Homelessness	Outline government recommendations for hospitals to address homelessness	1.Enroll in Medicaid, 2. Identify (like a VS)/ use ICD 10 Code: Z59.0, 3. Identify "Super Utilizers" and team up with community partners, 4. Collaborate with post-acute recuperative programs 5. Know your community resources to find support and refer appropriately, 6) Invest in community partnerships, 7. Convert underutilized space into community support areas.	N/A
IV	ED Utilization Patterns	2015	Wang, H., Nejtek, V. A., Zieger, D., Robinson, R. D., Schrader, C. D., Phariss, C., ... Zenarosa, N. R.	The role of charity care and primary care physician assignment on ED use in homeless patients.	The aim of this study is to determine whether inappropriate ED use for nonemergency care may be reduced by providing charity insurance and assigning homeless patients to a primary care physician (PCP) in an outpatient clinic setting	Following New York University ED Algorithm standards, 76% of all ED visits were deemed inappropriate with approximately 77% of homeless patients receiving charity care and 74% of patients with no insurance seek- ing noncrisis health care in the ED (P = .112). About 50% of inappropriate ED visits and 43.84% of appropriate ED visits occurred in patients with a PCP assignment (P = .019). Those with high ED use had less inappropriate useage as they were identified by the facility and followed by CM team	1 Year

Level of Evidence	Theme	Year	Author(s)	Title	Aim/Purpose	Outcomes	Time Frame
VI	Homeless Perception	2007	Wen, C. K., Hudak, P. L., & Hwang, S. W.	Homeless People's Perceptions of Welcomeness and Unwelcomeness in Healthcare Encounters	"To examine how homeless persons experienced "welcomeness" and "unwelcomeness" in past encounters with health care providers and to characterize their perceptions of these interactions"	Interactions with healthcare providers can impact health seeking behaviors. I-You interactions = positive interaction r/t to treating pt as a human VS I-It interactions = negative interactions in which pt is dehumanized via treated as an object/nuisance.	N/a
IV	Healthcare utilization/ Pop. Dem.	2017	Zaretsky, K., Flatau, P., Spicer, B., Conroy, E., & Burns, L.	What drives the high health care costs of the homeless?	To determine driving healthcare costs for homeless patients	Health care costs are most strongly associated with diagnosed mental health disorders, followed by long-term physical health conditions. A current drug or alcohol dependency, but no diagnosed mental health disorder or long-term physical health issue, is not associated with higher level health care costs. Finally, higher health care costs are incurred by those with long periods of rough sleeping.	12 Months

Appendix C

Figure 1. Healthcare Association of Hawaii, Safe Discharge for Homeless Patients

Purpose

This document serves as a minimum community standard regarding the safe discharge to the community from acute and post-acute facilities for individuals identified as homeless, including children of homeless parents. This checklist is intended for homeless individuals for whom placement cannot be found, or, for homeless individuals who choose not to take advantage of placement recommendations.

Applicable discharge settings:

- Acute hospital inpatient discharge to the community
- Acute hospital emergency room discharge to the community
- Nursing facility discharge to the community

Community Standard

1. Food Security
 - Offer of food.
 - For inpatients, food is provided as part of the normal course of their stay.
 - For ED, food is provided as medically indicated as part of the treatment process during the visit.
 - If patient declines, document.
2. Clothing, if patient's clothing is inadequate
 - Street clothing that is clean and in good condition.
 - Covering for top and bottom (may be 1 or 2 pieces) and footwear.
 - If patient declines, document.
3. Medications
 - Appropriate* discharge medications or a prescription with minimum three-day supply.
 - When available, work with outpatient pharmacy to fill prescription in timely fashion so patient can access medications when discharged.
 - If patient declines, document.
4. Vaccinations
 - Vaccinations appropriate* to patient's presenting medical condition.
 - If patient declines, document.
5. Durable Medical Equipment
 - Provide durable medical equipment for patient to be independently mobile as defined by provider or mobile with assistance of a caregiver.

