Insulin Administration

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The purpose of this assignment is to identify and analyze an opportunity for improvement. This can be achieved through a performance gap analysis. This evaluation determines what aspects are lacking in the performance of an employee or company in comparison to its competitors. This audit is also beneficial in discovering additional training or skills needed to bring the individual or company up to an acceptable standard (Blank, n.d.). One example is the use of multi-dose vials. Whenever possible, these vials should be single patient use only. This practice prevents inadvertent contamination and medication errors (CDC, 2019). Observation in a clinical setting indicated that one insulin vial was used for multiple patients. At the same site, registered nurses do not double-verify insulin. However, the Joint Commission and Institute for Safe Medication Practices recommend that insulin should be double-checked prior to administration to prevent errors (Modic et al., 2016). These practices pose both safety and infection risks to the patients and should be thoroughly evaluated.

There are many articles and journals from reputable sources that support this claim. As mentioned above, The Centers for Disease Control and Prevention state that multi-use vials should be single patient use whenever possible (CDC, 2019). Another example is a journal entry published in 2018. This article discusses the risks of repercussions of using multi-dose vials. The results indicated that "the use of MDVs is associated with the risk of contamination and nosocomial outbreaks of life-threatening bloodstream infections" (Bhatia, Mishra, Loomba, & Dogra, 2018, para. 7). The information found in this article indicates that the use of multi-dose vials poses a safety and infection risk to patients. Lastly, an article published in 2015 discusses the correlation between insulin administration and medication errors. The author says that it should not be assumed that all healthcare professionals know and understand the process of measuring insulin doses. For example, the researcher states that participants measured insulin in

milliliters rather than units (Grissinger, 2015). By implementing a two-nurse verification on all high-risk medications, the probability of a medication error occurring is decreased.

Kurt Lewin's theory classifies change into three stages; unfreezing, changing, and refreezing. The process begins with unfreezing; this involves determining what needs to change, ensuring there is strong support from leaders, and managing the doubts or concerns. The changing stage is next; this is when implementation occurs. Communication between the audience and leadership is essential at this time. It is important to empower and encourage the target population during this phase. The final step is entitled refreezing; this involves developing ways to sustain the change, providing support and training, and celebrating success (Cummings, Bridgman, & Brown, 2015).

The driving force for implementing this change is the team’s desire to protect patients. The restraining effect is staff resistance, cost, and technical issues. The target audience, administration, and government facilities can all agree that multi-dose vials and single nurse verification pose an infection and safety risk to the client. Many researchers have conducted clinical studies and reported results linking cross-contamination and nosocomial infections to the use of multi-dose vials. Hospitals nationwide follow the guidelines and recommendations set by the Centers for Disease Control and Prevention (CDC). This organization also recognizes the potential infection risk MDVs pose. This information is located directly on the institution’s webpage.

Implementing this policy change will require the facility to purchase a large order of single-dose insulin vials. However, due to the bottle being a single dose, the client’s insurance carrier could be billed for the medication, thus alleviating some of the costs. The average retail price of insulin has gradually increased over the last few years (Table 1). One vial with 10 mL of

long-acting insulin is $340.00 (Lee, 2019). This price seems staggering; however, the cost of numerous healthcare-associated infections could be detrimental to a facility. The Office of Disease Prevention and Health Promotion (ODPHP) states, “the financial benefit of using preventative practices is estimated to be $25 billion to $31.5 billion in medical cost savings” (ODPHP, 2020, para. 3). This information supports our claim to eliminate MDVs in nursing practice. The health benefits outweigh the cost risks.

As with all new changes, it can take some time for participants to adjust. If modifications are made, there could be a decrease in unsafe insulin administration within the next six months. Indications that the plan was successful would include a decrease or elimination of multi-dose vials, and a double-verification requirement for the administration of insulin. The target system is nurses.

Resources needed to implement the new policy would consist of a large purchase order of single-dose insulin vials or pens and a new documentation option in the MAR. There should be a new option for a second nurse to enter their credentials. This documentation should be available for administration to view and audit. In addition, staff meetings should be scheduled to inform and educate the staff on the new changes. These meetings should occur at various times to accommodate employees on all shifts.

The interdisciplinary team should consist of nurses and other healthcare professionals. It is imperative to have nurses on the team as they administer the medications and will be directly affected. These individuals should disclose their habits and practices to the team. This is important because if they have been using multi-dose vials for many years, the adjustments from the new change could be difficult. Also, nurses could have personal issues with double-verifying

insulin. This could be due to staffing, as it could be difficult for a nurse to find another available RN on the floor.

Having various members of staff allows for different opinions and expertise. The team will plan to listen to the concerns of the group. An open-door policy will be implemented after the introduction of the new change. This will allow group members to present their concerns to the panel. After 30 days of implementing the new insulin administration guidelines, the team will perform an audit to assess the progress. The audit will include monitoring the charting of unit nurses that administer insulin. If feedback is required, it will reach the individual promptly. Follow-up staff meetings will be scheduled to assess the status of the new change. Employees can discuss any questions, concerns, or comments they have at this time. There will also be an anonymous suggestion box available in the unit break rooms.

