Brayden Black & Issac Herman

Quality Improvement Activity: Central Line-Associated Bloodstream Infection (CLABSI)

A patient who was morbidly obese came into the hospital with severe bouts of diarrhea and abdominal pain. The patient also received hemodialysis on Monday, Wednesday, and Friday because of renal failure in the hospital. The admission nurse collected all of the subjective and objective information obtained from the patient and decided to place the patient under contact isolation until the stool cultures were completed in the laboratory. When the polymerase chain reaction (PCR) test confirmed *Clostridium difficile*, the nurse communicated with the interdisciplinary team for an action plan. One of the interventions the provider ordered was the insertion of a central line because of the need for vancomycin administration. A few days passed in the hospital and the patient became confused and disoriented to her surroundings and inadvertently dislodged her central line. When the patient was found to have dislodged it the dressing was on the floor, the central line was inside her gown, and there was visible dried blood across the patient's upper chest. The patient also stated that she had a bowel movement and was sitting in her feces for quite some time. There was no telling how long it had been since she pulled the central line out of her body, and the provider was immediately notified of the situation while the team on the floor cleaned the patient thoroughly along with changing her linens and gown. The provider came to the bedside to evaluate the patient and cleaned the insertion site with the appropriate solution while requesting a new central line be inserted along with the use of a tele-sitter. He had also ordered a complete blood count, comprehensive metabolic panel, and blood cultures to be performed because of the possible risk for central line associated bloodstream infection (CLABSI). When the results came back the patient was also positive for staphylococcus aureus.

1. **Describe the scenario. In what way did the patient care or environment lack? Is this a common occurrence?**

In the scenario described, the patient was not provided quality care in such that she had dislodged her central line without anybody knowing and that she was sitting in her feces for quite some time. This led to her acquiring a CLABSI along with the infection that she was already present on admission with. This particular situation is not as common of an occurrence for patients across the hospital, but patients who require caregivers to don personal protective equipment and who are difficult to take care of because of their weight and frequent incontinent episodes often see a decline in care. This is why there are policies at Covenant such as hourly rounding to prevent poor outcomes from occurring such as this one. The system needs to change in a manner in which there is adequate staffing to care for morbidly obese patients because nurses often struggle and tend to avoid such patients when they do not have the necessary help that they require. The floor needs to work better as a team by not neglecting patients that they are not assigned to in order to promote more positive outcomes.

2. **What circumstances led to the occurrence?**

The circumstances that led to this occurrence were the nurses and aides not performing hourly rounding and the nurses not performing the change-of-shift report at the bedside. The nurses and aides need to be more thorough when checking patients' backsides when they are confused or disoriented because this patient probably didn't know she had a bowel movement until it became copious. The hourly rounding would have helped to prevent or recognize the inadvertent dislodgement of the central line leading to CLABSI. The interdisciplinary team could have prevented these circumstances from occurring if the patient was re-oriented frequently, a tele-sitter was present earlier when the onset of confusion was discovered, and/or by a more thorough change-of-shift report from the nurses performed at the bedside.

3. **In what way could you measure the frequency of the occurrence? (interviewing nurses, examining charts, patient surveys, observation, etc.)**

Because dislodging a central line could cause harm or even death to the patient, this type of incident is something that should be reported by the nurse along with the fact that the patient developed a CLABSI because of the dislodgment. That means it should be pretty simple to do a survey of incident reports to measure the frequency of this type of incident.

It is a little more difficult to measure the frequency of patients not being cleaned for an extended period of time after the dislodgement of a central line. Interviewing nurses and UAPs and patient surveys are the best a few methods get an estimate of frequency.

4. **What Evidence based ideas do you have for implementing interventions to address the problem?**

This is a difficult problem to completely eliminate. If patients are confused or disoriented, they might not know that they are pulling on a central line or even a peripheral IV site. Some interventions that I have seen used in the past are Tele-sitters to help alert nurses and aids before the patient is able to completely dislodge the line, restraints for the patient that is disoriented or agitated and actively trying to remove a line, or distractions like music or TV.

There are policies in place to help prevent patients being soiled for extended periods of time such as hourly rounding and turning the patient every two hours. It is important to note that hourly rounding should include following all lines from start to finish to ensure patient safety.

Adequate staffing and bedside report are essential to prevent a huge number of issues that occur in hospitals including both of these issues.

5. **How will you measure the efficacy of the interventions?**

Efficacy of the interventions can be measured by surveying incident reports six months after nurses have been taught these interventions to see if the number of incidents of this type has decreased.

For this specific patient you can measure efficacy of the interventions simply by noting whether or not the patient dislodges her central line again.

If a patient is sitting in soiled linens or gown it often causes skin breakdown. So, looking at wound reports could help determine the efficacy of hourly rounding and turning every 2 hours. It is especially important for patients that are confused or disoriented because they could unknowingly contaminate their central lines with feces.