6. Post Discharge Instructions and Referrals
 - Standard protocol for Post Discharge Instructions.
 - If Appropriate, contact via phone, e-mail or fax with receiving provider, clinic or agency.
7. Transportation
 - Transportation to “previous living situation” (e.g., place of homelessness) or agreed upon shelter or facility.
8. Laminated list of community resources
 - Provide island specific information to patient and identify resources most relevant to the patient’s situation.
9. Screen for insurance or offer application assistance if have no insurance
 - Screen patient for insurance.
 - If no insurance, initiate application process and/or connect patient to resources that can assist with completing the application.
 - If patient is in a Medicaid QI health plan, contact the health plan housing/service coordinator.
10. Mental Health Evaluation
 - If patient is exhibiting signs and symptoms of mental illness, perform mental status exam.
 - If positive, determine individual’s ability to care for self. If needed, provide or refer for appropriate intervention.

* *Appropriate is based on the determination of the patient’s treating provider.*

Figure 2. Safe Discharge Workflow for Patients who are Homeless

1) Was the patient provided/offered food prior to discharge?

{YES/NO***:64}

yes
no - ***

2) If the patient's clothing is inadequate, was the patient offered clothing?
(Criteria: Clothing is in good condition, top and bottom portions of the body are covered, patient has footwear) {CLOTHING:14572}

Clothing provided
N/A Street clothing is clean and in good condition
Paper scrubs provided, additional clothing unavailable

3) Has the patient been provided their discharge medications?

Note: Unless declined by the patient, antibiotics are to be filled by inpatient/discharge pharmacy and directly provided to the patient prior to discharge.

{homeless meds:14574}

Discharge medications provided to patient
Electronic or paper prescription provided to patient per patient request
No medications prescribed
Patient declined medications
N/A: Patient left AMA

4) Has the patient been offered appropriate vaccinations based on age and medical indications?
Note: According to QMC protocol, the seasonal flu vaccination must be offered to all patients indicated to receive it.

{vaccinations:14575}

Flu shot received
Patient declined flu shot

5) Has the patient been supplied with adequate DME equipment to be independently mobile?

{DME Homeless:14606}

Walker
Wheelchair
Crutches
Cane
Wound Care Supplies

6) Have post-discharge instructions and referral/appointment information been provided to the patient via the AVS? {AVS Review:14576}

Yes
No ***

7) Has discharge transportation been arranged? {Transp:14577}

Yes***
No
Patient declined

8) Has the patient been provided appropriate referrals and/or contact information to access community resources/programs? {Homeless resources:14578}

Social Worker Consulted
Oahu Homeless Help Card

9) Has the patient's insurance been verified?

{Homeless Insurance:14580}

Yes, the patient is insured
Yes, the patient is ineligible for insurance coverage
Pending, patient was offered a Med-Quest application

10) Is the patient exhibiting signs or symptoms of mental illness?

{mental illness:14583}

No
Yes, SW consult completed
Yes, Psychiatry/MCLT consult completed
Yes, MD aware and resources provided

Appendix D

Figure 1. Permission for Use: Iowa Model

6/16/2019

Gmail - Permission to Use The Iowa Model Revised: Evidence-Based Practice to Promote Excellence in Health Care



Flannery Shannon <f.shannon06@gmail.com>

Permission to Use The Iowa Model Revised: Evidence-Based Practice to Promote Excellence in Health Care

1 message

Kimberly Jordan - University of Iowa Hospitals and Clinics <noreply@qualtrics-survey.com> Tue, Jun 11, 2019 at 9:18 PM
Reply-To: Kimberly Jordan - University of Iowa Hospitals and Clinics <kimberly-jordan@uiowa.edu>
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Appendix E

