**Safety Performance Improvement Group Paper**

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**Introduction**

The purpose of the Joint Commission National Patient Safety Goals is to help outline the importance of the different priority areas that all healthcare workers should be cognizant of when practicing. Preventing infection in a hospital setting is a leading way that we can help prevent the spread of disease to patients which can in turn cause increased hospital bills for the patient and the hospital as well as for the patients. Consider this scenario, a floor nurse who is about to finish his or her third 12-hour shift in a row on a busy medical/surgical unit.  The nurse’s patient load is heavy, including a 95-year-old male who’s been admitted for urinary tract infection related to his chronic Foley catheter use.  The patient had multiple orders for intravenous antibiotics, and began complaining of loose stools that morning.  The 95-year-old male has just called out to the nurse’s station asking for assistance to the bathroom. Upon arriving at the room, the nurse notes a sweet and pungent odor that is distinct in flavor. The patient had stooled himself in the bed. The nurse notes thick, gelatinous feces had seeped up the back of the patient’s torso and also soaked the chucks pads underneath. The nurse sends a stool sample to test for Clostridium difficile (C-diff). The stool comes back positive for C-diff and now the patient’s length of stay in the hospital will be extended in order to treat the C-diff. C-diff is one of many Hospital Acquired Infections (HAI) that are important safety issues in the acute care setting.  HAI are an important cause of increased burden in particular to increased length of stay (LOS) and accounts for up to 90% of total costs (Giraldi,  Montesano, Sandorfi, Iachini, Orsi, 2019). According to the Centers for Disease Control (CDC), in 2019, 1 in every thirty-one patients in the United States had at least one infection associated with his or her care in the hospital. The 2021 Hospital National Patient Safety Goals listed ‘Prevent infection’ as number 7 on their list.

Use the hand cleaning guidelines from the Centers of Disease Control and Prevention of World Health Organization.  Set goals for improving hand cleaning.  Use the goals to Improve hand cleaning (Joint Commission, 2021).

The purpose of this discussion is to identify a safety issue that needs change to help deliver safer care to patients. The paper will discuss the change process, will identify those who support or oppose the change, discuss feedback and evaluation of the change, and also discuss leadership’s role in the change.

**Seven Steps in the Change Process**

            The performance improvement process, as described by Sullivan (2018, pg. 64-66), involves the cumulative stepwise implementation of seven stages. The first step, identifying the problem, has been addressed above; the problem we are attempting to change is to reduce the instance of healthcare-associated infections (HAIs). While identifying the problem it is important to ask a series of questions to evaluate our current status. According to Sullivan, the important question, ‘What kind of change is required?’ generates integrative thinking on the potential effect of change on the system.

            The second step in the change process is to collect necessary data and information.  Sullivan states that ‘This step is crucial to the eventual success of the planned change’.  Collecting data on HAI might include quarterly infection prevention meetings in which data is presented from different floors or departments; trends and graphs present the data. A business case scenario would be established to present the costs and benefits of the proposed change (Sullivan, 2018).

            Step three involves selection and analysis of data. ‘The kinds, amounts, and sources of data collected are important’.  This step includes identifying potential solutions, areas of consensus, and building a case for whichever option is selected (Sullivan, 2018).

            The fourth step, developing a plan for change, involves both the timeframe for the change and the inclusion of those who it will affect. This is a key step in any change process and should be done with care. To better facilitate the change in HAI protocols, the nurses and other workers who will be affected by the change will be asked for their input, as well as be further educated on the importance of the changes.  As Sullivan (2018) states “The more involved members from the system are at this point the less resistance there will be later.”

            Step five deals with identifying supporters and those who oppose the change. This will become somewhat evident based on the initial reactions from staff when hearing about the change and receiving education as to the changes benefits. This step can be crucial to the overall changes success, as by forming a supportive team the morale of other employees will rise.

            The sixth step is to apply interventions to support the desired change. During this step the plan is first tested and resistance may be firmly met. Interventions, such as formal reprimands for non-compliant employees or to acknowledge the efforts of a group to help uphold the change, can ensure further compliance. One of the most pivotal people for change during this step is the change agent. “The change agent creates a supportive climate, acts as an energizer, obtains and provides feedback, and overcomes resistance” (Sullivan, 2018).

            The final step to the change process is to evaluate and stabilize the change, if it is successful. If the expected benefits from the change, like the reduction of HAI, has occurred then the change can be viewed as a success and the change can be further, or permanently, incorporated into the hospital system. As Sullivan (2018) notes “the change agent will delegate responsibilities to target system members.” During this final step positive feedback is still advised to help reinforce the changed behavior.

