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# Illicit Substance Use in Acute Care Hospitals: Creating a Safe Environment

Christina Sanford
sanfordchr@aol.com

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Christina E. Sanford, DNP(c), RN, NEA-BC

University San Francisco

Chair: Juli Maxworthy, DNP, PhD(c), MSN, MBA, RN, CNL, CPHQ, CHSE, FNAP, FSSH

Committee member: KT Waxman, DNP, MBA, RN, CNL, CENP, CHSE, FSSH, FAAN

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## Abstract

**Problem:** In January 2019**,** a medium-sized acute care hospital in Northern California reported new safety concerns related to patients using illicit substances in the hospital.

**Context:** Leaving the hospital AMA is an increasing problem in acute care hospitals among patients who use illicit substances, with a rate of 25% to 30% (Ti & Ti, 2015). Grewal et al. (2015) conducted a study of over 1,000 illicit substance users who had experienced a hospitalization, where 43.9% reported use of illicit substances while in the hospital.

**Intervention:** The project was the creation, implementation, testing, and evaluation of multiple interventions to improve patients' safety who use illicit substances in an acute care hospital and for the staff who care for them. Collectively, the interventions will be referred to as the toolkit.

**Measures:** To assess and measure the effectiveness of training provided to staff, the Thackrey Confidence in Coping with Aggression instrument with pre and post-assessments was utilized. Knowledge acquisition of the concept of implicit bias was measured pre and post-education. Comfort level or self-assuredness of nurse leaders was measured pre and post-education and simulations. A survey measured stakeholders' overall satisfaction with the toolkit. Reduction in risk reports of safety concerns regarding this patient population was tracked and measured.

**Results:** There was a 94% reduction in the number of risk reports related to safety while over 200 behavior contracts have been administered. There was a 20.5% improvement of the level of self-assuredness of the contract's nurse leader administration, or $p$-value <.005. The comfort and confidence level of staff improved with statistical significance in nine out of ten measures on the Thackrey instrument. The overall level of satisfaction of the toolkit was measured at 7.29 on a Likert scale of 1-10.

**Conclusions:** The toolkit provided effective strategies to mitigate risks associated with this patient population. The ongoing support and sponsorship for a project that crosses department and service line boundaries are in place to assure sustainability.

Keywords: *illicit substance, acute care hospital, safety, implicit bias, patient safety*

## Section II: Introduction

### Problem Description

Illicit drug overdose in our nation is at epidemic proportions and continues to rise. In 2016, there were 63,632 overdose deaths, and in 2017, those numbers increased to 70,237 (Scholl, Seth, Kariisa, Wilson, & Baldwin, 2019). From 2016 to 2017, our nation experienced an increase of 45.2% death rate secondary to synthetic opioid-related overdose deaths (Scholl et al., 2019). Currently in America, 130 people die daily due to an opioid overdose (Centers for Disease Control and Prevention, 2018). Opioid deaths in California increased by 8.2% between 2016 and 2017 (Scholl et al., 2019). During this same timeframe, California was listed as one of the top three states to experience an increase in heroin-related overdose deaths, with an increase of 21.4% (Scholl et al., 2019). The trend in California and across the United States is an increase in visits to hospital emergency departments and inpatient stays related to opioids, with similar upward trajectories in volume (see Appendix A) (Agency for Healthcare Research and Quality [AHRQ], 2018).

The setting for this Doctor of Nursing Practice evidence-based change of practice project is a 173-bed, full-service, acute care hospital located in Northern California. This hospital is one of 21 hospitals in an integrated healthcare system. In 2018, the facilities emergency department experienced over 61,000 visits, and the hospital performed over 18,000 surgeries (Kaiser Permanente, personal communication, November 2, 2018). The hospital is a teaching institution with family practice and foot and ankle residency programs and a medical student rotations site. There are two other acute care hospitals in this city and five hospitals in the county. The county's population is 503,246, reflecting a negative growth pattern for the past three consecutive years, and the first successive negative growth years since 1850 (World Population Review, 2019). The

county experienced a devastating wildfire in October of 2017, with over 8,000 homes and structures destroyed. The city is now ranked third in the nation for those homeless in suburban areas (Henry et al., 2018). Sonoma County ranks mental health illness and substance abuse disorder services as two of their five priorities (Sonoma County Community Foundation, 2016).

In the acute care hospital, eight incident reports related to illicit substance use by patients were filed in 2018, with concerns over patient behaviors and visitor and staff safety. In the first two months of 2019, eight additional reports were submitted of illicit substances or paraphernalia located in patient rooms. Clark (2014) encourages nurses to get involved in legislation and build programs at local facilities to develop policies, plans, and education for staff to reduce overdoses. This project aimed to understand the impact on quality and patient safety that the opioid epidemic has on patients and the staff within an acute care hospital and to provide recommendations to facilitate quality care and improve patient and staff safety.

## Available Knowledge

### PICOT Question

The literature review related to the project question follows the PICOT (population, intervention or interest, comparison, outcome, and time) structure template for an evidence-based practice (EBP) search (Melnyk, Gallagher-Ford, & Fineout-Overholt, 2017). The search question was: In patients who use illicit drugs, how does a program to manage illicit drug use in the hospital, compared to no program, affect physical or psychological safety of staff and patients within six months of implementation?

### Literature Review

Databases searched included PubMed, CINAHL, Cochrane, AHRQ, PsychINFO, and Academic Search Complete for dates between 2009 and present. Terms utilized for the search

included *opiate abuse, illicit substance, inpatient hospital, bias, psychology of nurses, qualitative, quantitative, safety, harm,* and *drug overdose* combined with the Boolean operators AND and OR. The database searches yielded thousands of titles, many of which did not pertain to the acute care hospital or safety related to illicit drug use within the hospital. The decision was made to narrow titles to those that more closely aligned to the components of the specific research question, utilizing inclusion and exclusion criteria. Studies were limited to those published in 2014 or after, in the English language, and peer-reviewed, and excluded those articles about safety programs of hospitals that did not include the risk of illicit substance use. The search did not identify any experimental or quasi-experimental studies. Types of studies include qualitative and quantitative studies, in addition to a case study with expert opinion.

Inclusion Criteria:

- Published 2014 or after
- English language
- Peer-reviewed
- Hospitalized patients who use illicit substances
- Leaving the hospital against medical advice (AMA) and illicit substance use
- Qualitative study on those who care for patients who use illicit drugs
- Illicit substance abuse in acute hospitals
- Qualitative study on medication-assistive therapy
- Bias and healthcare providers

Exclusion criteria:

- Hospital safety programs that exclude illicit substances
- Leaving the hospital AMA without illicit substance

- Prescription opiate use in hospital
- Safe programs outside of the hospital

Due to the lack of evidence for a comprehensive program, abstracts from 50 articles were reviewed for general themes. Ten articles were identified to include a sampling of themes found in the literature to address the question. These themes were specific to bias in healthcare providers; experience of staff and patients with illicit substance abuse within a hospital; risk reduction programs, such as medication-assisted treatment; recommendations for nurse involvement in the opioid epidemic; and statistics of the opioid and drug epidemic. Limitation of the search included no findings for a comprehensive program for hospitals that address patient and staff safety. The case reviews reported appropriate use of statistics.

Literature was rated utilizing the John Hopkins nursing evidence-based practice hierarchy (Dang & Dearholt, 2018). Of the 10 articles reviewed, three were Level III systematic reviews of quantitative studies (Fitzgerald & Hurst, 2017; Hall et al., 2015; Ti & Ti, 2015); two were Level III qualitative studies (Lewis & Jarvis, 2019; Teruya, et al., 2014); two were Level III quantitative prospective cohort studies (Grewal et al., 2015; Ti et al., 2015); one was a Level V case study with expert opinions (Baldassarri, Lee, Latham, & D'Onofrio, 2018); and the other two articles were Level V non-research case reports (Clark, 2014; Scholl et al., 2019). The quality of the studies is included in the evidence table (see Appendix B).

Of the articles reviewed, none contained information of a comprehensive program to address the safety of staff and patients. Three major themes emerged from the review of the literature: person-specific approach, implicit bias, and harm reduction programs within a hospital to decrease the rate of this population leaving AMA.

**Leaving against medical advice.** Leaving the hospital AMA is an increasing problem in acute care hospitals among patients who use illicit substances, with a rate of 25% to 30% (Ti & Ti, 2015). Reasons for leaving AMA, according to patients who used illicit substances during their hospitalization, included active withdrawal, a desire to use, and discontinuation of addictive drugs during hospitalization (Grewal et al., 2015). Glasgow, Vaughn-Sarrazin, & Kaboli (2010) reported a significant increase in the risk of 30-day readmission and mortality with patients who leave the hospital AMA. Choi, Kim, Qian, & Palepu (2011) documented a statistically significant increase of 12-month all-cause mortality, readmission, and in-hospital mortality in regard to leaving the hospital AMA.

**Harm reduction.** Grewal et al. (2015) conducted a study of over 1,000 illicit substance users who had experienced a hospitalization, where 43.9% reported use of illicit substances while in the hospital. Grewal et al. (2015) argued for the need of harm reduction strategies, such as supervised injection locations, within the acute care hospitals. Ti et al. (2015) found that 68% of patients who use illicit substances are willing to participate in such programs.

It will be essential to understand why some patients seek and continue with medication-assisted treatment for substance abuse and addiction, while others do not. Teruya et al. (2014) reported obstacles for continuation with therapy from the patient's perspective included the patient's personal situations, the patient did not like how the medication made him or her feel, and the patient felt the design of the rules of the trial limited his or her continued participation. Some participants stated that they did not understand the number of days they could miss treatment, and when they exceeded the number of days, the participant was withdrawn from the study. Other design rules included the ability to allow an individual's preference for methadone versus buprenorphine/naloxone, and when participants were randomly assigned to

buprenorphine/naloxone, they left the study due to reported unpleasant effects, their desire for methadone, or they transferred to a methadone treatment program outside of this study (Teruya et al., 2014). Two other participants were withdrawn, one after becoming pregnant and another for using prescription opiates and not informing the study staff. Factors that had a positive contribution for patients to continue treatment included the feeling of *normal*, if and how staff interacted with them, and the personal conviction of the patient (Teruya et al., 2014).

**Implicit bias.** The topic of implicit bias from healthcare providers to patients and the potential adverse health outcomes are real, and as nursing leaders, we need to understand and create interventions for improvement. Lewis and Jarvis (2019) described student nurse experiences of unpleasantness in caring for people who use illicit substances, along with discrimination, bias, and ethical questions, and described a better sense of understanding with real situations, conversations, education, and simulations. Due to the lack of adequate data on the survival rates of critically ill people who use illicit substances, Baldasssarri et al. (2018) reported that medical futility is not a reason to withhold treatment. They suggested treating these patients as any other patient with a chronic medical condition and to utilize ethical inquiry. Fitzgerald and Hurst (2017) and Hall et al. (2015) recognized implicit bias among healthcare providers and called for more research to understand the impact of bias on the healthcare outcomes and to understand how to best change this experience.

Based on this literature review, evidence of safety programs within a hospital and how these might affect the physical or psychological safety of staff or patients was not found. There is clear evidence of the need for hospitals to address and to reduce the rate of AMA. Although there are no evidence-based strategies in the literature on implicit bias related to patients with

illicit substance use or strategies to improve implicit bias, organizations can start with education for their providers and staff.

## Rationale

Understanding the themes that emerged from the evidence review and the limitations of these studies, a framework was applied to the project. A framework of theories or concepts should be applied to guide the work of the project to evaluate relationships among concepts. There are three perspectives that were combined which guided this project: theory of human caring, the concept of implicit bias, and Kotter's 8-Step Change Model. For this project, the phenomenon of study was the identification of caring behaviors by a nurse leader when administering a behavioral contract during simulation and the nurse leader self-report of knowledge of the concepts related to implicit bias.

Jean Watson (2008) developed and published her theory of human caring in 1979. The 10 main components, or carative factors, include necessary conditions to demonstrate caring by a nurse, which differentiate the professional nurse from an experienced technical practitioner (Watson, 2008). In 2008, Jean Watson published minor modifications to include a change of language from carative factors to caritas processes. This current version

The Caritas Process 4 includes "Developing and sustaining a helping-trusting caring relationship," which highlights caritas consciousness as a component and encompasses transpersonal caring moments to "preserve human dignity" (Watson, 2008, p. 81). Through this process, an individual is able to detect nonverbal clues, demonstrates regard for the heart of another, and is more open (Watson, 2008, pp. 77-86). These components of human caring theory resonate with experiences expressed in the literature of patients not sensing treatment with respect and dignity and experiences of student nurses caring for this population. The theoretical

framework of human caring has been utilized for decades to inform each of the patterns of knowing through the lens of care for and impact to self and patient and the relationship between patient and nurse.

Greenwald and Banaji (1995) described the concept of implicit bias as a function of the human mind that its actions are not necessarily a conscious act. The Institute of Medicine's report *Unequal Treatment* outlines disparities of treatment in healthcare due to implicit bias (Smedley, Stith, & Nelson, 2003). Core concepts within implicit bias include unconscious harmful acts and decision making against those who are different from self (Smedley et al., 2003). The concepts of implicit bias are developing, in part by the research and work of Greenwald and Banaji and have been used to measure negative thoughts and/or behaviors towards minorities and vulnerable populations. Eight of the eleven students who participated in the Lewis and Jarvis (2019) study reported they experienced thoughts of judgment about this patient population, and that is not even a measurement of implicit bias.

In addition to the theory of human caring and the concept of implicit bias, Kotter's 8-Step Change Model was utilized for a successful change management strategy. Dr. Kotter published in 1995, his observations on the top eight reasons change efforts failed, after years of research within different organizations, as he studied and learned which factors facilitated change and which did not (Kotter, 1995). These observations of change management failures led Kotter to evolve a change model, what is now known as Kotter's 8-Step Change Model (Kotter, 2019). The eight steps of the model for successful change management include to: create a sense of urgency, build a coalition, develop a strategic vision, enlist an entire team, remove barriers, generate short-term wins, sustain acceleration, and institute change (Kotter, 2019).

This change model was applied to this project and provided a solid framework for successful change. Each step in the change model aligns with pertinent elements of the project. For example, step one of the change model calls to create a sense of urgency. Due to multiple safety concerns, a sense of urgency was building from front line staff, physicians, and leadership. Additional steps in the model include strong leadership, vision, and the ability to remove barriers and create short-term wins. A core interdisciplinary leadership team was engaged and committed to change practice with a shared vision. The work to remove barriers and to generate short-term wins was important as each of the new processes were implemented.