Figure 1: Logic Model

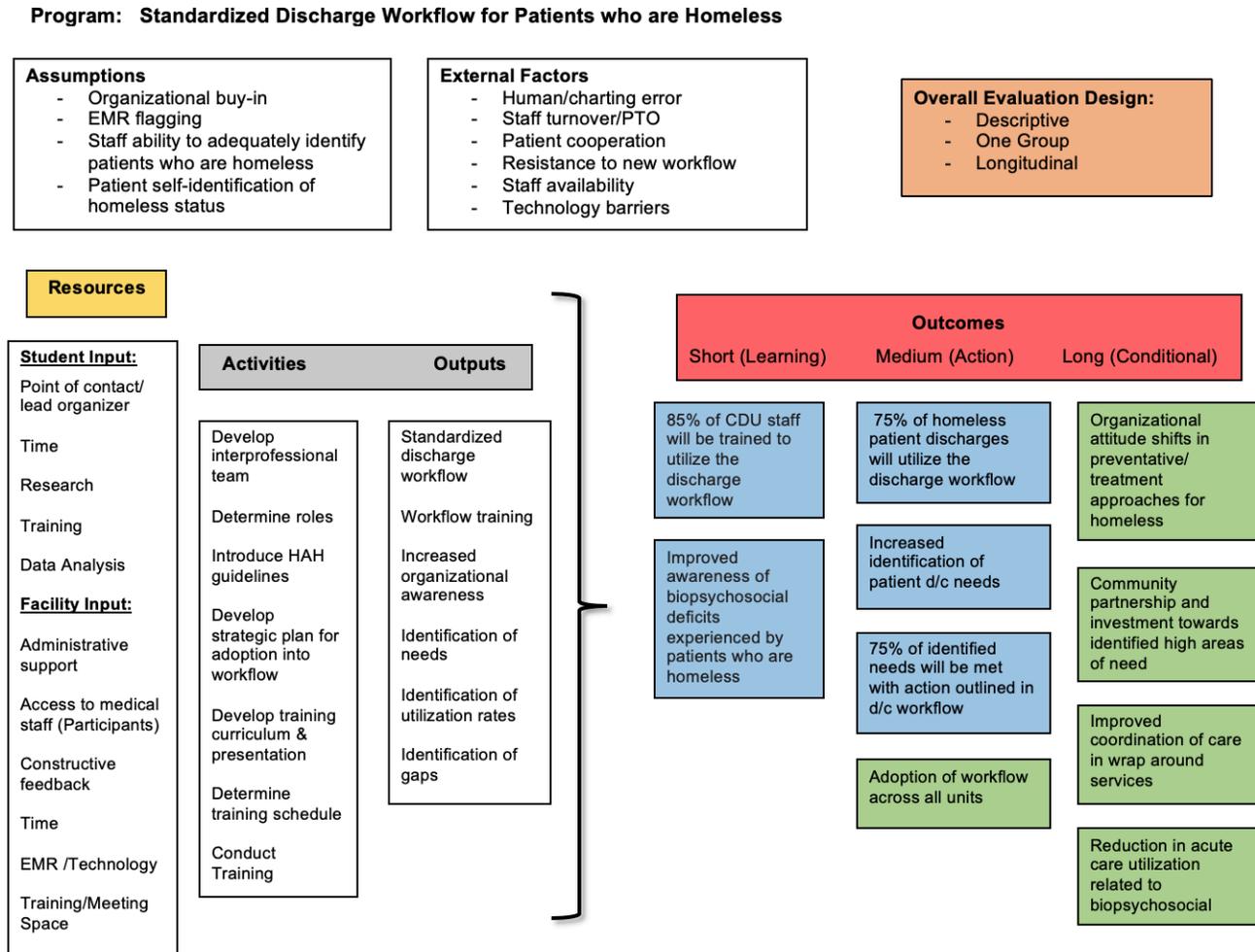


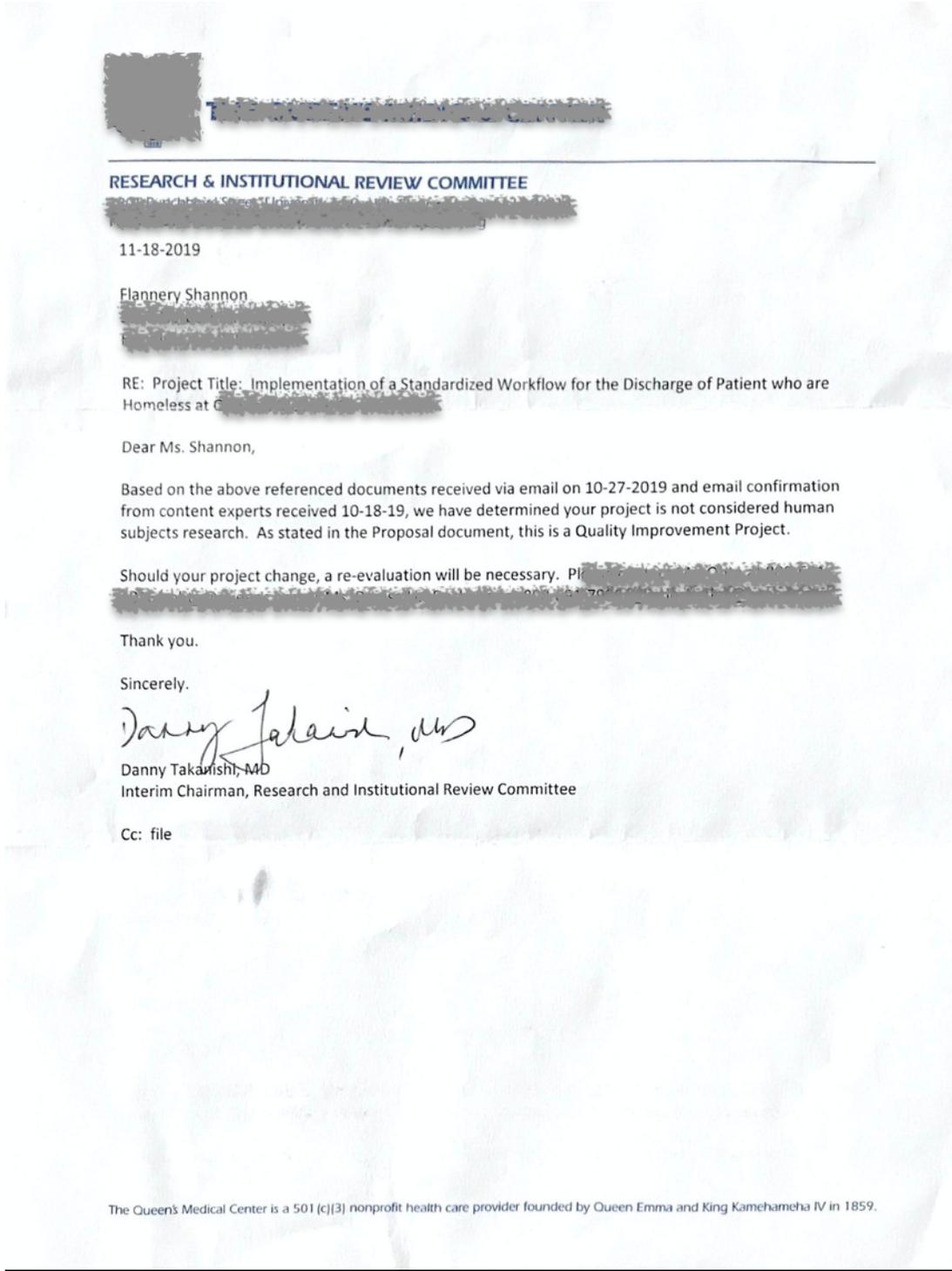
Figure 2: Gantt Chart

Objective/Aim	Responsible Person	Due Date	Comments
Major Task #1: By the end of December 2019, develop and integrate the HAH's guidelines into an EMR template for medical staff utilization			
Submit proposal material to RIRC for review.	Myself	September 15 th 2019	To be submitted upon committee approval of proposal.
Contact HAH to determine if revisions will be made to discharge checklist prior to September 30 th 2019	Myself	Ongoing	Current version 4/22/2019.
Obtain HAH's most current discharge checklist.	Myself	Ongoing	Current version 4/22/2019
Schedule and attend telephonic meeting with content experts to review HAH checklist barriers and methods to integrate into workflow.	Myself, Content Experts	December 9 th 2019	.
Email to management positions of RNs, CMs, SWs and Assistant Chief of ED to introduce project concept, discharge workflow draft for review	Content Experts	November 29 th 2019	Introduce project concept and attach HAH guidelines. Request each member to attend meeting or send a representative to create representative team.
Develop draft of discharge workflow	Myself	December 11 th 2019	Pending RIRC confirmation of QI
Initial meeting of representative team to discuss methods of integration into current workflow, barriers, and alterations to workflow draft.	Myself, Content Experts, Representative Team	December 11 th 2019	
Develop finalized draft of discharge workflow.	Myself, Stake Holders	December 22 nd 2019	
Coordinate with Content Experts to schedule meeting with IT to create EMR script.	Myself, Faculty	N/A	Content Experts were able to develop without IT support via Care Link SmartPhrase
Major Task #2: By the end of December 2019, 85% of medical staff responsible for discharges will engage in training for the workflow			
Determine training times and dates and reserve space for trainings.	Myself, Content Experts, Management	December 22 nd 2019	
Develop training curriculum/presentation and email to content experts and DNP chair for commentary	Myself	December 22 nd 2019	
Notify eligible staff of training schedule	Myself, Management	December 22 nd 2019	
Complete eight staff trainings and count # of attendants.	Myself, Stake Holders	December 31 st 2019	
Major Task #3: Between January 1st and February 7th, 2020, 75% of homeless patient discharges will show record of utilizing the workflow			