**Change Process**

            For this project we looked at the Transitions Theory by Afaf Ibrahim Meleis, which explains the idea of organizational transitions. This idea shows that the changing of environmental and social conditions can affect those who live within them (Alligood, 2018). In this theory nurses are charged with being ready to adapt to change when management presents it to them, whether that is in policy change or in an environmental change. Nurses must be prepared for change in order for it to run smoothly and benefit the patients involved. Hospitals are impacted by frequent change and therefore must be prepared for critical changes like a rise in HAIs related to the spread of infection between patients. Ensuring awareness amongst staff and leadership on ways to decrease the spread of infection is vital in order to collectively find ways to decrease this infection risk.

            There are many interventions that can be implemented to help reduce the spread of infection amongst patients. An increase in hand hygiene and proper and frequent donning of PPE can help reduce HAIs due to spread of bacteria from one patient to another. For our change in process to reduce HAIs we looked at the use of Halo Disinfectant Spray systems that disinfect rooms of patients once a patient has been discharged and therefore reducing the risk of spread of bacteria from one patient to another (Safe Net, 2017). Using this halo lighting is a process that uses blue light to kill bacteria in the room in which it is used. While these systems can be expensive for a hospital to purchase up front, roughly $10,000 to $15,000, in the long run these systems can save money that hospitals would spend treating patients who have been exposed to a HAI (Safe Net, 2017). We chose to implement this intervention because this use of the Halo Systems is a great example of a way of decreasing the spread of bacteria on a hospital floor or inpatient room. We also felt this system was an easier add on to procedure and policy which would make it easier for staff and management to adjust to the addition.

**Supporters and Opponents of Change**

Whenever a plan is made, there will be those that are compliant and those that are resistant to finding a solution for a better outcome. There will also be supporters and opponents to developing a plan.  There needs to be a plan for implementing HAI preventions.  Supporters for implementing HAI preventions would include the patients, hospital staff, and administration.  Patients would support a plan because those who were diagnosed with HAIs described feeling dirty, “having the plague”, or “feeling like a leper.”  Patients reported a fear of transmitting their infections to others, which affected their personal and workplace relationships (PSQH, 2018).  Hospital staff would also support a plan to decrease HAI’s as they do not like having to don PPE all times when caring for a patient.  Administrators would be in support of a plan to decrease HAIs because they are costly.  The fewer number of HAIs in a year would benefit the hospital budget.  For example, surgical-site infections (SSI’s) have a mean hospital cost of $25,546 per infection; while ventilator-associated pneumonia (VAP) has a mean hospital cost of $9,966 per infection.  Central line associated bloodstream infections (CLABSI’s) have a mean hospital cost of $36,441 per infection and Catheter associated urinary tract infections (CAUTI’s) have a mean hospital cost of $1,006 per infection (Stone, 2009).  HAI’s are not only a budgetary problem but they also are a time invasive problem for hospital staff that are managing and treating the patients.

Those that would oppose a plan to help decrease HAIs would be those hospital staff members who don’t like change. Some reasons why staff members are resistant to change is fear of the unknown; people resist what they do not understand, especially when tangible measures are a part of the unknown. Resistance occurs when change is mandated. People feel that change was done to them, not with them, and any outside solution is off-putting, at best. No involvement by staff in the change process makes buy-in difficult.  Acceptance of the status quo is another reason for resistance. People take comfort in doing things the way they have always been done.  Since a competency has been built and there is personal value in sticking with the status quo, anything that disrupts the current approach feels unsettling (Barlow, n.d.). Even if the hospital can find the problem(s) and match an evidence-based solution, implementing the change can be difficult because of the resistance to change by the staff. Most executives, regardless of industry, will agree that culture eats strategy for lunch. Despite the best planning and implementation of patient safety interventions in hospitals, quality improvement initiatives frequently fail or fall short of internal targets. Organizational resistance to change is a well understood phenomenon, but one that is poorly applied to healthcare (Wallace et al.,2017).

**Resistance to Change**

Implementation of evidence is essential for patients to receive the best care possible.  Everyone needs to be on board and understand this regardless of personal feelings or how things were previously done. Some reasons used to be reluctant to change includes the following: “That’s how I was trained”, “We have always done it this way with no problems”, “It is how we do things here”, “When I am in a hurry I do what I have always done”, “lack of knowledge, skill, and time” (Johnson, 2014).  How do you manage resistance to change? The best way to manage resistance would be to include staff members in the change process. This includes providing education for staff on evidence based practice (EBP) to include posters, educational sessions etc. Selecting a nurse who is interested in nursing research to serve as an EBP mentor. Having a n EBP mentor or champion who works with the staff on the unit in implementing evidence into care legitimized the practice. Identify staff who are “early adopters” and will most influence implementation. Find a staff member who is respected and others listen to, view as a resource and get them on board to assist with implementing change (Johnson, 2014). The bottom line to managing resistance is to involve peers in the change process to better influence others to go along with the change.