The combined framework of human caring and the concept of implicit bias provided the necessary structure for this project. The impact of an individual's unconscious bias on a trust-based relationship is essential for those involved to understand what this impact has on the relationship and how to provide strategies towards non-bias. Kotter's change model steps were utilized to guide successful change management strategies as our team studied, created new education and processes related to safety with illicit substance use, while learning about implicit bias and how to treat this population with dignity.

## Specific Aims

By September 1, 2020, develop, implement, and evaluate an illicit substance toolkit. The objectives included:

- Reduction of safety reports by 50% related to illicit substance abuse by patients.
- Improvement of comfort of nursing leaders by 20% to administer contracts with patients.
- Increase of confidence of staff by 20% for dealing with issues surrounding substance abuse.

## Section III: Methods

### Context

The toolkit was piloted at a 173-bed acute care hospital in Northern California. The hospital's mission statement is "to provide affordable, high-quality health care services to improve the health of our members and communities we serve" (Kaiser Permanente, n.d., para. 4). The hospital serves a member base of 144,503 patients in a city of 185,083. The membership includes 72% commercial insurance, 12% Medicare, and 11% Medi-Cal/other (Kaiser Permanente, personal communication, November 2, 2018). Membership ethnicity includes 71% Caucasian, 21% Hispanic, and 8% other (Kaiser Permanente, personal communication, November 2, 2018). There is an average daily census of 113, over 61,000 annual emergency department visits, 10,758 annual hospital discharges, and over 18,000 annual surgeries, with an average length of stay of 3.47 days (Kaiser Permanente, personal communication, November 2, 2018). There are 2,895 physicians/staff, and 2020 is the third year of a family practice residency program, with a long-standing history of medical student and foot and ankle residency rotations (Kaiser Permanente, personal communication, November 2, 2018).

The senior leadership team was the sponsor this toolkit. The senior leadership team created an interdisciplinary Threat Management Team (TMT) comprised of leadership representatives from hospital, nursing, physician, risk, security, compliance, human resources, and ambulatory departments. The TMT is responsible for providing ongoing education and training to staff and physicians throughout the medical center on policies related to violence, reporting, and industry standards. The TMT identifies, evaluates, determines credibility of, and develops action plans for perceived physical or psychological threats to our patients or staff.

The senior leadership team assigned the TMT to evaluate and address the issues surrounding the reported concerns and to mitigate the risk to staff and patients. Stakeholders included senior leaders, nursing and physician leadership, emergency department, staff nurses, security officers, and administrative house supervisors. Staff voiced their concerns about patients using illicit substances in the hospital, their safety related to contaminated needles, the potential for incidental exposure to illicit substances, and their safety related to threatening behaviors exhibited by these patients and/or their visitors. Physicians self-reported that they were not all trained and comfortable to treat this patient population and engaged with this work for positive change.

## Interventions

The project was the development and testing of a toolkit for acute care hospitals to mitigate safety risks to staff and patients in the setting of patients using illicit substances in an acute care hospital. The toolkit contains multiple items that include educational modules, process and procedure for the sequestering of belongings, a risk assessment tool, documents and process for the administration and tracking of behavioral contracts. All items were developed over time and underwent revisions based on small tests of change and stakeholder feedback.

First, the risk assessment screening tool contains different levels of interventions based on the risk level assessed (Appendix C). The risk assessment screening tool was developed in collaboration with our Area Quality Leader (AQL), responsible for risk director accountabilities, and this author, as there were no evidence-based risk tools located in the literature. The process of risk assessment was initially completed by two nursing leaders together, with the intent of support and to maximize consistency with the assessment process. Once the nursing leaders were familiar with this process, and the accuracy was validated, they now perform this

independently. The nursing leaders were trained in person by either one or both tool creators. Once nursing leaders complete a risk assessment, they provide their summary in writing to creators of the tool, who then provided feedback of appropriateness and whether there was interrater reliability. The summary includes a patient history of illicit substance use, the specific behavior that aligns with the risk assessment tool, and what level of risk the nurse leader scored and why. Feedback was sent to each of the nurse leaders' first six assessments from the creator of the tool.

Once the risk assessment is completed, the next step in the process is for two nurse leaders to deliver a patient letter and behavior contract for those patients who scored as high risk (Appendix D). The AQL and legal created the patient letter and behavior contract. A how-to guide for nursing leadership on how to deliver the contract to the patient which includes the recommended standardized administrative documentation note in the medical record, with an example tracking document for the contracts administered (Appendix E). The patient receives a copy of the contract, which outlines the patient's and the organization's rights and responsibilities, and a copy is placed in the medical record. For consistency, the frontline nurses will include the patient specific safety interventions of the contract during shift hand off. The AQL and this author manage the tracking of contracts administered and also serve as content experts for questions, concerns, or problems with any contract or patient. There are examples of the process and documents for security officers to safely sequester patient belongings and how to destroy illicit substances; this process includes a nursing leader as the second witness to the process.

Also, educational sessions were provided for staff nurses, nursing leadership, security officers, and providers. The next stage in the development included a plan to conduct simulations

which included standardized patients, hospitalist-based physicians, and nurse leaders. A simulation was developed for the hospitalist-based physician's conversation, which occurs during the admission process with the patient who uses illicit substances, followed by the nurse leaders administering the contract. This session included a standardized patient, the simulation manager, our chief of the hospital-based physicians (HBS), three adult services nursing leaders, and this author. This group tested different scripts for the hospitalist-based physician's conversation followed by the nurse leaders administering the contract. Based on input from the standardized patient, chief of HBS, and nursing leaders, a script was chosen (Appendix F). The plan was to create simulations for all HBS physicians to attend, yet when the COVID-19 pandemic hit, a shift in our priorities was necessary, and the simulations for the physicians did not occur. The chief of HBS did share the recommended script with all HBS providers with her expectation of them to utilize this script when admitting patients with illicit substance use disorder.

The next round of simulations was explicitly aimed for nurse leaders to administer the behavior contract in the emergency room, immediately following the script from admitting HBS physician. Simulations were created to include a standardized patient with two nurse leaders administering the behavioral contract (Appendix G). Nursing leaders who participated in the simulation included those from the emergency department, adult services, maternal-child health, and the administrative house supervisors. Twenty-eight simulation time slots for two nurse leaders per session were offered. Due to COIVD-19, only twenty-one sessions were completed with thirty-one unique learners. The remaining sessions were cancelled due to our change in priorities.

## Gap Analysis

A review of the incident reports filed that described safety concerns of patients using illicit substances, data of patients leaving against medical advice, conversations with front-line physicians, nurses, and nurse leaders, and current policies, identified a large gap with no current policies, guidelines, agreements, or training program for this risk. Multiple interventions were then created, implemented, and revised through an iterative process by small tests of change. Once all elements of the toolkit were in place, a formal gap analysis was conducted.

The gap analysis demonstrated inconsistent practices with multiple elements of the toolkit. These areas included the administration and documentation of the contract, the process of searching and sequestering belongings, the destruction of illicit substances, and the need to assess and treat opioid withdrawal (see Appendix H). Results from the satisfaction survey informed the action plan, which included additional training, change in processes, and agreements.

The results demonstrated the need for additional education and engagement with the emergency department. An educational presentation was created and provided to all of the emergency room charge nurses, nurse managers, director, and chief by the AQL, physician chief of hospital operations, and this author. During this discussion the nurse managers and charge nurses pushed back on the presentation of the contract prior to admission while the managers verbalized their disinterest with this process, viewed this as a function for the inpatient leaders, and felt this process would delay admissions and back up throughput. Once they heard actual stories and the risks involved, we came to agreement for support of this process by compromising with the emergency department nurse managers to change their role to only be witness of the process. The house supervisor or inpatient nurse leader’s role would be the

primary leader during the administration process, and security would sequester belongings in the emergency department.

Additional findings from the survey and verbal feedback that were addressed was the lack of comfort by the front line nurse leaders in the process of administering the contract, that they felt the actual contract was lengthy, that the language felt punitive, and that the tracking of the documents and process was cumbersome. To address the level of comfort of the nurse leaders a simulation of the nurse leader administering a contract to a standardized patient was planned. Language in the contract was revised with input from a Care Experience leader. The risk assessment tool was revised and shortened based on our experience and data. The how-to guide on the process to administer the contract was also revised and condensed, and a smart phrase was developed for the nurse leaders to use for the documentation in the medical record when they deliver the contract which improved their efficiency and standardization. The smart phrase includes the following information:

- Behavioral contract read to patient who was AAO X3, participated in conversation
- Patient acknowledged receipt and understanding of contract
- Names of nursing leader who administered contract and witness
- If patient signed contract
- Notification to attending physician contract in place
- Confirm belongings were sequestered and list items approved to remain in patients' possession
  and is documented in the notes section of the medical record.

## Gantt Chart

A Gantt chart is utilized to map the timeline of the project, sequencing different tasks, and provides clear visual deadlines, due dates, and significant project headings. The Gantt chart was broken down by categories of the work breakdown structure, with the overarching strategy on top (see Appendix I). The overall strategy was developed by the core team. Education was sequenced, dependent on timing with the education department and development and assessment

of interventions. Annual classroom education for staff nurses occurred in May and June of 2019. All surveys, including non-research, with data for potential publication, are required to be submitted to the organization's Institutional Review Board (IRB) for waiver approval. Compliance contains elements to facilitate processes to improve patient and staff safety. Items in security are focused on safe practices for security officers, staff and for collaboration. Measurement and analysis are sequenced over time with timing of newly developed processes or interventions.

## Work Breakdown Structure

To manage the deliverables for this project, a work breakdown structure (WBS) was utilized to manage and visualize the project steps, as recommended by Martinelli & Milosevic (2016) and Shirey (2008). The first or top box in the WBS was the overall project to create a comprehensive plan to improve staff and patient safety when patients use illicit substances within the hospital. The next step was to gain support and agreement from the chief nurse executive (CNE)/chief operating officer (COO) and the area quality leader (AQL), who is accountable for risk. The next level of the WBS includes four boxes. Those boxes include staff training for providers, compliance of the program, security, and budget (see Appendix J).

The staff training box consists of physician (MD) and registered nurse (RN) training, with a box for engagement and project work with the manager of research. The MD box required the first step to gather key physician leaders to hear the staff complaints and to review incident reports, to obtain agreement that we had a problem and a gap in knowledge, and that as an interdisciplinary team, we needed to agree to a plan. The next step was for the physicians to create teams of champions and work with nursing to create education specific to the physician group. The training content development for RNs started with research on the topic of illicit

substance use within an acute care hospital, which included both database searches and in-person interviews with subject matter experts. The creation of RN education was developed in conjunction with the education department. Staff RNs then completed the education plan and is now provided for all new hire RNs. The research manager's engagement was critical, as she supports many projects within the facility and possesses specific skills and invaluable expertise. The research manager assisted with PICOT development and the draft of the Thackrey (1987) survey instrument to submit for IRB waiver approval. The Thackrey survey instrument was administered to staff before their education and post-education to measure pre- and post-survey differences.

Within the compliance box, work to complete included the development of required documents, a process to involve law enforcement, the development of a process for contract administration, and training for those who administer the contract. The forms which required creation included a patient letter, a contract with behavioral expectations, and a risk assessment to standardize decision making for those who will administer the patient letter and contract. The letter and contract required input and approval from the legal counsel. These documents require a secure location to store, but with an ease for retrieval for the stakeholders who access and track. Access to this secure folder requires the folder owner grant access via information technology.

Stakeholders and leadership who administer and track these forms are the house supervisors, designated nurse leaders, and the risk manager. The creation of a process was required to identify the patient, conduct the risk assessment, administer the letter and contract, and then track information. Once the process design was final, training was provided to the house supervisors and designated nurse leaders.

Support from law enforcement is ideal, and the security director was assigned the task for this outreach. The security box contains elements of safety for the security officers and new processes to improve the safety around patient belongings. A new process was required to sequester belongings, which may pose a threat of safety to staff or patients. Security, risk, engineering, and nursing met to make agreements on these new processes. New equipment and supplies were obtained, which included clear plastic bins of various sizes with the capability for zip locking, numbered zip ties, tracking binder, Rx destroyer (pharmaceutical waste system which is compliant with all regulatory bodies), and padlocks for cabinets. A tip sheet was created on the proper process to use the Rx destroyer. Engineering completed the work order items for new storage space, and supplies were placed with the tip sheet.

Agreements were developed with the director of security to include the order, purchase, and use of new personnel protection devices, such as grippers to remove illicit substances or paraphernalia and needle resistant gloves. The security director then provided training to all officers on their role and on the new processes and equipment. The final box represents the budget, which required a review of the plan with the CNE/COO and then formal approval from the area financial officer.

**Responsibility/Communication Plan**

Effective communication and relationship building skills and strategy are required throughout the life of successful projects (Biafore, 2016). The development and use of an effective communication and relationship strategy with all stakeholders was employed, from frontline staff to physicians to senior hospital leaders. The AQL and clinical adult services director were accountable for the bulk of communication with nursing, leadership, core team, and committees. The chief of hospital-based physicians was responsible for communication to

the hospital-based physicians, with the assistant physician in charge being responsible for communication to the physician leadership across the medical center (see Appendix K).

**SWOT Analysis**

A SWOT analysis was conducted to understand issues within or outside our organization that may have negatively or positively impact this project (see Appendix L). The organization's strength includes senior leadership support, as evidenced by their sponsorship of the TMT to address this issue and by providing a provision of resources. Areas of weakness included this sudden change in our patient population that includes a significant rise in patients with mental illness and substance abuse. An additional weakness was the higher than planned census and a shrinking budget. Threats included a rise of mental health illness in the local community and the continuous juggle with competing priorities among this interdisciplinary team of stakeholders. Opportunities identified included a partnership with community agencies, such as drug treatment centers and local law enforcement, in addition to partnering with in-house pain specialists with connections to the University of California San Francisco who have experience with assessing and treating opiate withdrawal in an acute care hospital setting.

**Budget**

The budget for this project was estimated at $55,000. The majority of the cost was related to the training of staff nurses, nursing leaders, and physicians. Staff nurses are provided one eight-hour day per year, in May and June, for mandatory annual education. By working with the AQL and education department, we developed an educational program to address this topic. Administrative costs included items such as storage bins for patient belongings, personal protective equipment for the security officers, and document development (see Appendix M).