Launch EMR Workflow	Myself, IT	January 1 st 2020	
Send weekly emails to representative team to request feedback and address concerns	Myself, Representative Team	Weekly	
Compile aggregate data of number “flagged” homeless patient visits to the CDU	Myself, Content Experts, IT	February 7 th 2020	
Compile aggregate data of completed workflows.	Myself, Content Experts, IT	February 7 th 2020	
Major Task #4: Between January 1st and February 7th, 2020, 75% identified biopsychosocial needs outlined in the workflow will have documentation of being met by discharging staff.			
Compile aggregate data of patient identified biopsychosocial needs.	Myself, Content Experts, IT	February 7 th 2020	
Compile aggregate data of staff selection of intervention (or lack of) in response to each identified need.	Myself, Content Experts, IT	February 7 th 2020	

Appendix F

Figure 1: Approval Letter from RIRC



Appendix G

Figure 1: The Essentials of Doctoral Education for Advanced Nursing Practice

DNP Essential	DNP Student's Activities/Products
Essential I: Scientific Underpinnings for Practice	<ul style="list-style-type: none"> • Completion of required DNP program course work specific to evidence-based practice, program evaluation, leadership, translational science, the DNP project, informatics, bioethics, economics, and health policy. • Literature search, critique and rating of evidence utilized for DNP project. • This evidence-based quality improvement project used current literature and scientific rationale to improve knowledge and access of standardized charge practices of for patients who are homeless in a manner that is congruent with nursing values and practice.
Essential II: Organizational and Systems Leadership	<ul style="list-style-type: none"> • Completion of require DNP program course work focusing on leadership in health systems (including course work identified in Essential I). • As the DNP project leader, this DNP student used their interpersonal skills to engage RN-CMs and SWs in training to provide a standardized process for identifying and meeting homeless patient's biopsychosocial deficits in an effort to improve staff efficacy and patient health outcomes.
Essential III: Clinical Scholarship and Analytical Methods for EBP	<ul style="list-style-type: none"> • Review and evaluation of the literature to determine the prevalence and significance of the problem and determine best practices to address the problem • Preparation of DNP project report
Essential IV: Information Systems/Technology	<ul style="list-style-type: none"> • Completion of coursework for technology and informatics (including course work identified in Essential I). • Evaluation of specific data points selected from patient medical records (All PHI removed).
Essential V: Health Care Policy for Advocacy in Health Care	<ul style="list-style-type: none"> • Completion of coursework for health policy (including course work identified in Essential I).

Essential VI: Inter-Professional Collaboration	<ul style="list-style-type: none"> • Interprofessional collaboration with various departments and organizations to develop a feasible and effective workflow model meeting proposed community standard of care.
Essential VII: Clinical Prevention and Population Health	<ul style="list-style-type: none"> • Review of literature for this DNP project and clinical practice. • Identified a gap in care impacting determinants of health and designed an approach to meet community standards of care.
Essential VIII: Advanced Nursing Practice	<ul style="list-style-type: none"> • Developed, lead and evaluated a quality improvement approach to improve continuity of care. • Completion of at least 500 hours of clinical rotations.