Safety PI Paper

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**Safety Goal**

Medication errors are a major concern in healthcare. According to Foote and Coleman (2008), approximately “1.5 million Americans are injured each year because of medication errors (which) cost the health system well over $3.5 billion per year” (p. 207). Khalil (2009) stated that “46% of medication errors occur when patients are admitted or discharged from hospital” (p. 166). With these staggering numbers and the negative consequences patients face, it’s no wonder one of the 2014 National Patient Safety Goals is to improve medication safety, more specifically through the use of accurate medication reconciliation.

Karnon, Campbell, and Czoski-Murray (2009), define medication reconciliation as “the process of identifying the most accurate list of a patient’s current medicines … and comparing them to the current list in use, recognizing any discrepancies, and documenting any changes” (p. 299). This accurate list of all medications, including vitamins or herbal supplements, is instrumental to the overall treatment plan for the patient. This list will help the healthcare team make better decisions regarding the treatment of acute issues, while maintaining chronic illnesses, by preventing negative interactions and improving communication with the patient on what should be stopped, resumed, or changed at discharge. Since nurses have the most direct interaction with patients, and are key players in the multidisciplinary team, their communication between patient and provider has been shown to reduce medication errors by over 75% (Optimizing Medication Safety, 2011, p. 25).

Medication reconciliation is an important process and responsibility throughout the entire patient’s hospital stay, starting with admission, including transfers of care to other units or private providers, and discharge - which is the most problematic and influential step. “28% to
40% of a patient’s medications are discontinued during hospitalization, and 45% of medications prescribed at discharge are initiated during the hospital stay” (Ng et al., 2013, p. 25). While certain facilities and geographical locations might offer situational challenges, overall improving the discharge step of the medication reconciliation safety goal will have a positive influence on patient outcomes, therefore improving self-determination and reduce readmission rates.

**Data Collection**

Since the problem has been identified, the next step to implementing change is to collect and analyze data before devising a plan to correct the problem. The patient’s safety is the driving force of what is to be gained by safer medication reconciliation at the time of discharge. A possible restraining force is the time it will take to implement change, and ultimately the time the implemented change will take doctors, nurses, and pharmacists to complete prior to patient’s discharge. Qualitatively, the hospital should look at previous medication errors and factors that contributed to errors at a facility level, as well as at a regional and statewide level. With identification of the reasons behind medication errors, one can more effectively implement a change that will improve the process. Quantitative data should focus on the amount of errors within the hospital, so that after a change is implemented new data can be compared for evaluation of effectiveness.

Additional restraining forces could include the lack of medication error reporting, due to emphasis on blame and reprisal consequences (Tang, Sheu, Yu, Wei, & Chen, 2007, p. 448). A research study of nurse’s perspectives of medication errors found that ‘personal neglect,’ ‘heavy workload,’ and ‘new staff’ were the top contributory factors to medication errors in their practice (Tang, et al., 2007, p. 447). The researchers concluded that while the hospital system, patient
condition, and physician’s prescriptions contributed, the leading factor in medication errors is the nurse’s personal neglect (Tang, et al., 2007, p. 448).

Possible Solutions

In order to improve the medication reconciliation process at discharge, not one single solution is going to solve the problem. A protocol should be developed that provides the staff (physicians, nurses, and pharmacists included) a clear and concise way to reconcile patient medications at discharge. All three of the aforementioned healthcare professionals should be involved and work together to prevent patient medication errors. Some suggestions for improvement could include an orientation or training for new staff, maintaining adequate staffing for all units, maintaining attention and concentration during review of discharge medications, improved physician-to-nurse communication, clear physician orders and prescriptions, 24/7 availability of physicians, second checking and/or supervision of discharge medication lists, and ensuring resources are available for healthcare staff (Mohamed & Gabr, 2010, p. 33). Since the focus is on medication reconciliation at discharge, the solution and developed protocol should emphasize safe prescription and transcription of discharge medications, with an aim to reduce or resolve the contributing factors discovered during data collection.