The budget was submitted to the COO/CNE for approval, with second level approval obtained from the area finance officer with the agreed cost avoidance model**.**

## Cost Avoidance Analysis

Data is lacking on costs related to staff injuries sustained by patients who use illicit substances and costs related to patients who use illicit substances during their hospitalization. There is plenty of data to support the rising violence against healthcare workers and the responsibility of leadership to create a safe environment. OSHA reports that workplace violence is underreported, 75% of all workplace violence occurs in healthcare settings, and one risk factor is healthcare workers who care for patients who abuse drugs or alcohol and friends/family of these patients (OSHA, 2016). Violence and exposure to substances are two of the top five categories for healthcare worker injuries (OSHA, n.d.). The financial cost to a healthcare organization in California for a claim of violence against a healthcare worker averages about $46,000 (Insurance Journal, 2016). In 2017, 13,604 claims were filed in the United States for violence against healthcare and social assistance workers, which caused lost time from their work (CDC, 2018).

In addition to work comp claims of violence, the RN turnover rate could be contributed to unsafe working conditions related to caring for substance abuse patients without safety measures. A report prepared for Robert Wood Johnson shows a national RN turnover rate of 12% (Lewin Group, 2009). Jones (2008) reported the replacement cost of one RN at a full-time equivalent is between $62,000 to $67,000 with an inflation adjustment is higher at $82,000 to $88,000. A conservative count of one claim of violence and two RN turnovers in one year, related to this patient population, the cost avoidance is estimated at $206,000 (Appendix N).

## Study of the Interventions

The overarching objective of this evidence-based change of practice project was to improve the safety of patients who use illicit substances in the hospital and improve staff safety for those who care for these patients. There were multiple outcome measures to evaluate different aspects and the overall effectiveness of the toolkit. The safety measurement will be the number of incident reports filed for concerns about staff safety and patient safety, the comfort level of staff and leaders to care for this patient population, the contract administration, and pre and post educational intervention measurements on implicit bias.

To measure the effectiveness of the educational intervention provided to staff nurses and nurse leaders, the Thackrey Confidence in Coping with Patient Aggression instrument (Thackrey, 1987) was administered pre- and post-education (see Appendix O). Thackrey (1987) described the development and testing process of this 10-question instrument and 1-10 Likert scale with the conclusion that this instrument was a measure of a unidimensional construct with a high degree of internal consistency and precision, with a reported $r = .53$ and coefficient alpha = .92, and the total sum of the 10 items had a standard error of approximately 1.5. The Thackrey instrument was administered to nurses' pre- and post-education via Survey Monkey. Paper surveys were offered for those who preferred this survey method. Results from the paper survey were entered into Survey Monkey by the manager of research. The simulation operations specialist ran the Survey Monkey results. *T*-tests analyses were run on the results of each of the pre- and post-questions to evaluate presence of statistical difference between pre- and post-education.

Measurement for the overall satisfaction of the illicit substance toolkit survey included a 21-question satisfaction survey created by this author and administered via the Qualtrics software

program available through the University of San Francisco (USF) (Appendix P). This satisfaction questionnaire was emailed to all Kaiser Permanente Santa Rosa clinical adult services nursing leaders, administrative house supervisors, medical/surgical and intensive care unit staff RNs, hospital-based physicians, emergency department leadership, and critical hospital leadership. The survey was sent to over 200 participants with a return of 83 completed surveys. Descriptive statistics were utilized on the survey results, and t-tests analysis were utilized to compare pre and post nurse leader simulation survey results of the question specific to the self-assured level of comfort of nurse leaders who administer the behavior contracts. Revisions to different toolkit components were performed based on the survey results and analysis presented to the leadership group (see Appendices Q, R, and S).

Another measurement tool was utilized to measure the caring behaviors and communication skills of the nurse leader. The measurement was completed during the simulations by a standardized patient while the nurse leader administered the behavioral contract to the standardized patient. The caring behaviors instrument was McDaniel's Verbal and Nonverbal Caring Behaviors tool with "Absent" or "Present" as the answer options with facility created questions to measure communication (see Appendix T). Content validity was documented at .80 with a reliability of .91 based on a study from two trained raters (Sitzman, 2019). Approval for the utilization of this tool was obtained from Dr. McDaniel by this author. The standardized patient completed the paper survey immediately after each simulation and debriefing session. The survey tool did not contain any personally identifying information. The simulation manager held the survey tool results until all sessions were completed, and results were then entered into an excel database for analysis with descriptive statistics.

The nurse leader's comfort level administering the behavior contract was measured at different time segments during this toolkit build. The literature search did not discover evidence-based questions to measure nursing leaders' self-assuredness levels with the administration of behavior contracts in an acute care hospital. The question utilized for this measurement was created by this author, based on the question structure of the Thackrey survey tool, and was a 10-point Likert scale. The pre-intervention comfort levels were gathered via the satisfaction survey, utilizing Qualtrics, and the post-simulation survey conducted via a paper survey immediately post-simulation. In addition to this one survey question, a self-learning evaluation tool for simulations was utilized with a 5-point Likert scale. This tool was published by Laerdal Medical, modified by the Galen College of Nursing and additional questions were added to capture verbatim comments (Appendix U). The survey tool was collected by the simulation manager and held until all simulation sessions were completed. There is no personal identifying information on the survey tool. Data was entered into an excel spreadsheet for analysis with descriptive statistics.

Additional educational sessions were provided to nurse leaders of the emergency department, maternal-child health, administrative house supervisors, and adult services. The educational sessions provided background information, the neurobiology of addiction, prevalence, human and financial impact, implicit bias, stigma, and preferred language, and described the toolkit elements. Due to patient stories from our facility and literature illustrating implicit bias and stigma, our nurse leaders' measurement of implicit bias was completed. The literature search did not provide an evidence-based survey tool to measure knowledge acquisition on implicit bias. One question was created based on generic knowledge acquisition instruments, and pre and post surveys were conducted with these educational sessions. The surveys were

paper without personal identification information. Data was entered to excel with descriptive statistics and t-tests were performed to analyze any statistical difference between pre and post-education intervention.

## Analysis

Quantitative methods of measurement were used to analyze the different components of the toolkit. Incident reports were analyzed using a statistical run chart. The Excel data analysis tool pack with descriptive statistics was utilized to analyze the education intervention, simulation, and paired t-tests were conducted on all questions on this survey. The purpose was to understand if there was a statistical difference between the pre- and post-survey results of staff nurses before and after the education intervention. The satisfaction survey data analysis was performed utilizing the Qualtrics software and paired t-tests for pre- and post-intervention impacts on nurse leaders' level of self-assuredness to administer the contract. Caring behaviors analysis of the nurse leader simulations was performed using descriptive statistics.

## Ethical Considerations

The focus of this project was quality improvement and not research. The USF IRB provided waiver approval for the quality improvement project. Two components of the project were included in the hospitals' IRB, and waivers were granted through the Kaiser Permanente Northern California IRB board (Appendix V). The two components include the Thackrey Confidence in Coping with Patient Aggression instrument for the pre- and post-education survey and the satisfaction survey on the components of the toolkit. The project was evaluated and approved as a quality improvement project through the USF School of Nursing and Health Professionals (see Appendix W). USF's (n.d.) Jesuit value of *Cura personalis*—care of the whole person—describes the respect we have for every individual's intellectual, physical, and

spiritual health and autonomy, and this value is in alignment with this author's value of honoring, respecting, and consideration of the entire person. This author believes caring for the whole person was the perfect framework for this project, as the literature demonstrates there is judgment and stigma with this patient population. This belief is also in alignment with the American Nurses Association (ANA) Code of Ethics for Nurses. The ANA Code of Ethics provides a framework to guide nurses in ethical practice, specifically Provisions 1 and 8, that includes treating all patients with dignity and respect while collaborating with other disciplines to reduce health disparities (ANA, 2015).

## Section IV: Results

The overall aim of this project was to improve our patients' safety who use illicit substances and the staff who care for them, based on the measurement of risk reports submitted. Before interventions, the baseline data of risk reports totaled sixteen reports with post-intervention risk reports totaled one for a 94% reduction in risk reports.

The pre and post Thackrey tool results provided evidence of effective education for staff and nurse leaders that statistically improved their comfort level and knowledge to care for patients with illicit substance use disorder. Not all participants answered each question. The sample size of the completed survey questions ranged between 166-224. Nine out of the ten questions resulted in statistically significant improvements (Appendix X).

The satisfaction survey results demonstrated an overall level of satisfaction of various healthcare roles, on the different components of the toolkit with a total of 83 participants who completed various questions (Appendices R and S). The components of the toolkit with the lowest scores underwent additional revisions. The AQL and this author met with specific stakeholders for qualitative feedback and reviewed the relevant comments in the survey. The contract language was revised with input from a Care Experience Leader and approval from legal. The Brooks and Sanford Illicit Substance Risk Tool© (Appendix C) was revised and streamlined. A smart phrase was created to simplify the nurse leaders' workflow to document the administration of the contract.

Results from the nurse leader simulation learner evaluation and comments were reviewed and themes that surfaced included: valuable experience, appreciation for the standardized patients, learning a different style from a colleague, and length of time required for the process (Appendices Y and Z). The level of self-assuredness of the nurse leaders who administer the

contract resulted in a statistically significant increase. The pre-simulation group (N=35) was associated with a M=7.05 (SD = 2.67). The post-simulation group (N=28) was associated with a M = 8.5 (SD = 1.34). The results are statistically significant with $p<005$.

The measurement of nurse leaders' familiarity of the concept of implicit bias resulted in statistically significant improvement (Appendix AA). The pre-education group (N=15) was associated with a M = 3.13 (SD = 0.83). The post-education group (N=15) reported a M =4.0 (SD=0) with $p<.001$.

Results for McDaniel's Caring Behavior Checklist from the nurse leader simulations (N=21) was associated with a M=8.8 (SD = 1.28) (Appendix BB). The tool is comprised of 12 questions which ask the presence or absence of verbal and nonverbal items. The score associated with an item present is one and absence is zero. A perfect score would be 12.

## Section V: Discussion

### Summary

The aim for this DNP project included developing, implementing, and evaluating a toolkit at an acute care hospital to improve patients' safety who use illicit substances and for the staff who care for these patients. The overall project was successful, met all objectives, and to date, we have administered over 200 behavior contracts. The project required the ongoing support by senior leaders, interdisciplinary collaboration and approach with generous listening, frequent communication, and embracing multiple change tests. This iterative process allowed staff and leaders in all departments to give input and feedback throughout this process. The open dialogue from all stakeholders contributed to the success. Once feedback was received, revisions were completed, and this demonstrated to stakeholders that the project team was listening, validated their input, and would take action.

Learnings included differing levels of engagement with different departments and the need for ongoing maintenance of the program. Although agreements on workflows were obtained at the highest level, actions of those on the ground in some departments were incongruent, which required additional education and expectation sessions. Training about the toolkit's different components is currently provided to all new leaders, physicians, and staff during their onboarding process to ensure critical messaging and expectations.

### Interpretation

This project is well known across the medical center. In addition to staff, hospital and physician leaders have expressed their appreciation of this work as they hear and see the positive impact to staff and this patient population. The project met or exceeded each aim, and the system does require ongoing upkeep, and there has been workload impact to the house supervisors,

nurse leaders, and during a high census in the emergency department, this process impedes throughput by creating delays for patient admission to the floor. Pushback was experienced from the emergency department and house supervisors which required escalation, re-education, and reconfirmation of agreed process and top priority of safety. The process requires maintenance with data tracking, case reviews, feedback, education, and the actual process time to prepare, administer the contract, and sequestering belongings need multiple people and is not quick.

Leading this change with Kotter's Change Model, the combined framework of Jean Watson's Caring Theory, and the concept of implicit bias blended and illuminated the importance of different frameworks to drive various project components. Participants in the educational sessions and simulations reported new learnings of this patient population and the importance of language and understanding of their personal views.

Future plans for this project include the study of clinical outcomes to understand the impact on rate of leaving against medical advice and the acceptance of medication-assisted therapy. The educational presentations will require updates when processes are revised, or new evidence is published in the literature. The toolkit will be made available to other acute care hospitals in this system challenged with similar patient populations.

## Limitations

During the course of this project, this hospital experienced an evacuation due to wildfire and then COVID-19 pandemic arrived in March 2020. The community has experienced much trauma with two large wildfires in the past couple of years and the capacity for resolve and resiliency is strained. The commitment for departments and leaders to follow the process at times has felt overwhelming when so many other competing priorities, production pressure, and personal stressors impacted one’s ability to stay engaged, focused, and to follow agreed upon

workflows. Simulations for all nursing leaders and physicians were not completed due to changing priorities with the pandemic. To adjust to this, nursing leaders who did not participate will partner up with others who did, during their actual work shift when the opportunity arises. The HBS chief set firm expectations for the team to follow the script and all new physicians receive this training during their onboarding process.

Bias from the standardized patients scoring of nurse leaders Caring Behaviors was potentially present due to the possibility the three unique standardized patients may have had a desire for perceived success of the nurse leader. These standardized patients have experience with many of the nurse leaders from past simulations, planning, debriefing sessions, and one was a member of multiple hospital committees and interview panels as a patient advisor. Although these relationships are professional and not social, this could be an experience similar to that of "ingroup" bias- those with relationships tend to view with a more positive perception (American Psychological Association, n.d.). In addition, to assure consistency in how the standardized patients rated the participants, a strategy for inter-rater reliability of the standardized patients was not included with this project.

Another limitation of this study included the measurement of the nurse leader self-assuredness level. The first measurement was not conducted prior to the start of the process of nurse leaders administering the behavior contracts. This was due to the fact that the contract was one of the first interventions developed, there was a growing urgency for the implementation of risk mitigation strategies to prevent a negative outcome, and the decision was made to implement strategies as they were created and then assess multiple interventions at a later date. The first measurement was conducted six months after the process was initiated.

The success of this project will continue to depend on multiple departments and roles working together to assure safety for these patients and our staff. The emergency department's participation in educational sessions and simulations created relationship building and shared language with this patient population. At times, there is still push back from the emergency department and house supervisors to administer the contract prior to admission, and knowing that this is the safest process, the inpatient nurse leaders will continue to follow the proper process.

## Conclusions

In conclusion, patients who use illicit substances in an acute care hospital place themselves and staff at risk. These patients have a high likelihood to use during their hospitalization. Patient safety and staff safety is the accountability of nursing and physician leadership. The opioid epidemic is present and spreading to different communities which will require safety measures in acute care hospitals.

The engagement and partnership with security provided safe, secure sequestering and storage of patient belongings with a process to destroy substances. Education for staff, physicians, and leaders was essential for their understanding of the disease of addiction, bias, stigma, withdrawal symptoms and treatment, and the processes created for safety. Iterative changes to the process and documents were required for improved efficiency for the end-users and to demonstrate action from their input.

