

Hospital-Acquired Infections: Quality Improvement

Hazelyn Hunter

Lakeview College of Nursing

N434: Evidence-Based Practice

Professor Travis Whisman

July 1, 2025

Hospital-Acquired Infections: Quality Improvement

Nursing is a profession of ever-changing standards and ways of doing things that impact how clients are cared for and outcomes are impacted. One such way that nursing impacts change and outcomes is through the use of quality improvement. The overall concept and intent of quality improvement is to enhance the processes that are beneficial for the client. This concept is used to ensure ongoing improvement by using research-based information and focuses on the overall quality. Research is conducted through quality-improvement studies that are frequently descriptive and measurable while being supported by existing data (Houser, 2023). The results of the research and quality improvement studies are deliberately calculated for the benefit of clinical groups (QSEN, 2020). Each research study conducted is peer-reviewed by external reviewers. Quality improvement (QI) and Quality and Safety Education for Nurses (QSEN) are related in a few ways. Both quality-improvement and QSEN strive for client care improvement and overall client outcomes (QSEN, 2020). The goal for QSEN is to improve client care by preparing nurses with accurate knowledge to better the overall safety and quality (QSEN, 2020). QSEN includes three different sections within each of the six categories. These sections are knowledge, skills and attitudes. Each of these sections provides methods to help enhance quality improvement. Some examples that relate to nursing from these three sections include describing approaches for changing care processes, using quality measures to understand performance, and valuing self and other contributions to outcomes of care in local settings (QSEN, 2020). A specific concern related to the nursing profession is hospital-acquired infections (HAIs). These infections may also be termed nosocomial infections which can affect many clients throughout the hospital setting. These infections result from hospitalized care which may lead to an extended care period or other extensive situations. HAIs can be prevented by using proper

techniques and hand hygiene for the safety of the clients. This topic is significant because these HAIs have the potential to be a life-or-death situation. There are many ways to monitor or improve HAIs, one of which is using research to gain perspective on current trends. One such article was done by McVey, et al. (2022) to study the impact of HAIs on patient care.

Article Summary

This research discussed a process that was created during the COVID-19 surges. Research showed that during the COVID-19 pandemic 148 hospitals revealed a sudden increase in hospital-acquired infections which resulted from COVID-19 hospitalization (McVey, et al., 2022). This information led individuals to create the NSIQUI Toolkit which is made up of two documents. Zero Boards are used to track HAIs while being able to visualize data and trends. Report cards are also used to track information while also entering the data into the electronic health record. Specific staff members are chosen to audit the measures of each shift while also scoring them based on compliance. While enforcing the NSIQUI Toolkit, hospital-wide CLABSI rates were reduced by 19% and CAUTI rates reduced by 19.4% within a ten-month period of hospitalization (McVey, et al., 2022). Research showed that healthcare workers reported more awareness and focus while working to prevent infection while using the NSIQUI Toolkit.

Introduction

This research study was conducted to collect qualitative data to improve health care associated infections (HAIs) while in the hospital setting. The article expanded on methods to reduce HAIs specifically, central line-associated bloodstream infections (CLABSI), catheter-

associated urinary tract infections (CAUTI), as well as hospital-acquired pressure injuries (HAPIs) (McVey, et al., 2022). Examples of these methods to reduce HAIs included interactive whiteboards and audits each shift. The study is relevant to quality improvement because it addresses a major issue in the healthcare setting and conducted research while gathering data to implement a plan to reduce HAIs. This data that has been collected has been proven to decrease the number of HAIs while the NSIQI Toolkit is in place.

Overview

This research article relates to quality improvement by providing information to healthcare individuals on how to reduce HAIs. The research shows that following the implementation process of the National Database of the Nursing Quality Indicators (NDNQI) will reduce the quantity of HAIs (McVey, et al., 2022). If nurses and other health professionals take the time to use the whiteboards, complete audits and enter the correct information into the electronic health record the number of HAIs may decrease even more and increase overall quality improvement. This research used data to monitor outcomes of processes and the use of improvement to design and test changes that continuously improve quality and safety (QSEN, 2020).