Plan

After the problem is identified and data is collected and analyzed, the next phase requires developing a plan to implement the required changes. During hospitalization, various forms are placed in patient paper charts that are filled out for patient safety. Such forms include medication reconciliation forms that doctors fill out with medications that they want patients to be on at admission and at discharge. Other forms such as consent forms, pre-procedure, and pre-
operation checklists are also placed in the medical record. These are all safety mechanisms that are in place to decrease errors.

A medication safety check sheet should be implemented and signed off on. This sheet would provide a list of different checkpoints that would need to be addressed and signed off on during the patient’s length of stay. There should be places for nurses, physicians and other healthcare personnel, such as pharmacists, to sign to state that they have addressed part of the check sheet. The first check-off point should be of the initial medication reconciliation of the patient’s home medications. This checkpoint can also have reminders to assist in helping nurses to remember to ask patients about herbal and vitamin supplements. If the patient is not admitted, then they can skip to the last checkpoint which is a discharge check point where you compare home medications to medications the patient is being discharged on. However, if the patient is admitted, the next checkpoint after the admission checkpoint should be that of the “inpatient medication reconciliation”. Nurses can clarify with attending physicians on discrepancies.

**Implementation**

The implementation should not be started hospital wide at first. A pilot unit should be responsible where a smaller group of staff and patients can be monitored to ensure that the implementation is running smoothly, and that staff is adhering to the change. When a patient’s chart is constructed, a part of the initial construction should be placing the medication safety checklist form to the front of the chart. A patient label should be placed on the form. Hospital staff involved in this change, including clinical staff and support staff (information technology), would need to have education provided to them in how to use the form and its importance. Implementation of the checklist, as stated above in the planning phase, should be implemented
and strictly adhered to. Home medication lists should be clarified in the emergency room and then also upon admission to the hospital. Upon discharge, the doctor will write a discharge medication list for the patient. The nurse then reconciles the medications. Then there should be a required co-signature by a second RN to make sure that the discharge medication list is accurate. When patients are discharged, they should be sent home with cards in which they can write down all of their medications that they take. This card will be beneficial in multiple ways. The patient can take this card with them to all of their follow-up appointments. This will increase medication safety for patients that visit multiple doctors. If a patient carries this list with them, everyone should have the same copy.

Resources

The resources needed to complete this process would be minimal. The additional forms to be completed would need to be designed and distributed to the units, as would the medication cards to be provided to patients. There would be some additional financial costs incurred. A short training on the new system will need to be provided to all staff who will be using the system. Both the staff members and the trainers will need to be paid. Someone will also need to follow up with compliance audits, and will need to be paid to do so.

Change Theory

Kurt Lewin’s classic change theory, as described by Marquis and Huston (2009), is appropriate for the planned change described above. Lewin’s change theory is comprised of three phases - unfreezing, movement, and refreezing. The first stage of planned change is unfreezing. In unfreezing, the need for a change needs to be recognized. In this case, the need for a change is related to medication reconciliation at discharge, and the medication errors that
accompany it. The current system is recognized to be ineffective, thus providing a driving force. A driving force is anything that pushes toward the change, whether internal or external. The new facility policies regarding medication reconciliation will be a driving force, as will any people who are interested in making a change. However, it is important that policy not be the only driving force. People have to be willing to make the change. Marquis and Huston (2009), caution that change should only be implemented if necessary, because excessive changes cause stress to employees.

The second stage is movement. During movement, the new policies regarding medication reconciliation will be developed and put into use. A helpful tool here will be a change agent, a person who acts as a driving force and pushes toward change. The change agent must make a careful and thorough assessment of the situation and develop an appropriate plan. This is a difficult stage; forward momentum on the changes must be maintained. Restraining forces are the forces that “push back” against the change. This may be the attitudes of people who are unconcerned about making changes. The key will be to have a change agent who is able to overcome the restraining forces. It is also important to make sure that the new system is reasonable to use. A complicated system will increase the amount that people balk against it.