Key partnerships throughout included senior leadership, TMT, legal counsel, and front-line staff and leaders. The sponsorship of this project by senior leadership and TMT allowed for consistent support of the toolkit and they would intervene when issues were escalated. To assure there was no violation of patient rights, legal counsel was critical for the language and contents of the contract. Routine rounding on nursing units provided ongoing opportunities to engage

staff and front-line leaders on their experience with and suggestions for the toolkit. Nursing leaders placed very high value on the simulation, and this author would recommend this to be offered much earlier in the process.

Our hospital experienced a sudden change in patient population, to include illicit substance abuse, and we did not have any system, structure, or knowledge in place to safely care for them. Since the development and implementation of all components of the toolkit, staff and leaders report much higher level of safety and comfort caring for this population.

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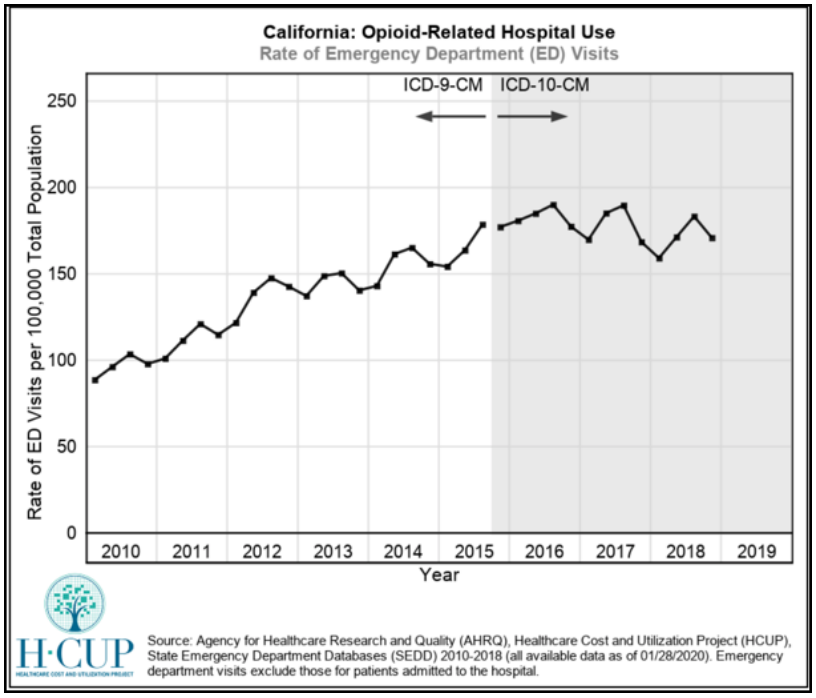
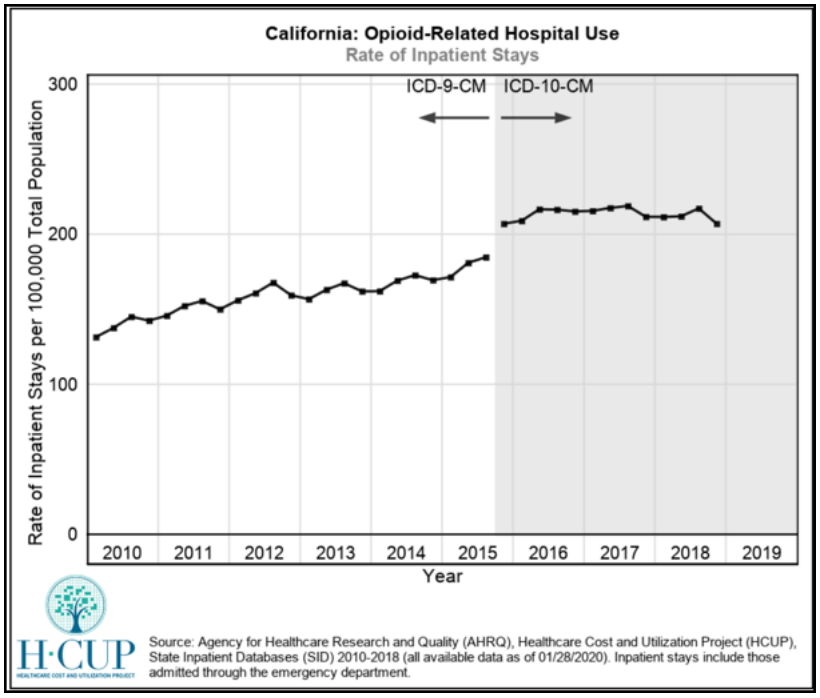
## Section VII: Appendices

# Appendix A

## California: Opioid-Related Hospital Use Data



## Appendix B
## Evaluation Table

| Author (date) | Evidence Type | Sample, Sample, Setting | Findings that help answer the EBP question | Observable Measures | Limitations | Evidence Level and Quality |
|---|---|---|---|---|---|---|
| Teruya et al. (2014) | Single study qualitative design | *N* = 105 from nine federally licensed opiate treatment programs, across the US. Recruited 3½ yrs after completion in RCT comparing naloxone and methadone. Interviews conducted by co-authors after consent and IRB approval. | Barriers to retention in program: design of clinical trial, negative mediation experience, personal circumstances. Facilitation to remain in treatment include: positive experience with the medication, "feel normal," personal determination and commitment, staff encouragement and support. Recommend person-centered approach, revisit local and federal policies to increase options of treatment for opioid dependence. | Study participant characteristics. Barriers, facilitators, themes. | Time lapse of 3½ years from program completion to interview with investigator. Findings drawn from convenience sample. May not felt comfortable to answer questions candidly as some were still under treatment at facility of interview. | III A/B |
| Lewis & Jarvis (2019) | Single study qualitative design | Semi-structured interviews with eight questions to 11 senior nursing students at one public university in New England. | Themes included: navigating ethical dilemmas, gaining comfort with time and experience, avoiding the "elephant in the room," learning from real-world scenarios, witnessing discriminatory care, and recognizing bias among self and witness of others. | Themes | All participants were White female, similar age, from same university, and those who self-selected for study may have strong feelings on topic, which may bias the findings. | III B |
| Ti et al. (2015) | Quantitative, two prospective cohort explanatory/ descriptive study | *N* = 732, Vancouver, Canada, cross-sectional with various socio-demographic characteristics. 34% female, 41% | Suggests in-hospital safe injection facility (SIF) have potential to minimize health harm among patients who use illicit drugs in the hospital. 45% would access SIF to be able to stay in hospital, 38% would access to reduce their drug- | Daily heroin injection (AOR = 1.9; 95% CI: 1.2-3.11), ever used illicit drugs in hospital (AOR = 1.63; 95% CI: 1.18-2.26), and previous | No randomization, population limited to geographical area, potential bias with sensitive questions during in-person interview. | III, non-experimental B |

| Author (date) | Evidence Type | Sample, Sample, Setting | Findings that help answer the EBP question | Observable Measures | Limitations | Evidence Level and Quality |
|---|---|---|---|---|---|---|
| | | HIV positive with median age of 48. | related risks, and 19% would to reduce stress associated with being kicked out of hospital because they were using drugs. Legal risks that must be considered and explored. | use of SIF (AOR = 1.53; 95% CI: 1.10-2.15). | | |
| Ti & Ti (2015) | Quantitative systematic review | 17 studies, all except one in Australia, were conducted in Canada and the United States. Studies conducted among general hospitalized patients (*n* = 610,187), post-partum (*n* = 2,727,175), patients with pneumonia (*n* = 23,198), and cirrhosis (*n* = 581,380). | 13 of 17 studies found substance misuse a significant predictor of leaving AMA – 25%-30%. Lack of research of interventions to reduce the rate of AMA. Factors associated with leaving AMA include recent injection drug use, leaving on weekends, welfare check day, and Aboriginal ancestry. Factors associated with not leaving AMA include in-hospital methadone use, social support, older age, admission to community-based model of care. | Summary of studies with characteristics, locations, drug use, outcome, and main findings. | Literature on substance misuse and AMA is limited to retrospective analysis. Difficult to define clear causal relationship between explanatory variable and outcome variable of interest. Medical documentation lacks information on the dynamic nature of drug use behaviors, environmental factors which may influence hospital discharge. No account for clustering of patients. | III A |
| Grewal et al. (2015) | Single quantitative study | Vancouver, Canada *n* = 1,028 patients who participated in the VIDUS or ACCESS study, and who have been hospitalized. 32% female, 45% HIV positive, median age 45. | Most common reason to use in hospital: 17% in withdrawal, 16% felt bored, 17% wanting to use. Abstinence based approach to this population may be ineffective. Harm reduction programs should be implemented in hospital to mitigate risk of overdose, blood-borne pathogen disease, and to facilitate comprehensive care. | Bivariable analyses, factors significantly and positively associated with using illicit drugs in hospital included: daily heroin injection at least 50% of the time (OR = 1.66; 95% CI: 1.40-5.97), daily crack non-injection at least 50% of the time (OR = 1.81; 95% CI; 1.36-2.41), | Design unable to determine causal relationship between variables and outcome. Data self-reported. No randomization, may not be generalizable. | III B |

| Author (date) | Evidence Type | Sample, Sample, Setting | Findings that help answer the EBP question | Observable Measures | Limitations | Evidence Level and Quality |
|---|---|---|---|---|---|---|
| | | | | and binge drug use at least 50% of the time (OR = 1.42; 95% CI: 1.10-1.83), while older age (OR = 0.99; 95% CI: 0.99-1.0) and male gender (OR = 0.54; 95% CI: 0.42-0.71) were negatively associated with the outcome. The most common locations where illicit drugs were used in the hospital include: bathroom (20.8%), hospital room (16.1%), and smoking area (17.9%). | | |
| Baldassarri et al. (2018) | Case study with expert opinions | 43-year-old man with history of IV heroin use and prior bacterial endocarditis requiring valve replacement presented to hospital with complaints of fever and groin pain. | Medical futility not helpful to apply in cases involving critically ill patients who use IV drugs. Ethical questions to continue asking are about quality of life, timeframe of expected life expectancy, and what constitutes a "benefit"? Ensure access to methadone or naloxone, implement harm reduction. | N/A | Single case study, unknown location. Opinions from professors, physicians, and the director Bioethics at Yale. | V Good |
| Hall et al. (2015) | Quantitative systematic review | 15 studies -14 peer-reviewed journal and one doctoral dissertation. All studies conducted in | Most healthcare providers have implicit bias. Future studies more rigorous to examine relationship between bias and healthcare outcomes. | Summary of study purpose, design, description of healthcare providers, | All but 2 were cross-sectional design, difficult to infer causality between risk factor and an outcome. Use of convenience sampling can lead to the under | III A |

| Author (date) | Evidence Type | Sample, Sample, Setting | Findings that help answer the EBP question | Observable Measures | Limitations | Evidence Level and Quality |
|---|---|---|---|---|---|---|
| | | the United States. 12 studies included healthcare professionals and samples ranged from 14 to 2,535 participants. Six studies included patients. Sample sizes ranged from 112 – 4,794. All included Black patients, 4 included White patients, and only 2 included Hispanic/Latino/ Latina. | | assessment of bias, *n* size, analysis of bias and healthcare outcomes. | or over representation of particular group. Small sample size. Eight studies had 100 or less, and 3 had 15 participants. 14 studies used IAT, which demonstrates good internal consistency, instruments test-retest reliability relatively low. However, the IAT is the most widely utilized, known, and the most controversial tool to measure implicit bias. | |
| Fitzgerald & Hurst (2017) | Quantitative systematic review | 42 articles | Evidence indicates healthcare professionals with the same level of bias as the wider population. 35 of 42 articles found evidence of implicit bias in healthcare professionals and found a significant positive relationship between implicit bias and lower quality of care. | Many tables with data. | Some studies failed to report response rates or provide full information on statistical methods or participant characteristics. Some very small sample size, and the majority did not mention calculating the power of their sample. | III B |
| Scholl et al. (2019) | Article – government report | N/A | Statistics of opioid overdoses, deaths in US. California one of eight states with increasing rates. Continue efforts of prevention and treatment to improve public health and safety. | Full of statistics. | At autopsy, substances tested vary by time and jurisdiction. Specific types of drugs involved were not included on 15% of drug overdose death certificates. Heroin and morphine metabolized similarly, some heroin deaths may have been misclassified as morphine deaths, resulting in underreporting. Potential race | V |

| Author (date) | Evidence Type | Sample, Sample, Setting | Findings that help answer the EBP question | Observable Measures | Limitations | Evidence Level and Quality |
|---|---|---|---|---|---|---|
| | | | | | misclassification might lead to underestimates for certain categories. | |
| Clark (2014) | Article | N/A | Call to nurses to become involved in the opiate crisis by developing processes and programs within your community and facility. To get involved with legislation. Opioid overdose epidemic, nurse involvement to increase use of naloxone. | N/A | | V |

## Appendix C
## Brooks and Sanford Risk Tool

| Brooks and Sanford Illicit Substance Risk Tool © | |
|---|---|
| **Qualifier for Behavioral Contract Program** | **Risk Level** |
| Pt. used illicit substance in hospital/ED | High |
| Presence of illicit substance in hospital/ED | High |
| Presence of drug paraphernalia in hospital/ED | High |
| Pt. used illicit substance in hospital/ED (Past 12 months) | High |
| Previous presence of illicit substance in the hospital/ED (Past 12 months) | High |
| Previous drug paraphernalia in the hospital/ED (Past 12 months) | High |
| Pt. admits illicit substance use within the past 7 days | High |
| Positive toxicology screen on admission or during hospital/ED visit | High |
| Tampering with sharps container in hospital/ED | High |
| Previous attempt to tamper with sharps container hospital/ED (Past 12 months) | High |
| Tampering with IV access | High |
| Previous Tampering with IV access (past 12 months) | High |
| Visitors with illicit drugs or paraphernalia | High |
| Previous visitors with illicit drugs or paraphernalia (past 12 months) | High |
| Witnessed diversion | High |
| Admitting Dx of Infection secondary to illicit substance use | High |
| | |
| Opioid Withdrawal symptoms | Mod |
| Acute diagnosis of substance abuse | Mod |
| History of IV drug use/abuse, but not currently using/testing positive | Mod |
| Use of opioids without a prescription | Mod |
| Demanding certain route of medication administration | Mod |
| | |
| Patient admitted with large volume of personal belongings | Low |
| KP Opioid contract | Low |
| Excessive fixation on narcotic administration schedule | Low |
| Frequent narcotic request in ED/Hospital | Low |
| Use of pain medication without a prescription (past 90 days) | Low |

***Only High Risk Qualifiers receive a behavioral contract***
***Illicit substances excludes Marijuana or Marijuana based products and Alcohol***

**Appendix D**
**Patient Letter and Behavior Contract Template**

KAISER PERMANENTE®
Kaiser Foundation Hospital
Santa Rosa
401 Bicentennial Way
Santa Rosa, CA 95403

DATE: XX/XX/XX

Dear: **PATIENT NAME**

We value you as a patient and want to continue providing you with high-quality care and service. To do so, we need to set boundaries and expectations that will foster an effective provider–patient relationship. Attached is a contract that outlines patient responsibilities and appropriate behaviors. In return for your cooperation and active participation in your care, we will make every effort to accommodate you and your needs. Please review the contract carefully.