Quality Improvement

Based on this qualitative research article, this quality improvement information may be used in any healthcare setting such as hospitals, nursing homes, educational facilities and even home health. Most facilities have room for improvement while working to prevent infection. It is possible to make change as needed, while having an equal effect as well. For example, instead of acquiring an electronic whiteboard, a simple whiteboard will work or even a laminated piece

of white paper (McVey, et al., 2022). Making shift audits to manage information is crucial. However, dedicating this task to a pair of individuals may help improve the job and data. Lastly, hand hygiene is always an important aspect of healthcare since it is the first step in prevention. Each of these changes made may improve quality HAIs. In addition, having a detailed communication plan including unit-based meetings, staff meetings, educational handouts, email communication and leader rounds will help enhance communication and quality improvement (McVey, et al., 2022). The preparation includes gaining supplies and assigning tasks. Managing and maintaining a system is the last way to improve care and is important to restore items that are needed to continue to enhance the overall quality improvement. This information does not need to have an impact on any institution if the funds are not available. Adjustments may be made that best suit the organization, and this should improve clients' perception of the organization while decreasing the risk of getting HAIs. Following protocol to reduce the risk of clients getting HAIs, essentially should leave the healthcare workers satisfied, since they have not caused harm to the client and essentially made the client feel good. This all increases the safety of the client while also increasing the nursing safety by protecting the client from HAIs and protecting the nursing staff both legally and from overall infection hazards.

Application to Nursing

Each healthcare professional may interact with a client at some point within the time of stay which makes it important to remain aware of the risk of hospital-acquired infections. As nurses and other health professionals provide holistic client care, the thought of infection prevention should always be considered. Other methods of practice may be used to prevent infection in the healthcare setting depending on the facilities prevention policy. To practice safe

and effective client care, the proper education should be provided for the safety of the clientele and staff. Required training or meetings should be done every so often to help review and remind health professionals of the prevention and safety of HAIs (McVey, et al. 2022). Along with continuous practice and education, expanded research should be done to help improve the overall statistics of HAI prevention worldwide. This research that should be conducted may discover common errors within practice or specific departments with higher probabilities of contracting HAIs. Overall, the application of proper safety in preventing HAIs should be a high concern for those who provide care to individuals.

Practice

The first step of prevention should be to always use hand hygiene before and after entering a client's room. This method may also be known to some healthcare professionals as pumping in and pumping out a room. While practicing this preferred method of prevention, it is important to use proper technique while also understanding the standards of hand hygiene. The purpose of further understanding the techniques of proper hand hygiene has the ability to prevent further damage from occurring, especially with wound care. Without hand hygiene, bacteria has the opportunity to spread from one person to another with ease. For example, if the nurse is caring for a client who has a disease, and leaves without washing their hands. The chances of that disease spreading to the new client become much higher if the nurse does not perform hand hygiene before touching the client. Many standards of healthcare are set in place for the safety of the clients and the healthcare workers. Electronic health records are

used to manage the progress of a client while also used for documentation purposes (McVey, et al., 2022). Documentation is an important process for both client safety and legal protection. Some facilities require specific cleaning measures when caring for clients. For example, a 30 second cleaning of a catheter hub along with the appropriate labeling and nurse evaluation of the line is a necessity (McVey et al. 2022). Overall, management of proper hand hygiene and cleaning requirements may help prevent overall infections acquired in the healthcare setting.

