

**Quality Improvement Paper**

Isabella Leevey

Lakeview College of Nursing

N434: Evidence-Based Practice

Professor Katie King

June 03, 2024

### **Quality Improvement Paper: Reducing Hospital-Acquired Infections**

Hospital-acquired infections have been a growing concern in the healthcare industry for years. (Cleveland Clinic, 2024) has been doing research on how hospital acquired infections occur and what nurses can do to prevent these infections from happening. Hospital acquired infections can lead to life threatening illnesses and diseases. This happens because droplets from a sneeze or cough will go through the air and can infect a person who is ill (Cleveland Clinic, 2024). These unwanted infections can also occur due to healthcare personnel not properly performing hand hygiene or improperly sterilizing equipment (Cleveland Clinic, 2024). These infections can cause lifelong complications such as endocarditis, sepsis, and abscesses

(Cleveland Clinic, 2024). A factor that has been playing into the rise of hospital acquired infections is missed nursing care (Tencic & Roche, 2023). This missed nursing care is due to understaffing of nurses and infection control (Tencic & Roche, 2023). Pneumonia, urinary tract infections, IV infections, and other infections have been linked to missed nursing care due to understaffing (Tencic & Roche, 2023). Heavier education needs to be implemented in hospitals for proper techniques to reduce the number of infections. In the QSEN module, we need to remember that the proper education on hospital acquired infections gets integrated into the training program before the staff member begins to work on the floor (QSEN, 2023). As nurses, they need to empathize and sympathize with their patients to create a mutual bond of trust which will then lead the patient to open to the nurse (QSEN, 2023). There is a root cause of this problem, and it all starts with hand hygiene and nursing staffing (QSEN, 2023).

### **Article Summary**

This article describes the rate of hospital acquired infections with people who had COVID-19 in the first 6 months of the pandemic (Knight et al., 2022). (Knight et al., 2022) did a study and looked at the time of the arrival to the hospital and the time of the first symptom of infection to appear, this is severely hard to do because of the unknown transmission of the unwanted viruses or bacteria. COVID 19 was a worldwide terror, and everyone's health was at risk. Healthcare staff were not always sterile when taking care of patients and that is why many patients received an infection. As nursing staff, we can make sure that we are washing our hands in between every patient, sterilizing and cleaning all shared equipment, and covering our mouths when we cough and sneeze. Now these things seem very to the point, but some staff do not do

this. This nursing article shows how the transmission of infections was higher because of the spread of COVID-19 when everyone's immune system was not well. (QSEN, 2023)

### **Overview**

This article relates to this quality improvement plan for many reasons. This article supports the evidence of how many hospitals acquired infections that occurred during the COVID-19 pandemic (Knight et al., 2022). The COVID-19 pandemic is a great example of how our hospitals can do a better job at keeping everyone safe. This article details strategies and methods of improving care for all patients. Different methods of how they extracted this data show how this has been an ongoing issue not just for COVID but for all other diseases (Knight et al., 2022).

The question is where these implications can be implemented. Proper education can be put into every healthcare setting. Hospital acquired infections are seen mostly in intensive care units so more education in intensive care units should be implemented. All hospitals and long-term care facilities should implement teaching about facility acquired infections.

### **Application to Nursing**

There are many ways that we can apply this knowledge into our nursing careers. We can use research to back up our evidence on how hospitals acquired infections start and spread and get to the bottom of it. We can use our scope of practice of washing our hands after every patient even if our hands are visibly soiled or not (Haque et al., 2020). With proper education, we can help reduce the infection rate throughout the healthcare setting and providing information that is accessible to the healthcare staff (Center of Disease Control, 2024).

## **Practice**

There are many ways that we can apply this knowledge into our career as a nurse. The methods of nursing practice that most people use are hand hygiene, maintaining a clean environment, making sure to keep patients in certain areas if they are more prone to becoming sick, following patient safety rules, and many more (Haque et al., 2020). Along with this, having adequate staffing can help reduce these infections (Shang et al., 2019). There was a study done in different hospitals, and only 40% of the staff washed their hands throughout the shift (Haque et al., 2020). It has been proven that handwashing significantly reduces the risk of passing a long germ to our patients (Haque et al., 2020). (Haque et al., 2020) states, "Cleaning is... the first stage of maintaining hospital hygiene, particularly for surfaces having evident pollution, and helps to safeguard the success of subsequent disinfection procedures". This evidence shows that if nursing staff do as simply as cleaning after themselves and have the appropriate amount of staffing, this can reduce the risk of patients contracting a hospital acquired infection.