Respectfully,

Dr. Siamack Nemazie
Assistant Physician in Chief- Hospital Operations

Your physicians have developed a care plan necessary for your recovery and survival.

- If you follow this plan of care, it can result in early discharge from the hospital and may prevent medical complications.
- If you choose to leave the Hospital against medical advice, or choose to not follow this plan of care, it is likely that you may suffer serious medical complications, and possibly even death.

On **XX/XX/XX** staff became aware of positive tox screen for cocaine use. This high-risk qualifier is indication for a behavioral contract.

This Behavioral contract is between **PATIENT NAME** and **Kaiser Foundation Hospital Santa Rosa and our Emergency Room.**
In an effort to better care for you, and to keep you and our staff safe, the following expectations **are required:**

**Patient Expectations:**

1. Cooperation with patient care. Comply with physician orders including all testing and specimen collection.

2. **You will**:
    a. Not use loud, disruptive, threatening or abusive language to any staff.

    b. Respect personal space of staff by not touching, hitting, kicking, spitting, or threatening physical violence.

    c. Allow us to sequester your belongings. You will be able to keep a few personal items (i.e. cell phone).

    d. Only take medications given to you by our staff. All medications must be taken at that time they are given.

    e. Not use any illegal or legal drugs while in the Hospital.

    f. Not have drug related paraphernalia in your Hospital room. For example:

i. Needles
ii. Syringes
iii. Razors
iv. Deformed cutlery
v. Foil paper
vi. Lighters
vii. Solvent cans
viii. Sharp objects
ix. Glue

g. Not touch or try to remove items from the sharp's container.

h. Leave your bathroom door unlocked.

3. **Your Visitors will**:
   a. Only visit between 8am to 9pm.

   b. Not use loud, disruptive, threatening or abusive language towards staff or patients.

   c. Check in at the nursing station before entering your room. Visitors may have their belongings sequestered or searched by security and are not to bring any illegal or legal drugs/substances, or drug paraphernalia into the Hospital.

**Hospital staff and physicians will:**

1. Provide you with the care and treatment you need to recover from your illness.

2. Communicate with you in a respectful and open manner.

**Consequences:**

Failure to meet the patient and/or visitor expectations listed above may result in the following consequences:

1. **Not allowing visitors if their presence is putting you or Hospital staff at risk.**

2. **Limiting the number of visitors and/or reducing the time they are allowed to visit.**
3. **Placing a sitter or security guard in your Hospital room at all times.**

4. **Leaving doors ajar in your room or curtains opened. Disabling the lock in the bathroom.**

5. **The Hospital may crush all of your medications and place them in food versus allowing you to take pill form.**

6. **Calling the local police department if we:**
    a. **Find illegal drugs or paraphernalia in your hospital room after belongings were sequestered or searched.**
    b. **Witness you damaging Hospital property (ex: sharps containers)**

The Hospital is doing all it can to help you get the care and treatment you need to recover from your illness. We are putting this contract in place to ensure that you are not jeopardizing your own safety or the safety of our staff members or other patients.
Before we sequester your belongings. Do you have any paraphernalia or illicit substances in your possession?

1. You or Hospital may dispose of the items now in our presence
    a. Initial your choice_____

2. Send the items out of the Hospital now with a friend or family member.
    a. Initial your choice_____

**Patient Initials:**

1. _____ I have read and understand the above-listed behavioral expectations.
2. _____ I have read and understand the actions the Hospital may take and consequences if I don't comply with this contract.
3. _____ I have received a copy of the "Patient Rights and Responsibilities" document.

**Patient signature**: _____ **Date**: _____

**Hospital Representative**

**Signature**: _____ **Date**: _____

**Witness signature**: _____ **Date**: _____

## Appendix E
## Process for High Risk Illicit Substance

### Process for addressing high risk illicit substance abuse patients

**Each patient needs to be assessed individually utilizing the Brooks and Sanford Illicit Substance Risk Tool.**

- Only High-Risk Qualifiers receive a behavioral contract
- Excludes all marijuana-based products or alcohol
- Be aware that certain prescription medications may cause false positive drug screens

**Process is as follows:**

1. An At-risk patient is identified in the ED (House Supervisor utilization of trigger questions).
2. Admitting MD to inform patient prior to admission two nurse leaders will visit to review admission guidelines (contract).
3. For High-Risk Qualifiers, review and implement the appropriate High- Risk Level interventions and necessary documentation.
    a. Behavioral contract to be implemented in the ED setting prior to admission by two nursing leaders (i.e. House Supervisor and ANM).
    b. Contact Security to sequester belongings of the patient and evaluate for need of RX Destroyer (container used to destroy illicit substance).
        i. Offer patient the opportunity to send home any/all “belongings”. Sequester remaining belongings on admission in the designated area via security/house supervisor. Patients may send home illicit substances, or they should be destroyed via RX Destroyer with Security and nurse leader.
        ii. Patients may retain small personal items (i.e. cell phone, toiletries, books).
        iii. No personal food should be stored in patient room
    c. Read the contract in its entirety to the patient.
        i. If the patient refuses to sign or initial the contract, please document that they acknowledged the receipt of the contract and you gave them a copy.
    d. Clearly explain that Visitor Hours are from 8am to 9pm only. There will be no overnight stays in the patient room or any waiting areas.
    e. Patient should receive a copy of the signed contract and the other copy should be placed in the min rec.
    f. Document the discussion in KPHC and add patient name/MRN to High Risk Drug User list on Shared Drive.

        Example of KPHC note *Met with the patient to review the Patient/Hospital Behavioral Contract. Contract read in its entirety to the patient with Jane Doe ANM as witness. Patient acknowledged receipt and understanding of the contract and Patient's Rights document but refused to sign or initial the contract. Copy of contract signed by Hospital representative and Patient's Rights Document given to the patient, and copy placed in the patient's min rec to be added to the scan*

*tab. Contract elements and conversation with the patient shared with "Dr. Spock".*

g. Prior to admission to the inpatient unit. Complete the following:
    i. Place in close observation room
    ii. Consider removing sharps container
    iii. Request for patient to NOT lock bathroom lock. Staff will knock prior to entry.
    iv. Place Green Hand Stop Sign on inpatient door frame
    v. Complete Visitation Restrictions form, to individualized limitations and safety on paper document and place in min rec
    vi. Alert Security for routine rounding of patient
    vii. Change patient to a new room with a new gown and have security search the room (if patient found with illicit substance or paraphernalia after admission)

4. Upon discharge security will obtain the sequestered belongings and meet the patient in the hospital lobby and escort them off property. Do not take patients back to the sequestering area in old ICU.

5. After discharge, security to search the bed frame, room, and bathroom for potential hidden contraband.

## Appendix F
## HBS Script
## HBS Script Admitting Illicit Substance Use Patient

My name is Dr. _____. How are you feeling? Thanks for coming in today. I know it took a lot of effort to come in. I talked with the ED doctor and s/he told me about why you came in. You are being started on antibiotics and I think you need to be admitted to the hospital to treat your infection.

I want to talk to you about urine screen. I understand that you have used heroin in the past and the urine screen today was positive. We want to care for you as a whole person while you are here. We want to make sure you are comfortable and that you are safe.

Have you had challenges with withdrawal in the past? How are you feeling now? Do you feel like you are withdrawing now?

How is your pain level now?

Have you used meds for withdrawal in the past?

Have you been in a treatment program before?

One of the things we want to do is keep you comfortable and to keep you from withdrawing and to keep you safe. Are you interested in trying medications to help withdrawal so that you can concentrate on the infection in your leg and not have to worry about withdrawal?

This is a difficult problem and we want to help you with everything when you are here. I wanted to let you know that when you have a urine screen that is positive, we have some rules to keep you safe and to keep the staff safe. A couple of nurse managers will come in and talk with you about that.

Is there anything that you are worried about or anything I can help you with now? Thanks for coming in today. I know it took a lot of courage. It was nice to meet you.

## Appendix G
## Nurse Leader Script

Simulation Nurse Leader Administering Behavioral Contract

Knock…
Hello, "patients' preferred name", handshake. My name is _____nurse leader in the inpatient unit where you will be admitted. This is _____, who is another nurse leader. How are you feeling right now? I understand that Dr. Meyers spoke to you about your positive urine tox screen and that nurse managers would be in to discuss a contract with you?

We have a process that we follow, for all patients, when a patient meets high risk criteria. In your case it is the positive urine tox screen. The goal of this process is to keep you and our staff safe so we can all focus on providing you the best possible care. The letter and contract outline our expectations of you and what you can expect from us.

What we have here is the patient letter and behavioral contract that nurse leader _____will read to you. The contract contains elements which may not pertain to you. We read and administer the contract in it's entirety for all patients who meet the high risk criteria.

## Appendix H
## Gap Analysis

| Objective | Current State | Deficiency | Action Plan |
|---|---|---|---|
| 1.1 HBS MDs inquire and notify AHS of admission. | HBS MDs do not consistently inform AHS prior to admission and AHS does not consistently inquire. | Lack of understanding/ communication. | Provide education/expectation to HBS MDs and all AHS. |
| 1.5 Contract administered in the ED, prior to admission, with two nurse leaders. | AHS and adult services nurse leaders administer contract on floor after admission, occasionally in ED. | ED leadership reluctant to participate in administration of contract. | Understand gap with satisfaction survey and provide education to ED leadership. |
| 2.0 Patient belongings sequestered by security prior to admission and illicit substances destroyed. | Inconsistency with adult services nurse leaders sequester in collaboration with security. | Security not consistently available/ timely.<br>Nurse leaders unclear about searching and sequestering against patient wishes. | Provide definitive directions/support to nurse leaders on conversations for sequestering.<br>Obtain clear expectations from security leadership on expected response time and role.<br>Understand barriers for nurse leaders via satisfaction survey. |
| 2.5 Consistent script documentation of contract administration in EMR. | Inconsistent documentation in EMR after contract administration. | Knowledge gap and new nurse leaders. | Provide additional training to nurse leaders. |
| 3.0 Provide MDs and RN to assess and treat opioid withdrawal. | Few MDs comfortable and willing to order MAT. | RNs had exposure to COWS only and not present in EMR. MDs not trained and absence of order sets. | Long-term goal to develop order sets and COWS scale with education for providers and nurses. |
| 3.5 Provide simulation experience for all AHS, adult services nurse leaders, and ED nurse leaders. | Inconsistent process and presentation by nurse leaders with contract administration. | Training for the communication process of contract is absent. | Finalize simulation.<br>Book dates with SP.<br>Schedule NL. |
| 4.0 Instrument of measurement for caring behaviors of nurse leader during contract administration. | No definitive instrument confirmed. | Simulation is not finalized.<br>Unable to obtain authorization from author of Caring Behaviors instrument. | Continue to reach out to author.<br>Continue to research other measurement instruments. |

