

Effects of the COVID-19 Pandemic on the Hand Hygiene Practices of Healthcare Professionals

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Background

According to the Centers for Disease Control and Prevention (CDC), one in 31 patients in an acute care center will contract an infection associated with their medical stay¹. These healthcare-associated infections (HAIs) often require prolonged treatment, compromise patient outcomes, and increase the length and cost of the hospital stay. Hand hygiene is a crucial step in restricting the spread of disease and infection within the healthcare setting. Hand hygiene performed with an alcohol-based hand rub is both the first choice and most commonly used hand hygiene method in the hospital setting². Although hand hygiene is a key procedure to limit the spread of HAIs, most healthcare workers comply with hand hygiene guidelines less than half of the time³. Reasons for healthcare workers not complying with hand hygiene guidelines can include busy work environment, lack of access to appropriate product, and skin irritation⁴. The COVID-19 pandemic has reinforced the importance of proper hand hygiene in limiting the spread of infection. COVID-19 has caused healthcare facilities to enact stringent hand hygiene practices, including the frequent use of an alcohol-based hand rub, as well as masks and other personal protective equipment^{5,6}. In 2009, more rigorous hand hygiene practices were also implemented to combat the H1N1 pandemic in Chile⁷. Interestingly, Labarca et al. found that hand hygiene rates improved with training during the H1N1 pandemic, but declined to previous rates after the pandemic ended. Taken together, a decline in hand hygiene rates across or after a pandemic could have negative implications for HAIs.

Purpose

This research project explores how the COVID-19 pandemic may have influenced the rates of hand hygiene compliance in an acute care setting.

Method

Deidentified hand hygiene data will be obtained from a local acute care setting. Changes in hand hygiene rates due to COVID-19 were determined by comparing hand hygiene rates in months prior to the COVID-19 pandemic (May 2019 – Jan. 2020) with rates during (May 2020 – Jul. 2021) the COVID-19 pandemic. Data from February 2020-April 2020 were omitted from the analysis due to variability of the adjustment period at the beginning of the pandemic.

Results

Nurses



Figure 1: Hand Hygiene compliance rates over time of nurses in an acute healthcare setting

Physicians

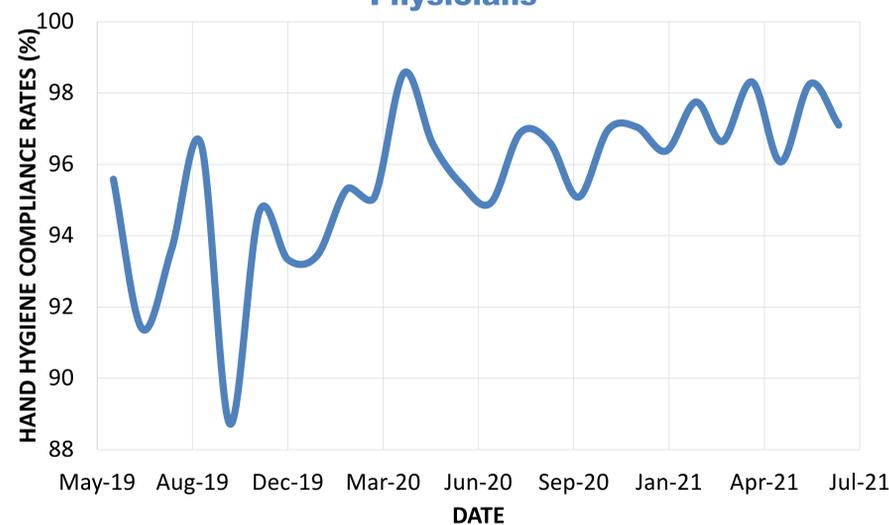


Figure 2: Hand Hygiene compliance rates over time of physicians in an acute healthcare setting

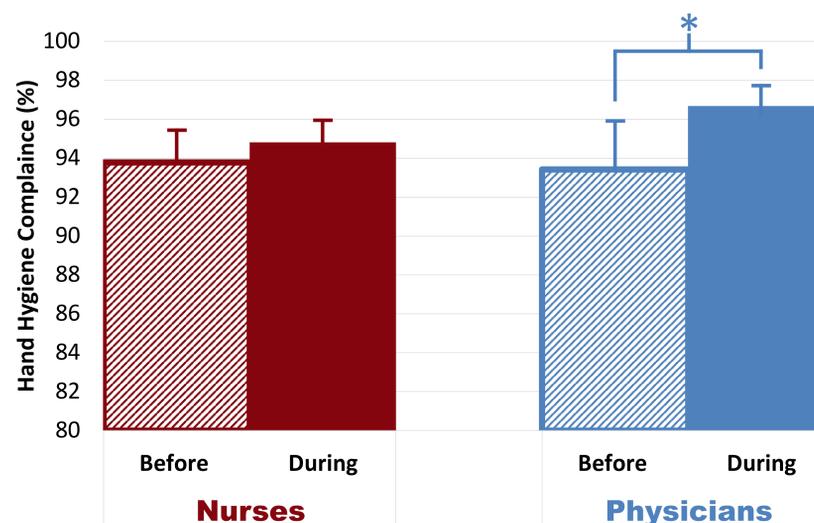


Figure 3: Comparison of average hand hygiene compliance rates before (May 2019 – Jan. 2020) and during (May 2020 – Jul. 2021) the COVID-19 Pandemic of nurses and physicians
* Statistically significant, P value < 0.005

Implications for Research and Practice

Hand hygiene is imperative in the healthcare setting, as it reduces spread of infection. Hand hygiene protects patients, healthcare workers, family members, and other hospital staff. The COVID-19 pandemic brought to light the importance of reducing the spread of disease and protecting others and oneself from illness. Through the course of the pandemic, the importance of hand hygiene was illuminated. However, the COVID-19 pandemic also put the healthcare system under immense stress, with increased patient loads, lack of equipment, and increased overall emotional distress of staff. These competing influences could have resulted in both increases or decreases in hand hygiene. Examining the effects of major environmental change on the practices of healthcare workers can bring further understanding of the stresses and responses of working in healthcare.

Conclusion

Our data show a statistically significant increase in hand hygiene compliance of physicians through the course of the pandemic. More research should be performed to assess hand hygiene compliance as the COVID-19 pandemic has continued. Furthermore, questionnaires and surveys could be distributed to learn more about healthcare worker's response to the COVID-19 pandemic.

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