## **Education**

The Center of Disease Control (CDC) has a long list of preventative measures and rules for all healthcare settings implemented in each setting. The CDC mandates that everyone is to be held accountable for their work and infection control measures (Center of Disease Control, 2024). Their goal is to have healthcare job specific training for each speciality in and out of the hospital and to require all new staff members to complete training on infection control and then do a training seminar yearly after (Center of Disease Control, 2024). The guidelines also entail that the workplace enforces the staff to know infection prevention requirements for their scope of work, which can include precautions for critical care units or oncology units (Center of Disease Control, 2024). All healthcare settings should have a pamphlet printed with all the CDC guidelines for infection control so staff can come back to areas where they are confused (Center of Disease Control, 2024). Our hospitals have all the information needed for infection control, and those rules fall through the cracks. More education seminars should be in place to protect our patients.

## **Research**

Some priorities for further studies will be to look at the correlation between nursing staffing and the number of infections present. A study by (Shang et al., 2019) showed that when there was better nursing staffing on these floors that there was a decrease in hospital acquired infections. The results of this study can help improve rules and regulations for staffing measures in the hospital to reduce the amount of hospital acquired infections that are contracted. In this study by (Shang et al., 2019) that there was fifteen percent of dayshift staff that was understaffed all the time, and another hospital were understaffed 6.2 percent on day and night shift and both

hospitals were calculated to have significant rises in their hospital acquired infections. As we can see, with research backing this idea, nursing staffing must always be full, and we have the research to prove this theory.

### **Conclusion**

Hospital acquired infections are increasing in severity of the population that will reside in the hospital (Haque et al., 2020). Hospital acquired infections are the second leading cause of death which is not hard to believe (Haque et al., 2020). There are many ways that healthcare staff can reduce the number of patients getting an infection by simply washing their hands, cleaning off surfaces and areas after every patient interaction, and having the correct education on the importance of hygiene in the hospital (Haque et al., 2020). We can prove that fully staffing our nurses as well can significantly decrease the likelihood of someone contracting a hospital acquired infection (Shang e al., 2019). Hospital acquired infections are the second most common source of death and with the right education, research, and drive, we can minimize this problem in the healthcare setting.

## References

Center of Disease Control. (2024, April 12). *CDC's Core Infection Prevention and Control Practices for Safe Healthcare Delivery in All Settings*. Center of Disease Control. <https://www.cdc.gov/infection-control/hcp/core-practices/index.html>

Cleveland Clinic. (2024, May 7). *Nosocomial Infections (Healthcare-Associated Infections)*. Cleveland Clinic. <https://my.clevelandclinic.org/health/diseases/16397-avoiding-healthcare-associated-infections-hais>

Haque, M., McKimm, J., Sartelli, M., Dhingra, S., Labricciosa, F. M., Islam, S., Jahan, D., Nusrat, T., Chowdhury, T. S., Coccolini, F., Iskandar, K., Catena, F., & Charan, J. (2020). Strategies to Prevent Healthcare-Associated Infections: A Narrative Overview. *Risk management and healthcare policy*, 13, 1765–1780. <https://doi.org/10.2147/RMHP.S269315>

Knight, G. M., Pham, T. M., Stimson, J., Funk, S., Jafari, Y., Pople, D., Evans, S., Yin, M., Brown, C. S., Bhattacharya, A., Hope, R., Semple, M. G., ISARIC4C Investigators, CMMID COVID-19 Working Group, Read, J. M., Cooper, B. S., & Robotham, J. V. (2022). The contribution of hospital-acquired infections to the COVID-19 epidemic in England in the first half of 2020. *BMC infectious diseases*, 22(1), 556. <https://doi.org/10.1186/s12879-022-07490-4>

QSEN. (2023, April 23). *QSEN institute: Quality and safety education for Nurses*. QSEN. <https://www.qsen.org/>

Shang, J., Needleman, J., Liu, J., Larson, E., & Stone, P. W. (2019). Nurse Staffing and Healthcare-Associated Infection, Unit-Level Analysis. *The Journal of nursing administration*, 49(5), 260–265. <https://doi.org/10.1097/NNA.0000000000000748>