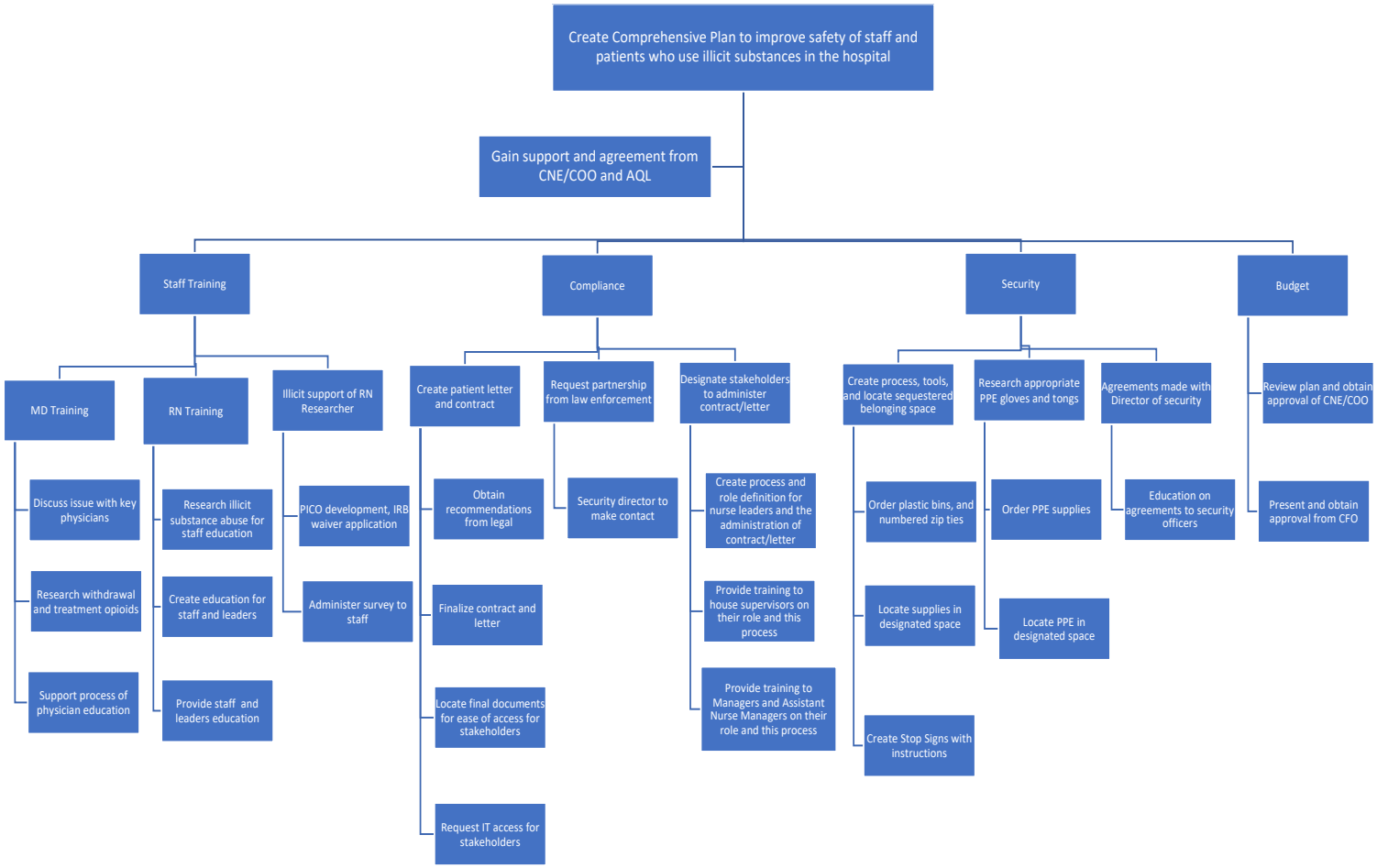
# Appendix I
# Gantt Chart

| ELDNP USF Christina Sanford | 2019 | | | | | | | | | | | | | 2020 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Activity** | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | 15-Dec | Break! | 15-Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| **Toolkit Development Strategy** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Approval CNE/COO & AQL | | | | | | | | | | | | | | | | | | | | | | | | | |
| Literature review | | | | | | | | | | | | | | | | | | | | | | | | | |
| Create core team | | | | | | | | | | | | | | | | | | | | | | | | | |
| Create and meet with core interdisciplinary team | | | | | | | | | | | | | | | | | | | | | | | | | |
| Create and administer satisfaction survey | | | | | | | | | | | | | | | | | | | | | | | | | |
| Review and analysis of satisfaction survey | | | | | | | | | | | | | | | | | | | | | | | | | |
| Revise toolkit based on survey | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Education** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Literature review | | | | | | | | | | | | | | | | | | | | | | | | | |
| Content developemt with substance dependency MD | | | | | | | | | | | | | | | | | | | | | | | | | |
| Content development with nursing education department | | | | | | | | | | | | | | | | | | | | | | | | | |
| Measurement strategy with research manager | | | | | | | | | | | | | | | | | | | | | | | | | |
| IRB Waiver application Thackrey survey | | | | | | | | | | | | | | | | | | | | | | | | | |
| Education for staff and nurse leaders | | | | | | | | | | | | | | | | | | | | | | | | | |
| Presentation to Emergency Dept Leadership | | | | | | | | | | | | | | | | | | | | | | | | | |
| Development of simulation | | | | | | | | | | | | | | | | | | | | | | | | | |
| IRB waiver application satisfaction surveys | | | | | | | | | | | | | | | | | | | | | | | | | |
| Conduct simulations with SP and nurse leaders | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Compliance** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Recommendations from legal for letter and contract | | | | | | | | | | | | | | | | | | | | | | | | | |
| Develop Risk Assessment Tool | | | | | | | | | | | | | | | | | | | | | | | | | |
| Create contract and letter | | | | | | | | | | | | | | | | | | | | | | | | | |
| Create process and role responsibiltiies for risk assessment, letter and contract administration | | | | | | | | | | | | | | | | | | | | | | | | | |
| Security Director contrac local PD for partnership | | | | | | | | | | | | | | | | | | | | | | | | | |
| Patient Rights addended to contract | | | | | | | | | | | | | | | | | | | | | | | | | |
| Provide training to nurses leaders on roles and process of letter and contract administration | | | | | | | | | | | | | | | | | | | | | | | | | |

| ELDNP USF Christina Sanford | 2019 | | | | | | | | | | | | | 2020 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Activity | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | 15-Dec | Break! | 15-Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| **Security** | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Location for documents iin shared folder access requests submitted | | | | | | | | | | | | | | | | | | | | | | | | | |
| Designate and design space and tools for sequestering belongings | | | | | | | | | | | | | | | | | | | | | | | | | |
| Obtain/create PPE, Rx Destroyer, zip ties, tracking log | | | | | | | | | | | | | | | | | | | | | | | | | |
| Security director provide education to officers | | | | | | | | | | | | | | | | | | | | | | | | | |
| Design and pilot green stop sign | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Budget** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Review plan and obtain approval by CNE/COO | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Measurement and Analysis** | | | | | | | | | | | | | | | | | | | | | | | | | |
| Administer Thackrey Instrument | | | | | | | | | | | | | | | | | | | | | | | | | |
| Analyze resulst of Thackrey | | | | | | | | | | | | | | | | | | | | | | | | | |
| Literature review instruments | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stakeholder survey measurement | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stakeholder survey analysis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Simulation measurement | | | | | | | | | | | | | | | | | | | | | | | | | |
| Siimulation analysis | | | | | | | | | | | | | | | | | | | | | | | | | |

| Color Code |
|---|
| System |
| Core leadership strategy |
| Education |
| Compliance |
| Security |
| Budget |
| Measurement and Analysis |

# Appendix J
# Work Breakdown Structure



## Appendix K
## Responsibility/Communication Matrix

**Communications Plan**

| | |
|---|---|
| **Project Name:** Illicit Substance Toolkit | **Beginning Date:** January 2019 |
| **Project Manager:** Christina Sanford, CASD | **Completion Date:** Q3, 2020 |

**Planning**

**Project objective and key message points:**

- Provide safe environment for staff
- Assure patient safety
- Develop and implement strategies to mitigate risks

**Stakeholders:**

- Staff and Patients
- Senior Leadership
- Threat Management Team (TMT)
- Hospital Physician Leaders
- Nursing Leadership

**Outline**

| Timeline | Team Member Responsible | Target Audience | Tool for delivery | Message Points |
|---|---|---|---|---|
| Jan. 2019 Monthly | AQL | TMT | Verbal | Summarize issue with request to sponsor project |
| Jan. 2019 | AQL & CASD | Staff | Verbal | Discuss concerns reported and share plan development |
| Jan. 2019 | CASD | COO/CNE | Verbal | Share plan development |
| Feb. 2019, Monthly, & PRN | CASD | ANM/Managers | Verbal, email | Summarize issue and plan development |
| Feb. 2019 & PRN | AQL | Legal counsel | Phone, email | Guidance language patient letter and contract |
| Feb. 2019 & PRN | CASD | House Sups | Verbal, email, ppp | Summarize issue, concerns, plan development |
| Feb. 2019 & Monthly | CASD | HBS Chief | Verbal, email | Summarize issue, concerns, plan development |
| Feb. 2019 & Quarterly | AQL | Med Exec | Verbal | Summarize issue, concerns, plan development |
| March 2019 Monthly & PRN | AQL & CASD | Security Director | Verbal, email | Summarize issue, concerns, plan development, request partnership |
| March 2019 & Quarterly | CASD & AQL | Patient Safety & Quality | Verbal, ppp | Update status of issue and plan development |
| March 2019 & Monthly | CASD | COO/CNE | Verbal | Share plan development |

| | | | | |
|---|---|---|---|---|
| Outline | | | | |
| **Timeline** | **Team Member Responsible** | **Target Audience** | **Tool for delivery** | **Message Points** |
| March 2019 | CASD | Chemical Dependency | Verbal | Summarize issue, request content for staff education |
| March 2019 & weekly thru May | CASD & AQL | Education Dept | Verbal, ppp | Summarize issue, share plan and content for staff education |
| February 2019 & Monthly | CASD | Research Manager | Verbal, email | Status on project, survey, IRB |
| Quarterly & PRN | AQL & CASD | Core team | Verbal | Status and next steps |
| August 2019 Weekly | CASD | Simulation Manager | Verbal, email | Simulation development |
| Quarterly & PRN | HBS Chief | HBS MDs | Verbal, email | Plan updates |
| Quarterly & PRN | APIC Hospital Ops | Physician Leaders | Verbal, email | Plan updates |

**Appendix L**
**SWOT Analysis**

**Appendix M**
**Budget**
**Illicit Substance Toolkit**

| EXPENSES | | Budget |
|---|---|---|
| **Security/Compliance** | | |
| | Clear storage bins | $100.00 |
| | Zip ties | $20.00 |
| | Rx Destroyer | $50.00 |
| | Puncture proof gloves 3 @ $35.00 ea. | $105.00 |
| | Stainless steel tongs | $10.00 |
| | Belongings log | $15.00 |
| | Laminated stop signs | $20.00 |
| | Storage bin and dividers | $10.00 |
| | **Subtotal** | **$330.00** |
| **Training** | | |
| | Content development | $3,000.00 |
| | Staff RN training- 265 for 2 hours @ $85.00/hr | $45,000.00 |
| | Security officers-30 for 30 min. @$35.00/hr | $525.00 |
| | ANM/Managers - 22 for 2.5 hours @$90.00/hr | $4,950.00 |
| | House Supervisors - 7 for 30 minutes @ $90.00/hr | $315.00 |
| | ED leadership - 15 for 30 minutes @ $90.00/hr | $675.00 |
| | HBS Physicians - 20 for 30 minutes @ $125.00.hr | $1,250.00 |
| | **Subtotal**<br>**Total** | **$55,715.00**<br>**$56,045.00** |

## Appendix N
## Cost Avoidance Analysis

| Risk Event/Costs | Number of Occurrences | Cost/Event | Total Cost | Potential Cost Avoidance |
|---|---|---|---|---|
| **Scenario #1** | | | | |
| Work Comp Claim (violence, exposure)* | 1 | $46,000 | $46,000 | $46,000 |
| RN Turnover** | 2 | $80,000 | $160,000 | $160,000 |
| Subtotal | | | | $206,000 |
| Minus Cost of Program | | | | $56,045 |
| Cost Avoidance for Decreasing 1 Work Comp Claim and Retaining 2 Nurses | | | | **$149,955** |
| **Scenario #2** | | | | |
| Work Comp Claim (violence, exposure)* | 2 | $46,000 | $92,000 | $92,000 |
| RN Turnover** | 2 | $80,000 | $160,000 | $160,000 |
| Subtotal | | | | $252,000 |
| Minus Cost of Program | | | | $56,045 |
| Cost Avoidance for Decreasing 2 Work Comp Claims and Retaining 2 Nurses | | | | **$195,955** |
| **Scenario #3** | | | | |
| Work Comp Claim (violence, exposure)* | 3 | $46,000 | $138,000 | $138,000 |
| RN Turnover** | 3 | $80,000 | $240,000 | $240,000 |
| Subtotal | | | | $378,000 |
| Minus Cost of Program | | | | $56,045 |
| Cost Avoidance for Decreasing 3 Work Comp Claims and Retaining 3 Nurses | | | | **$321,955** |

***Insurance Journal (2016)**
****Jones, C. (2008)**

## Appendix O
## Thackrey Instrument

**Thackrey Confidence in Coping with Patient Aggression Instrument**

We are offering education about the impulsive, potentially combative, patient. We ask that you fill this out before and after the training. It is anonymous and voluntary. Thank you.

0. Code nickname or number_____

1. How comfortable are you in working with a patient with illicit IV substance abuse?

**very uncomfortable** **very comfortable**

1 2 3 4 5 6 7 8 9 10

2. How good is your present level of training for handling psychological aggression from a patient using illicit IV substances?

**very poor** **very good**

1 2 3 4 5 6 7 8 9 10

3. How able are you to intervene physically with an aggressive illicit IV substance abuse patient?

**very unable** **very able**

1 2 3 4 5 6 7 8 9 10

4. How self-assured do you feel in the presence of an aggressive illicit IV substance abuse patient?

**not very self-assured** **very self-assured**

1 2 3 4 5 6 7 8 9 10

5. How able are you to intervene psychologically with an aggressive illicit IV substance abuse patient?

**very unable** **very able**

1 2 3 4 5 6 7 8 9 10

6. How good is your present level of training for handling physical aggression?

**very poor** **very good**

1 2 3 4 5 6 7 8 9 10

7. How safe do you feel around an aggressive patient illicit IV substance abuse patient?

**very unsafe** **very safe**

1 2 3 4 5 6 7 8 9 10

8. How effective are the techniques that you know for dealing with aggressive illicit IV substance abuse?

**very ineffective** **very effective**

1 2 3 4 5 6 7 8 9 10

9. How able are you to meet the needs of an aggressive patient illicit IV substance abuse patient?

**very unable** **very able**

1 2 3 4 5 6 7 8 9 10

10. How able are you to protect yourself physically from an aggressive illicit IV substance abuse patient?

**very unable** **very able**

1 2 3 4 5 6 7 8 9 10

## Appendix P

## Toolkit Satisfaction Survey Questionnaire

| Age | Years in your profession | Years at this hospital | Clinical Specialty | Role | Highest Level of Education | Gender |
|---|---|---|---|---|---|---|
| 20-25 | 0-5 | 0-5 | MS | Staff RN | ADN | Male |
| 26-30 | 6-10 | 6-10 | Tele | ANM | BSN | Female |
| 31-35 | 11-15 | 11-15 | ICU | Manager | MSN | Other |
| 36-40 | 16-20 | 16-20 | Other | House Supervisor | MBA | Prefer not to state |
| 41-45 | 21-25 | 21-25 | Medicine | ED Charge Nurse | DNP | |
| 46-50 | 26-30 | 26-30 | Leadership | ED Nursing Leader | MD | |
| 51-55 | 35+ | 35+ | Emergency | Senior Leader | Other | |
| 56-60 | | | | Director | | |
| 61-65 | | | | Physician | | |
| 66-70 | | | | | | |

Satisfaction Survey on Prevention of Illicit Substance Use in Acute Care Hospital Toolkit

We have built and are conducting a pilot of our toolkit to improve the safety of patients who may use illicit substances in the acute care hospital and to improve safety for the staff who care for these patients. We are very interested in your level of satisfaction of this toolkit and gaps you still have identified. After collecting your input, we will review, make improvements, and then plan to share the toolkit with the remainder of Kaiser Permanente hospitals in Northern California. The contents of the Prevention of Illicit Substance Use in Acute Care Hospital Toolkit include:

- How to identify patients who qualify for this program (admission diagnosis, Threat Team Management watch list, patient behavioral contract list)
- Brooks and Sanford Risk Assessment Tool
- Risk level with corresponding interventions
- Patient Letter from APIC of Hospital Operations
- Patient Contract that includes expectations, consequences and Patient Rights
- Instructions on how to administer the contract and document in KPHC
- Patient Behavioral Contract Administration Tracking spreadsheet

- Sequestering of belongings process and tools (including Destroyer Rx)
- List of PPE tools for security and ordering information
- Green Stop Sign template
- Presentation of pilot, learnings, and how-to-guide for implementation
- Educational module for staff which contains:
  1. Neurobiology of opioid addiction
  2. Treatment options for opioid withdrawal
  3. Information about methamphetamine
  4. Research related to the difficulties of caring for patients who use illicit drugs
  5. Research related to implicit bias
  6. Research related to negative health outcomes of this patient population

Please take a few minutes to complete this, so we can continue to improve our processes and ensure safety for our patients and staff. Not all questions apply to all roles. Please choose "N/A" if you have no experience with this question. This is anonymous and voluntary. If you choose a score of 4 or lower on any questions and are willing to share your thoughts and ideas with this team, please include your name and contact information so one of us can reach out to you. Thank you.