**Evaluation of Change Process**

In an effort to ensure that the changes that have been implemented are adhered to, and to see if said changes have resulted in the desired outcome, an evaluation of the change process must be established. Feedback for the changes will consist of daily check-ins with either the charge nurse or the unit manager for any updates and reminders on the new changes and protocols. Nurses will also be able to fill out small surveys, at the end of their shift, where they can comment on the changes and any improvements that could be looked into. All nurses will also be evaluated on their coherence to the policy changes and if needed may have extra instruction provided to them.

Ultimately, the major determinant of the success of the changes in protocol will be from the weekly and monthly totals of HAIs acquired on those units that the changes have taken effect. The evaluation of the changes will be based primarily upon the overall reduction of HAIs experienced by patients, compared to the pre-change HAI numbers. As such the total number of HAIs on both individual units and the hospital as a whole will be compiled and assessed on a weekly basis over a four-month period. This data will then be compared to the average amount of HAIs for the specific units and the hospital from the same period of the previous year. Should an anomaly, such as the COVID-19 outbreak, have occurred in either this current or the past year, and as such may skew the data, then the collected data from the change in protocol will be compared to the previous four months before the change for each unit. Furthermore, the financial impact of the change could also be evaluated through the use of a cost-benefit analysis; however, it is highly likely that a reduction in HAIs will result in financial savings for the hospital as it is no longer paying for the treatment of the HAIs that individual patients have obtained under the hospital’s care.

**Stabilizing Change**

            Once the initial change has been implemented and refined, through the feedback and evaluation of the nurses, managers, and other integral parties, the next challenge will be to stabilize the change; as the temptation to fall back into old habits may, with time, resurge. In order to stabilize the change from the previous protocol to the newly implemented protocol, and thus ensure the continued use of the new protocol, weekly reminders concerning the change and its positive effects will be given to the nurses working on the units for the next four months following the initial month of the change’s introduction. Along with these weekly reminders, random inspection by nurse managers, and other such authority figures, will be conducted and any new nurses hired during the period of the change will only be taught the newer up-to-date protocol. If any nurse is continuing to have trouble with the change they will be given extra instruction, as needed. Should any nurses continue to willingly disregard the change in protocol they will be reprimanded, and if necessary either retrained or terminated.

**Leadership**

Proper leadership is essential to implementing change. The time between the current situation and the implementation of change is known as the transition period (Bridges, 2009, as cited in Sullivan, 2018). During this transition time it is important for leadership to not only explain the new processes and policies being implemented but also it is important for them to lead by example. While not all leaders who implement policy change are working as bedside nurses or charge nurses they can still lead by example, especially when we are looking at HAIs. When implementing an improvement change such as we are proposing there are many people who would need to be involved. A systemic change such as this requires involvement from management to all staff working in the hospital. The key leaders that need to be involved though are the nursing supervisor, to make sure policy is changed at the staffing level, the head of nursing education, to make sure everyone is properly trained in new policy, and the charge nurses to make sure that all new policy is followed on the unit when people are working. The transition of a new policy and practice is a pivotal time and takes focus and practice not only by the leadership but also by the staff. A staff member can be just as much a leader just as an actual appointed leader is and it is just as much the responsibility of the staff to set a good example for each other when carrying out new policy as the leaders. As previously mentioned, transitions in policy can be hard for a number of reasons, but with good leadership it is possible to have a successful change that benefits the whole staff and overall improves patient safety.

**Conclusion**

Patient hospitalization can be extended unexpectedly due to one of the most preventable occurrences, hospital acquired infections. In order to prevent an extended stay, the root of hospital-acquired infections must be addressed. Change must take place to prevent HAIs and the first step of seven is identifying the problem. Nurse leaders will collect and analyze data to develop a plan of prevention. Once a plan is made, the leader surveys those who are for and against the change. Steps six and seven are implementing the plan and evaluating the change. Leadership is essential in the process of change because it can be an uneasy ride for those involved. With proper leadership, a strong team, and a well thought out plan, hospitals can greatly reduce the amount of HAIs.

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