The Teacher’s Role in Enforcing Hand Washing Techniques Among School-Aged Children in the Midst of the H1N1 Pandemic

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Abstract
The endeavor of increasing health literacy among school-aged children is a vital role for teachers to play during these turbulent times of pandemic viruses. This essay will address the vital role that teachers have in enforcing proper hand washing techniques in the classroom among their students in order to prevent the spread of influenza and other illness within the community. The document will also provide information related to the historical perspective of the influenza virus and findings associated with the history of hand washing as a mechanism to prevent the spread of disease and illness among human populations.

There was a time during our childhood when we were constantly reminded by our parents and teachers to “wash our hands” after playing outside or when returning home from school. “Cleanliness is next to Godliness” is a cliché that was used to encourage hand washing and good hygiene practices. The average layperson does not realize that properly washing your hands is vital to the prevention of disease, illness, and untimely death. Health literacy must begin in the schools in order to make a significant impact in our world’s health status. Without the utilization of proper hand washing techniques, the presence of harmful bacteria and viruses can remain on the hands and microscopic pathogens can be transported to portals of entry within a susceptible individual. Three common portals of entry include such orifices as the eyes, mouth, and nose (Merrill & Timmreck, 2006). If harmful germs are present on the hands when rubbing eyes, eating food, or other activities, disease transmission may occur. Much of the exposure to harmful bacteria and viruses are present on fomites.

Fomites are defined as inanimate objects, (e.g. doorknobs, hair combs, steering wheels, sinks, desks, clothing, etc.) that have the possibility of containing disease-causing agents that can be harmful to our health if given the opportunity to enter our bodies through a portal of entry (Merrill & Timmreck, 2006). The Centers for Disease Control (2003) state the transmission of the influenza virus can occur either through person-to-person contact or person-fomite-person contact when infectious secretions are in contact with our hands. “Influenza virus can survive for 24-48 hours on nonporous surfaces (steel and plastic) and 8-12 hours on porous surfaces such as paper, cloth, or tissues and can be transmitted to a person’s hands from these surfaces” (CDC, 2003, Epidemiology section, ¶ 3). Our hands tend to touch many of these surfaces daily before eating and, perhaps, rubbing our eyes.

The Teacher’s Role in the School Environment
Teachers play a vital role in encouraging proper hand washing
TEACHER’S ROLE IN HAND WASHING

techniques in order to curtail the spread of illness in the classroom. It is common knowledge that proper hand washing after using the restroom, coughing, sneezing and before eating meals and other activities can reduce the onset of illness. According to a study by Neuzil, Hohlbein, & Zhu (2002), communicable diseases that originate in the school environment contribute to absenteeism of school-aged children, teachers, and parents in addition to an increase in healthcare costs.

Children normally develop hygiene habits early in life if proper prompting and reinforcement are provided (Witt & Spencer, 2004). Surprisingly one study revealed, “among high school students, it has been found that less than 60% of females and less than 50% of males wash their hands after using the restroom, with few of these students even using soap during the process” (Guinan, McGuckin-Guinan, & Sevareid, 1997, p. 425). In another study that was conducted among school-aged children in Pakistan, the findings revealed a lower incidence of pneumonia, diarrhea, and impetigo after using either plain or antibacterial soap (Luby, Agboatwalla, Feikin, Painter, Billhimer, Altarf, & Hoekstra, 2005). China has adopted a Health Promoting School (HPS) framework in which school-aged children are introduced to a broad curriculum of health education issues that are supported by the school environment and the government (Lee, Wong, Keung, Yuen, Cheng & Mok, 2008). Proper hand washing is one of the primary concepts that is taught and emphasized in the HPS schools. The benefits to such a simplistic behavior are paramount to the prevention and spread of disease among our children and families.

The importance of proper hand washing techniques was discovered during a study of Childbed Fever, a streptococcal disease, in the 1840s (Merrill & Timmreck, 2006). At this time, Dr. Ignaz Semmelweis noticed medical students were unintentionally contributing to an increase of maternal mortality due to their work with cadaverous material prior to completing their rounds at a maternity ward in which they examined mothers post-partum. During that time, physicians learned to clean their hands with chlorinated lime before examining patients in order to decrease the chance of disease transmission. This groundbreaking analytical study revealed that midwives, in comparison to the medical students, who washed their hands prior to examining mothers were less likely to transmit the harmful pathogens that were causing childbed fever (2006).

History of Influenza

We have learned many valuable lessons since the pandemic influenza outbreak of 1918. The proper washing of hands may have decreased the spread of influenza during that time. This pandemic contributed to the death of an estimated 20-50 million people worldwide, including 675,000 in the United States (CDC, 2005). “The pandemic’s most striking feature was its unusually high death rate among otherwise healthy people aged 15-34” (CDC Press Release, 2005, ¶4). Another notable outbreak of a similar nature occurred during the years of 1957-1958 that was the cause of 1-2 million deaths (CDC, PanFlu Storybook, n.d.). During this time, the H2N2 Asian influenza spread in the US population with similar occurrences.

Conclusion

Precautionary measures must be taken on various levels in order to decrease the spread of such a virus. Teachers can play a vital role by providing positive reinforcement methods that will remind their students to wash their hands for at least 20 seconds with soap and warm water. The
availability of a vaccine in convenient locations within the community, public health messages that include the importance of proper hand washing, cooperation by public agencies (e.g. schools and health centers), and compliance by parents, teachers and employers to adhere to the Centers for Disease Control and Prevention’s recommendations are all essential activities that contribute to a comprehensive plan of prevention. The best practices, which include hand washing, are vital and routine methods that should be emphasized in the home and classrooms.

References


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