1. Have you cared for a patient with illicit substance use in the past 6 months? (If no, skip to question#2)

| Yes | No | N/A |
|---|---|---|

a. If yes, did this patient have a behavioral contract in place?

| Yes | No | Unknown |
|---|---|---|

b. If yes, were patient belongings sequestered?

| Yes | No | Unknown |
|---|---|---|

c. If yes, how satisfied were you on these new safety processes with the Prevention of Illicit Substance Use in Acute Care Hospital Toolkit?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|

Very unsatisfied Very Satisfied

Any gaps identified and recommendations for improvement?

_____

_____

_____

2. How would you rate your overall satisfaction of the Prevention of Illicit Substance Use in Acute Care Hospital Toolkit?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | N/A |
|---|---|---|---|---|---|---|---|---|---|---|

Very unsatisfied Very satisfied

3. How would you rate your overall satisfaction of communication with House Supervisor on processes pertaining to Prevention of Illicit Substance Use in Acute Care Hospital Toolkit?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | N/A |
|---|---|---|---|---|---|---|---|---|---|---|

Very unsatisfied Very satisfied

4. How would you rate your overall satisfaction of communication with HBS on processes pertaining to Prevention of Illicit Substance Use in Acute Care Hospital Toolkit?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | N/A |
|---|---|---|---|---|---|---|---|---|---|---|

Very unsatisfied Very satisfied

5. How would you rate your overall satisfaction of communication with Adult Services ANM/Manager on processes pertaining to Prevention of Illicit Substance Use in Acute Care Hospital Toolkit?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | N/A |
|---|---|---|---|---|---|---|---|---|---|---|

Very unsatisfied Very satisfied

6. How would you rate your overall satisfaction of communication with staff in Adult Services on processes pertaining to Prevention of Illicit Substance Use in Acute Care Hospital Toolkit?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | N/A |
|---|---|---|---|---|---|---|---|---|---|---|

Very unsatisfied Very satisfied

7. How would you rate your overall satisfaction of communication with security on the processes pertaining to Prevention of Illicit Substance Use in Acute Care Hospital Toolkit?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | N/A |
|---|---|---|---|---|---|---|---|---|---|---|

Very unsatisfied Very satisfied

8. How would you rate your overall satisfaction of communication with the emergency department on the processes pertaining to Prevention of Illicit Substance Use in Acute Care Hospital Toolkit?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | N/A |
|---|---|---|---|---|---|---|---|---|---|---|

Very unsatisfied Very satisfied

9. How would you rate your overall satisfaction in conducting the Brooks and Sanford Illicit Substance Risk Assessment Tool in the hospital or ED?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | N/A |
|---|---|---|---|---|---|---|---|---|---|---|

Very unsatisfied Very satisfied

10. How would you rate your overall satisfaction on the ease to find and use the documents (Tracking tool, letter, contract, etc.)?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | N/A |
|---|---|---|---|---|---|---|---|---|---|---|

Very unsatisfied Very satisfied

11. How would you rate your overall satisfaction in the process of administering the behavioral contract to the patient?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | N/A |
|---|---|---|---|---|---|---|---|---|---|---|

Very unsatisfied Very satisfied

12. How would you rate your overall satisfaction on the educational session, *Caring for the Patient Afflicted by a Withdrawal Syndrome*, during Adult Services annual skills?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | N/A |
|---|---|---|---|---|---|---|---|---|---|---|

Very unsatisfied Very satisfied

13. How would you rate your overall satisfaction on the process of security to sequester belongings?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | N/A |
|---|---|---|---|---|---|---|---|---|---|---|

Very unsatisfied Very satisfied

14. How would you rate your overall satisfaction on the effectiveness of Prevention of Illicit Substance Use in Acute Care Hospital Toolkit to minimize illicit substance use in the hospital?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | N/A |
|---|---|---|---|---|---|---|---|---|---|---|

Very unsatisfied Very satisfied

15. How would you rate your overall satisfaction on the effectiveness of Prevention of Illicit Substance Use in Acute Care Hospital Toolkit to improve the physical safety of staff (i.e. Contaminated needles, violence from patients/visitors)?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | N/A |
|---|---|---|---|---|---|---|---|---|---|---|

Very unsatisfied Very satisfied

16. Have you administered a behavioral contract for illicit substance use in the past eight months? (If no, skip to question #17)

| Yes | No | N/A |
|---|---|---|

a. If yes, how self-assured did you feel on your ability to administer the contract?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | N/A |
|---|---|---|---|---|---|---|---|---|---|---|

Not very self-assured Very self-assured

17. Gaps identified for any portion of the toolkit or on the topic of caring for illicit substance abuse patients, and recommendations for improvement?

_____

_____

_____

_____

Your name and contact information for in-person feedback session (optional):_____

## Appendix Q
## Results Demographics Satisfaction Survey

Table 1
*Demographics Illicit Substance Satisfaction Survey*
Baseline characteristic

| | *n* | *%* |
|---|---|---|
| Gender | 58 | 72 |
| Female | | |
| Male | 18 | 22 |
| Prefer not to answer | 5 | 6 |
| Highest educational level | | |
| ASD | 15 | 18 |
| BSN | 35 | 43 |
| MS | 14 | 17 |
| MBA | 6 | 7 |
| DNP/Phd | 1 | 1 |
| MD | 5 | 6 |
| Other | 5 | 6 |
| Clinical Specialty | | |
| MedSurg | 30 | 37 |
| Telemetry | 13 | 16 |
| Intensive Care | 18 | 22 |
| Emergency | 4 | 5 |
| Leadership | 12 | 15 |
| Medicine | 4 | 5 |
| Other | 1 | 1 |
| Years in profession | | |
| 0-5 | 14 | 17 |
| 6-10 | 26 | 31 |
| 11-15 | 17 | 20 |
| 16-20 | 5 | 6 |
| 21-25 | 7 | 8 |
| 26-30 | 5 | 6 |
| 31-35 | 2 | 2 |
| 35+ | 7 | 8 |
| Current Role | | |
| Staff RN | 43 | 53 |
| Physician | 6 | 8 |
| ANM | 19 | 24 |
| Manager | 2 | 2 |
| House Supervisor | 5 | 6 |
| ED Nurse Leader | 1 | 1 |
| Hospital Leadership | 5 | 6 |

## Appendix R
## Results Satisfaction Survey

Table 2
*Satisfaction Survey Illicit Substance*

| | *n* | *M* | *SD* |
|---|---|---|---|
| Overall satisfaction with | | | |
| Illicit substance toolkit | 57 | 7.29 | 2.15 |
| Communication with House Supervisors | 55 | 6.84 | 2.16 |
| Communication with HBS | 55 | 6.85 | 2.26 |
| Communication with Adult Services (AS)nurse leaders | 54 | 7.85 | 2.15 |
| Communication with AS nursing staff | 55 | 7.23 | 2.19 |
| Communication with security officers | 53 | 7.32 | 2.13 |
| Communication with emergency department | 48 | 5.64 | 2.48 |
| BrooksSanford Illicit Substance Risk Tool | 38 | 6.50 | 2.61 |
| Ease to locate and utilize all documents | 54 | 5.88 | 2.73 |
| Process to administer contract | 52 | 6.35 | 2.36 |
| Process for Security to Sequester Belongings | 55 | 6.65 | 2.54 |
| Overall effectiveness to prevent illicit substance use | 55 | 7.15 | 2.01 |
| Overall effectiveness to improve staff safety | 58 | 7.45 | 2.26 |
| Self-assured ability to administer contract | 35 | 7.06 | 2.68 |
| Total number unique participants | 83 | | |

**Appendix S**
**Qualitative Results Toolkit Satisfaction Survey**

Table 3
*Satisfaction Survey Identification of Gaps*

| *Question* | *Respondents Comment* |
|---|---|
| Identify gaps for any portion of the toolkit or for the topic of caring for patients who use illicit substance. | "When I recently discharged a patient who had a behavior contract I didn't know to get their belongings from security prior to d/c."<br>"Communication with HBS still needs improvement. It is difficult to get the admission details, some of them just want to give you a room number. It is a work in progress, and it takes frequent rounding."<br>"Need so much more education and communication related to this topic."<br>"Inconsistency in setting up room between nursing, house sups, security, as well as sequestering the belongings, especially if patient is moved. We could improve on our reports between security and staff, example if someone is covering for break, they do they not always know the importance of the observation."<br>"Ensure that the process is started in the ED."<br>"A number of house supervisors and all of our non-core HBS docs don't seem to know the procedure. I have received pushback from a few house sups who don't want to follow the procedure if it means they will miss ED to Bed metric. My recommendation My recommendation is to re-iterate to XXXX and the necessity of following the same procedure for these patients every time. Our patients and staff safety are at risk anytime we deviate from the agreed upon procedure for managing this population of patients. We should never be placing metrics ahead of safety."<br>"There are so many forms that it is difficult to decide which pertain and which to print."<br>"Communication/prompting from house sup to HBS and vice versa could be improved, still working on and really need a formal withdrawal protocol." |

**Appendix T**
**Standardized Patient Simulation Checklist**

| Question | Absent (0) | Present (1) |
|---|---|---|
| **McDaniel's Caring Behavior Checklist Verbal and Nonverbal** | | |
| 1. Verbally responds to an expressed concern | | |
| 2. Explains procedure prior to initiation | | |
| 3. Verbally validates patient's physical status | | |
| 4. Verbally validates patient's emotional status | | |
| 5. Shares personal observations or feelings (self-disclosing) in response to patient's expression of concern | | |
| 6. Verbally reassures patient during care | | |
| 7. Discusses topics of patient's concern other than current health problems | | |
| 8. Sits down at bedside | | |
| 9. Touches patient exclusive of procedure | | |
| 10. Sustains eye contact during patient interaction | | |
| 11. Enters patient room without solicitation | | |
| 12. Provides physical comfort measures | | |
| **Totals/Average** | | |
| **Facility Specific Questions- Listened to you Carefully** | | |
| 13. Did not interrupt inappropriately while you were speaking | | |
| 14. Used non-judgmental body language during the encounter | | |
| **Explained in a Way You Could Understand** | | |
| 15. Did not use acronyms | | |
| 16. Did not use jargon | | |
| 17. Stated rationale for contract | | |
| 18. Matched language with your literacy level | | |
| 19. Responded to your non-verbal behavior/facial expression | | |
| 20. Speech was not rushed during the encounter | | |
| 21. Used non-judgmental verbal language during the encounter | | |

**Appendix U**

**Role:** Manager_____, ANM_____, AHS_____, Director_____, Other_____

**Department:** ED_____, Adult Services_____, MCH_____, Hospital Admin_____

**Level of education:** ADN_____, BSN_____, MSN_____, MS_____DNP_____

**Student Learning Outcomes (SLO):**

1. Safe, Patient-Centered Care
2. Caring Behaviors
3. Communication/Information Technology Use
4. Critical Thinking/Clinical Judgment
5. Teamwork/Collaboration
6. Leadership/Professionalism

| **Evaluation Criteria** | | **SLO 1-6** | **Strongly Agree 5** | **Agree 4** | **Undecided 3** | **Disagree 2** | **Strongly Disagree 1** |
|---|---|---|---|---|---|---|---|
| Objectives/Information | I clearly understood the purpose and objectives of the simulation | 3 | | | | | |
| Support/Cues | I was supported in the learning process | 5 | | | | | |
| Problem Solving/Complexity | I was encouraged to explore all possibilities during the simulation | 4 | | | | | |
| Guided Reflection/Debriefing | Feedback provided was constructive and centered around patient safety and care. | 1,4 | | | | | |
| Fidelity | The scenario resembled a real-life situation. | 2,3,4 | | | | | |
| Active Learning | I actively participated in the debriefing session after the simulation | 3,4,5,6 | | | | | |
| Diverse Ways of Learning | The simulation offered a variety of ways in which to learn the material. | 3 | | | | | |
| High Expectations | I was challenged in my thinking and decision-making skills. | 1-6 | | | | | |
| Teamwork/Collaboration | I collaborated effectively with my peer during the simulation. | 3,5 | | | | | |
| Satisfaction with Current Learning | The teaching methods used in the simulation encouraged critical thinking. | 3,4 | | | | | |
| Self-Confidence in Learning | I am confident that the simulation has assisted in improving my ability to provide safe and competent care. | 1,2,4,6 | | | | | |

How self-assured do you feel to administer a behavior contract to a patient with illicit substance use?

**Not very self-assured** **very self-assured**

1 2 3 4 5 6 7 8 9 10

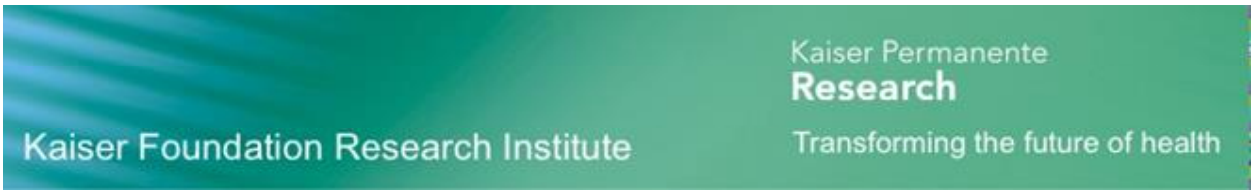
Describe the best part or most useful part(s) of the simulation.

Describe the least useful part(s) of the simulation.

Describe the part(s) of the simulation experience you would change and why.

Describe your overall satisfaction with the simulation as a learning experience.

**Appendix V**
**IRB Waiver**




August 26, 2019
**Subject:** RDO KPNC 19 - 111

**Title:** Satisfaction Survey on Prevention of Illicit Substance Use in Acute Care Hospital Toolkit

Dear Ms. Sanford:

As a Research Determination Official (RDO) for the Kaiser Permanente Northern California region, I have reviewed the documents submitted for the above referenced project. The project does not meet the regulatory definition of research involving human subjects as noted here:

[X]

[ ]

Not Research
The activity does not meet the regulatory definition of research at 45 CFR 46.102(d):

Research means a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge.