The implementation phase is the process of putting policy into effect. During this phase, the team accomplishes tasks defined in the plan. There are many steps to be taken while implementing the change because it is introducing a new normal. Change is not easy, but the target audience must understand why it has to happen. The safety and infection risk the current policy poses on clients must be addressed. The target audience should be educated on how the new system will prevent medication errors and cross-contamination. Change is accepted by using open communication and listening to all questions and comments. After addressing all concerns, the team will move forward by explaining the new policy. After the meeting, each nurse will complete a short quiz on the administration and disposal of single-use vials. This test will determine the effectiveness of the teaching.

Another aspect of implementing this change has nurses double-verify insulin before administration by inserting a new option in the EPIC software that the facility uses. Just as with

blood products, a second nurse will have to enter their credentials before the medication can be scanned. By having a second set of eyes, medication errors are less likely to occur. Also, these extra precautions ensure that the staff is following the five rights of medication administration; this includes the right patient, drug, dose, route, and time. As previously stated, in addition to follow-up meetings and an open-door policy, a suggestion box will also be placed in an accessible location. This system allows nurses and staff members a chance to voice their concerns publicly or anonymously. These interventions are used to improve the outcome and prevent resistance from the target audience.

Stabilization is "a process of being made unlikely to change, fail, or decline" (Merriam-Webster, 2020, para. 1). The appropriate department should monitor the policy. For example, using multi-dose vials for multiple patients creates a potential risk for infection. Therefore, the facility's infection control department should assume responsibility for ensuring policy adherence. The infection control team can monitor this by performing spontaneous audits. These inspections would include counting vials in the pyxis, observing nurses draw up insulin, and performing random competency exams on the hospital units.

Single verification of a high-risk medication increases the probability of a medication error occurring. Due to this, management should monitor and observe how nurses administer insulin. Random audits should be performed to ensure that staff is using the new option in EPIC. This software requires a second nurse to enter their credentials before the medication can be administered. Medical-surgical floors, critical care units, and other parts of the hospital can be very hectic due to high-acuity patients. Because of this, it may seem like a nuisance to find another registered nurse to verify a medication. Therefore, having charge nurses assist with this issue could relieve some of the stress from the nurses.

This assignment went well, and the group worked great together. We unanimously decided on this topic because we all felt it was very concerning and needed to be addressed. Every group member participated and put in hours of work and dedication. The essay topics were divided, and each constituent independently researched and compiled data. Due to the COVID-19 pandemic, we were unable to meet up as often as needed, but we did use video calls or text messages to communicate. The desirable outcome of this change is to eliminate multi-dose insulin vials and single nurse verification of high-risk medications. This outcome can be sustained by having the appropriate departments assume responsibility. Overall, this assignment was a great experience and will help us in the future if we want to propose a new policy change.

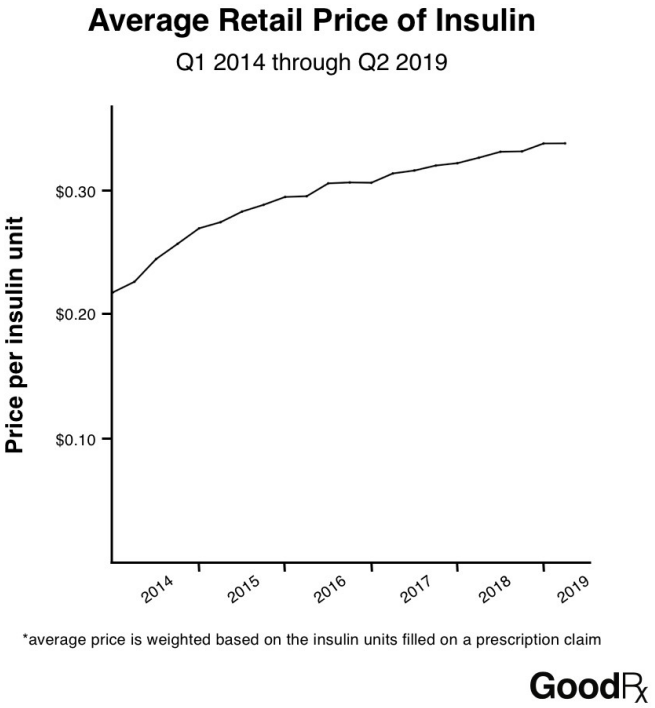
Appendices

Appendix I

- March 25, 2020-April 6, 2020
    - Group members met daily via video chat to discuss progress and address questions or concerns
- March 23, 2020
    - Abby Erickson emailed professor Miller asking for an extension on the paper
    - Professor Miller replied and extended the due date
- March 30, 2020
    - Abby Erickson emailed professor Miller asking about the page length requirement
    - Professor Miller responded
- April 4, 2020
    - Abby Erickson emailed professor Miller in regard to the change theory
    - Professor Miller replied

Appendix II

- Table 1



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