The final stage is refreezing, in which the new policies and procedures become the accepted way of performing medication reconciliation. The change agent will still be an important factor here, because the change must be stabilized. It will take three to six months for the change process to be complete, so the agent must be able to devote an extended period of time to the project (Marquis & Huston, 2009). If refreezing is not completed, the new system will not be properly established.
Evaluation

In order to evaluate the benefits of the change process, measurable outcomes must be taken into consideration. A decrease in the number and frequency of medication errors on the pilot unit, due to implementation of medicine reconciliation checks by numerous members of the healthcare team, would indicate success. However, if unintended consequences, such as an increase/no change in medication errors occurs, it could be concluded that more staff education is needed or the change process needs to be re-evaluated. Surveys are one of the most common ways for hospitals to gain information on their hospital, and how the patient’s experience was. A survey can also be used to survey hospital staff in how they feel the change is helping or hindering patient care. Positive feedback from staff surveys would also help to measure benefits of the change process. If staff members feel more confident with the new medicine reconciliation process, they are more likely to continue implementing the change per policy, and be better teachers to their patients. Medical records can audit the medication safety checklist to make sure that the checklist is being utilized. Any negative feedback could be beneficial when tweaking the change process before it is implemented hospital-wide.

Stabilization

To stabilize the change when the change process is extended past the pilot unit, the hospital will need to write formal policies regarding the medication reconciliation checklist, and its use throughout a patient’s hospitalization. The new policy and change in staff requirements will need to be reinforced frequently with positive feedback to ensure that staff members are following the new policies and do not revert back to old, familiar behaviors (Anders & Hawkins, 2006). Examples of positive reinforcers for decreased numbers of hospital readmissions could
be unit lunches or gift cards for staff provided by management. Hospital budget would have to be considered for these reinforcers, however it would show appreciation for the success of newly implemented change.

**Leadership**

Great change starts with effective leadership. If the leadership is able to show their willingness to improve, and they are open to new ideas and practices, then the staff is able to better accept those changes. In order to reduce medication errors by improving medication reconciliation, there are multiple departments that must be involved. One trait that is essential to performance improvement is the leadership being able to have interdepartmental cooperation, and be able to break down any obstacles to collaboration. For this specific scenario, four departments must come together: pharmacy, physicians, nursing and information systems. The leadership of all four of these departments must work together in order to choose the best way to implement the medication reconciliation improvement initiative.

Once the plan for improvement is in place and agreed upon by all departments, it must be passed down to the staff to be implemented. During education and implementation, it is important to maintain a focus on staff participation and teamwork. Doing this will help the staff feel that they are a part of the change, which results in a higher potential for a successful implementation. For example, if nursing staff were included in the process of performance improvement, they would be more likely to follow the new policies and procedures. Leadership could do this by surveying nursing to determine the most efficient way to implement these updates into the daily workflow.

While all departments help to initiate these changes, nurses are at the bedside
communicating with patients and are a vital part to the process improvement. It is also the responsibility of the leadership to periodically measure and track the success of the implemented program. If this is done routinely, then it makes it easier to find any barriers to the new system and to modify them if needed. This would involve occasional interdisciplinary meetings to evaluate effectiveness of the new procedures. The leadership must also evaluate the receptiveness of the staff to the change. If staff is not complying, then its true success cannot be measured. If staff are resistant to change, leadership may implement a reward system in order to increase staff compliance. Ultimately, without strong leadership change cannot be successful, so it is essential to recognize that change starts at the top (Anders & Hawkins, 2006).
References


I have neither given nor received unauthorized aid on this examination (or other material turned in for credit) nor do I have reason to believe that anyone else has.

SIGNED: Jacqueline Mench, Erin Miller, Courtney McFarland, Katherine Mitchell, Jessica Morrissette, Heather Murphy
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