Not Human Subject
The activity does not meet the regulatory definition of human subjects at 45 CFR 46.102(f):

Human subject means a living individual about whom an investigator conducting research obtains (1) data through intervention or interaction with the individual, or (2) identifiable private information.

Therefore, the project is not required to be reviewed by a KP Institutional Review Board (IRB). This determination is based on the information provided. If the scope or nature of the project changes in a manner that could impact this review, please resubmit for a new determination. Also, you are responsible for keeping a copy of this determination letter in your project files as it may be necessary to demonstrate that your project was properly reviewed.

Provide this approval letter to the Physician in Charge (PIC), your Area Manager, and Chief of Service, to determine whether additional approvals are needed.

Sincerely,

*Eric Garcia*

Eric Garcia
National Research Compliance Officer
Director, National Compliance in Research Support Program Kaiser Foundation Research Institute
1800 Harrison, Suite 1600
Oakland CA 94612
Eric.F.Garcia@kp.org
Phone (510) 625 - 2397

Date: June 16, 2020
Subject: RDO KPNC 20 – 088
Title: Safety for All: When Inpatients use Illicit Substance in an Acute Care Hospital

Dear Ms. Sanford:

The Research Determination Committee for the Kaiser Permanente Northern California region has reviewed the documents submitted for the above referenced project. The project does not meet the regulatory definition of research involving human subjects as noted here:

Not Research

The activity does not meet the regulatory definition of research at 45 CFR 46.102(d): Research means a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge.

This determination is based on the information provided. If the scope or nature of the project changes in a manner that could impact this review, please resubmit for a new determination. The word "research" should not appear in any posters or publications resulting from this project. Further, if publications, presentations or posters are generated from this project the following wording must be used to reference to the project research determination outcome:

"The Research Determination Committee for the Kaiser Permanente Northern California region has determined the project does not meet the regulatory definition of research involving human subjects per 45 CFR 46.102(d)"

You are expected, however, to implement your study or project in a manner congruent with accepted professional standards and ethical guidelines as described in the Belmont Report (http://www.hhs.gov/ohrp/humansubjects/guidance/belmont.html).

Additionally, you are responsible for keeping a copy of this determination letter in your project files as it may be necessary to demonstrate that your project was properly reviewed.

Provide this approval letter to the Physician in Charge (PIC), your Area Manager, and Chief of Service, to determine whether additional approvals are needed.

Sincerely,

B. Balough, MD

Ben Balough, MD
Research Determination Officer, TPMG, KPNC The Permanente Medical Group, Inc.
(916) 539-8172 (mobile)

KPNC Research Determination Office

KPNC-RDO@kp.org

**Appendix W**
**Signed Statement of Non-Research Determination Form**

UNIVERSITY OF SAN FRANCISCO | School of Nursing and Health Professions

**DNP Statement of Non-Research Determination Form**

**Student Name: Christina Sanford**

**Title of Project:** Illicit Substance Use in Acute Care Hospitals: Creating a Safe Environment

**Brief Description of Project:**

Our nation's rate of overdoses from illicit substances is at epidemic rates. In 2017, there were 70, 237 overdose deaths (Scholl, Seth, Kariisa, Wilson, & Baldwin, 2019) with a rate increase of 45/2% death rate secondary to synthetic opioid-related overdose deaths (Scholl et al., 2019). In 2017, California reported an increase in heroin-related overdose deaths of 21.4% (Scholl et al., 2019). Hospital inpatient stays, and emergency room visits due to opioids continue to have an upward trajectory (AHRQ, 2018; mEAR, n.d.). In a medium-sized hospital in Northern California, eight incident reports were submitted in 2017 with concerns related to the safety of patient and staff when patients were using illicit substances in the hospital. In the first quarter of 2019, there were over 20 similar events submitted. This hospital does not have any process, program, nor interventions in place for patients who use illicit substances.

This patient population demonstrates a high rate of leaving the hospital against medical advice (AMA) according to Ti & Ti (2015), with reasons reported to be due to active withdrawal and the desire to use (Grewal et al., 2015). Glasgow, Vaughn-Sarrazin, & Kaboli, (2010) report a significant increase in the risk of 30-day readmission and

mortality when leaving AMA and a statistically significant increase in 12-month all-cause and in-hospital mortality for this population (Choi, Kim, Qian; Palepu, 2011). A survey administered to over 1,000 illicit substance users, who were also inpatients at an acute care hospital, and 43.9% report to have used illicit substances while in the hospital (Grewal et al., 2015).

The safety of patients and staff are fundamentally accountable for nursing leadership. This new and drastic change in our patient population provides an opportunity to lead change in this organization for this vulnerable population. So, to reduce the risks and assure the safety of patients who use illicit substances in the hospital and safety for the staff who care for them, a toolkit of new processes and interventions will be developed, implemented, and tested. An interdisciplinary team will be formed as the stakeholders and subject experts for input and evaluation of the toolkit.

**A) Aim Statement:**

By September 1, 2020, develop, implement and evaluate an illicit substance toolkit.

Objectives include:

- Reduction of safety reports by 50% related to illicit substance abuse by patients
- Improvement of comfort of nursing leaders by 20% to administer contracts with patients
- Increase of confidence of staff by 20% of dealing with issues surrounding substance abuse

**B) Description of Intervention:** The development and testing of a toolkit for acute

care hospitals to mitigate safety risks to staff and patients, in the setting of patients using illicit substances in an acute care hospital. The toolkit is comprised of a risk assessment screening tool with different levels of interventions based on the risk level assessed. A patient letter and behavior contract with patient rights which delineates responsibilities of the patient and the organization for those patients who score as a high risk on the risk assessment tool. A "how-to" guide for nursing leadership to deliver the contract to the patient and documentation in the medical record, in addition an example tracking document for the contracts administered. There will be developed examples of process and documents to safely sequester patient belongings. Educational sessions provided for staff nurses, nursing leadership, security officers, physicians, emergency department charge nurses and leadership, and senior leadership, and customized to each audience. There is a long-term goal for training and order set development for the assessment and treatment of opioid withdrawal.

**D) Outcome measurements:**

- Reduction of safety reports by 50% related to illicit substance abuse by patients
- Improvement of comfort of nursing leaders by 20% to administer contracts with patients
- Increase of confidence of staff by 20% of dealing with issues surrounding substance abuse.

**References**

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Appendix X
Results Pre and Post Education Assessment

Table 4
*Pre and Post Education Assessment*

| Question | *n* | Pre Survey *M* | SD | *n* | *Post Survey M* | *SD* | *t*-test *p* value |
|---|---|---|---|---|---|---|---|
| How comfortable are you in working with a patient. with illicit IV substance abuse | 221 | 6.48 | 2.29 | 200 | 6.81 | 2.23 | >0.07 |
| How good is your present level of training for handling psychological aggression from a patient using illicit IV substances | 165 | 5.76 | 2.29 | 165 | 6.46 | 2.18 | <0.001 |
| How able are you to intervene physically with an aggressive patient illicit IV substance abuse | 217 | 5.04 | 2.50 | 166 | 6.14 | 2.42 | <0.001 |
| How self-assured do you feel in the presence of an aggressive illicit IV substance patient | 219 | 5.44 | 2.38 | 166 | 6.25 | 2.39 | <0.001 |
| How able are you to intervene psychologically with an aggressive illicit IV substance abuse patient | 217 | 5.73 | 2.40 | 166 | 6.44 | 2.27 | <0.05 |
| How good is your present level of training for handling physical aggression | 216 | 5.42 | 2.31 | 166 | 6.26 | 2.31 | <0.001 |
| How safe do you feel around an aggressive illicit IV substance abuse patient | 217 | 4.84 | 2.55 | 166 | 5.92 | 2.60 | <0.001 |
| How effective are the techniques that you know for dealing with aggressive illicit IV substance abuse | 217 | 5.23 | 2.29 | 166 | 6.17 | 2.38 | <0.001 |
| How able are you to meet the needs of an aggressive illicit IV substance abuse patient | 219 | 5.47 | 2.24 | 166 | 6.34 | 2.36 | <0.001 |
| How able are you to protect yourself physically from an aggressive illicit IV substance abuse patient | 224 | 5.60 | 2.42 | 166 | 6.25 | 2.51 | <0.001 |

## Appendix Y
## Results Student Learning Outcomes Nurse Leader Simulation

Table 5
*Simulation Learner Survey*

| Question | *n* | M | SD |
|---|---|---|---|
| I clearly understood the purpose and objectives of the simulation. | 31 | 4.93 | 0.045 |
| I was supported in the learning process. | 31 | 4.87 | 0.061 |
| I was encouraged to explore all possibilities during the simulation. | 31 | 4.77 | 0.425 |
| Feedback provided was constructive and centered around patient safety and care. | 31 | 4.83 | 0.374 |
| The scenario resembled a real-life situation. | 31 | 4.83 | 0.374 |
| I actively participated in the debriefing session after the simulation. | 31 | 4.81 | 0.341 |
| The simulation offered a variety of ways in which to learn the material. | 31 | 4.71 | 0.461 |
| I was challenged in my thinking and decision-making skills. | 31 | 4.64 | 0.661 |
| I collaborated effectively with my peer during the simulation. | 31 | 4.87 | 0.341 |
| The teaching methods used in the simulation encouraged critical thinking. | 31 | | |
| I am confident that the simulation has assisted in improving my ability to provide safe and competent care. | 31 | 4.72 | 0.514 |

## Appendix Z
## Qualitative Results Nurse Leader Simulations

Table 6
*Nurse Leader Simulation Participant Comments*

| Question | Participant Quotes |
|---|---|
| Describe the most useful part of the simulation: | " Using patient advisor is extremely valuable and I always get so much useful feedback from them"<br>"The actual sim process was a huge help. Having a supportive ANM partner speak up in areas I am not yet familiar with.<br>" Working with an ANM I've never met and getting to listen to her empathetic style"<br>"It felt real and what we encounter when delivering the contracts"<br>"Patient was believable and the environment was authentic"<br>"I appreciated the standardized patient and the feedback about what went well and what to do differently next time."<br>"The debriefing and the feedback from the patient" |
| Least helpful | "All was useful"<br>"Nothing-this was amazing"<br>"Being rushed"<br>"I know we have 12 minutes to go the they common. However, I suggest letting people know that it is the one priority to complete" |
| Simulation you would change | "The contract is wordy/lengthy; it needs to be distilled/refined further"<br>"I would answer the legal questions with more authority eg. What if I don't sign it? Etc.<br>"More prep work"<br>"I would n't change anything" |
| Describe learning experience | "I'm "thrilled" about the process. We need it (both patients, family, friend, and staff. We are making/creating a safer environment."<br>"Wonderful! Educational yet a very supportive learning environment"<br>"I feel ready to manage this process"<br>"It's a great way to learn and be exposed to this situation. I learned a lot and xxxx was a great mentor.<br>"It was great! Patient did excellent, very believable."<br>"Amazing", "Awesome", "Loved how real it felt" |

## Appendix AA
## Results Pre and Post Education Concept of Implicit Bias

Table 7
*Familiarity with Concept of Implicit Bias*

| Question | *n* | M | SD | *p*-value |
|---|---|---|---|---|
| Pre-assessment | | | | |
| How familiar are you with the concept of implicit bias? | 15 | 3.13 | 0.8 | |
| Post-assessment | | | | |
| How familiar are you with the concept of implicit bias? | 15 | 4.0 | 0 | 0.000625 |

## Appendix BB
## Results Caring Behaviors Checklist

Table 8

*Caring Behaviors and Communication Rating by Standardized Patient of Nurse Leaders Contract Administration Simulation*

| *McDaniel's Caring Behavior Checklist Questions* | *n* | *Present (1)* | *Absent (0)* | *Average Score (0-12)* |
|---|---|---|---|---|
| **Verbal** | | | | |
| Verbally responds to an expressed concern | 21 | 21 | 0 | |
| Explains procedure prior to initiation | 21 | 20 | 1 | |
| Verbally validates patient's physical status | 21 | 18 | 3 | |
| Verbally validates patient's emotional status | 21 | 15 | 6 | |
| Shares personal observations or feelings (self-disclosing) in response to patient's expression of concern | 21 | 3 | 18 | |
| Verbally reassures patient during care | 21 | 18 | 3 | |
| Discusses topics of patient's concern other than current health problems | 21 | 4 | 17 | |
| **Nonverbal** | | | | |
| Sits down at bedside | 21 | 20 | 1 | |
| Touches patient exclusive of procedure | 21 | 10 | 11 | |
| Sustains eye contact during patient interaction | 21 | 21 | 0 | |
| Enters patient room without solicitation | 21 | 21 | 0 | |
| Provides physical comfort measures | 21 | 14 | 7 | |
| | | | | 8.9 |
| *Facility Specific Communication Questions* | *n* | *Present (1)* | *Absent (0)* | |
| **Listened to you Carefully** | | | | |
| Did not interrupt inappropriately while you were speaking | 21 | 21 | 0 | |
| Used non-judgmental body language during encounter | 21 | 20 | 1 | |
| **Explained in a Way You Could Understand** | | | | |
| Did not use acronyms | 21 | 21 | 0 | |
| Did not use jargon | 21 | 21 | 0 | |
| Stated rationale for contract | 21 | 21 | 0 | |

| | | | |
|---|---|---|---|
| Matched language with your literacy level | 21 | 21 | 0 |
| Responded to your non-verbal behavior/facial expression | 21 | 19 | 2 |
| Speech was not rushed | 21 | 21 | 0 |
| Used non-judgmental verbal language during encounter | 21 | 21 | 0 |

# Appendix CC
# Letter of Support

KAISER PERMANENTE®

Kaiser Permanente Medical Center

September 3rd, 2019

Vicky Locey
401 Bicentennial Way
Santa Rosa, Ca 95403

University of San Francisco
School of Nursing and Health Professional
2130 Fulton Street
San Francisco, Ca 94117

Re: Letter of support for Christina Sanford, USF DNP student

To Whom It May Concern:

This letter is to confirm the support from Kaiser Permanente Santa Rosa, for Christina Sanford, doctoral student at USF, to conduct her DNP project at this facility. I further support and understand this project work will be written up and could be published.

Please do not hesitate to contact me for any further information.

Sincerely,

Vicky Locey

Vicky Locey, MSN, MBA, RN, NEA-BC
Chief Operating Officer/Chief Nurse Executive

401 Bicentennial Way
Santa Rosa, California 95403-2192
(707) 571-4000

04408-12 (REV. 5-00)