Education

There are many facility guidelines set in place for the overall safety of individuals both physically and legally. There are many key points that the CDC has determined to be a part of clinical safety. Hand hygiene is needed as protection from deadly germs which makes it important for all healthcare personnel to understand how to care for and clean hands (CDC, 2024). Hand hygiene is a simple concept that may be used in all situations. It may consist of soap and hot water, alcohol-based sanitizer or surgical hand antisepsis (CDC, 2024). Studies have shown that hand hygiene reduces the spread of deadly germs, including those that are antibiotic resistant (CDC, 2024). Research also shows that some healthcare professionals use hand hygiene as much as 100 times per work shift in order to keep everyone safe (CDC, 2024). Knowing the difference between using an alcohol-based sanitizer compared to using soap and water is important as well. It is recommended for healthcare professionals to wash hands with soap and water when hands are visibly dirty, before eating meals or after using the restroom. Using hand sanitizer may be used to kill germs before entering, as well as exiting a clients room

however, some facilities require soap and water use after several uses of hand sanitizer. There should always be a priority for staff to review the facilities guidelines to ensure proper safety.

Research

There are many priorities that need to be set in place to prevent the spread of infections that may cause HAIs. Further research needs to be completed to find the best preventative method of HAIs. So far, the best method is using proper hand hygiene, however, HAIs are still occurring. This means that something needs to change, and a new method of prevention needs to be researched to better guarantee the absence of HAIs. For example, most nursing school's forbid students from wearing acrylic nails or nail polish in general. However, in the professional healthcare field, nurses and other healthcare workers wear acrylic nails despite the many infection control protocols. Many hospitals have policies against acrylic and gel manicures however, some healthcare workers still wear them (Lynch, 2024). This should raise alarm during the practice of preventing HAIs since these nails may harbor bacteria in smaller spaces. When performing hand hygiene, it is important to clean the entire hand and under the nails to prevent all HAIs even with the use of gloves during a procedure. Research should be done to find the number of individuals who wear manicured nails and study the statistics of how much bacteria can really spread in those hard-to-get spaces.

Conclusion

The overall purpose of quality improvement to the QSEN competency of quality improvement is to improve the quality of knowledge, skills and behaviors. The intent of quality

improvement is to enhance the processes that are beneficial for the client and ensure continuous improvement while using evidence-based research to focus on the overall quality (QSEN, 2020). Knowledge is emphasized to ensure that nurses and other health professionals fully understand the quality of improvement methods. For example, the discussion of how the NSIQUI Toolkit will improve the quality of hospitals and reduce the risk for HAIs shows statistically measurable data while also supporting the data with strategies to improve the quality of care for clients (McVey, et al., 2022). It is important for nurses to understand the proper use of electronic health records as well to manage skills performed on a client or simply charting hourly information. The process of compiling data into the electronic health records displays an accurate amount of important information which will protect the client from mistakes while also protecting the nurse from legal actions. Nurses and other health professionals need to understand their role and the value behind their job. Nurses help improve overall client outcomes and should be proud educators as well. They contribute to quality improvement by practicing proper hand hygiene to prevent the risk for HAIs while also committing themselves to the safety and overall care for the clients. HAIs could be a deadly infection which makes it important to do everything possible to prevent it and the first step in prevention needs to be hand hygiene. Nursing interventions should be used to reduce the risk and ensure compliance when following these infection prevention protocols. Overall, this paper reviews the research study written by McVey et al, showing the statistical reviews of HAIs during the COVID-19 pandemic. The NSIQUI Toolkit uses Zero Boards, Report Cards and shift audits to manage the data for HAIs for each shift. After these new standards were set in place, a large reduction of CLABSI and CAUTIs occurred. Nurses learned to understand the holistic quality improvement methods to manage data and skills to establish a safe environment for the healthcare team and clientele.

References

CDC. (2024). *Clean Hands*. <https://www.cdc.gov/clean-hands/hcp/clinical-safety/index.html>.

Houser, J. (2023). *Nursing research: Reading, using, and creating evidence*. Jones & Bartlett Learning.

Lynch, S. (2024). *Infection control hates your manicure*. <https://nursingcecentral.com/infection-control-hates-your-manicure/> .

McVey, et al. (2022). *Nurse-Sensitive Indicator Quality Improvement Toolkit*. *Journal of Nursing Care Quality* 37(4):p 295-299. DOI: 10.1097/NCQ.0000000000000634.

QSEN Institute (2020). *QSEN competencies*.

https://qsen.org/competencies/pre-licensure-ksas/#quality_improvement.