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Hand Washing... Why Still an Issue

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Abstract:

Hand hygiene is very important for the health safety of patients' especially paediatric population. Less care about hand hygiene by nurses may lead patients in paediatrics ward to acquire infections which can further build up into other diseases. The purpose of this study is to identify factors which prevent nurses from adopting healthy hand hygiene practices and from following universal code of precautions. Through a review of previous studies, this paper explores that factors like non-availability of anti-bacterial soap or water, increased workload of nurses, unawareness, lack of accountability, lack of knowledge about hand washing technique and less reminders in health care setting are responsible for poor hand hygiene. The paper further argues that it is important for nurses and other health care professionals to be aware of safe hand hygiene practices and the consequences of not following them not only in order to create a safe and infection-free health care environment but also to prevent patients and themselves from future problems.

Pediatric population is more prone to infections than adults due to their birth weight, nutrition status, immunity and disease process. Hand hygiene is the basic intervention to protect children from acquiring infections. It has been observed that there is not much compliance to hand hygiene practices among nurses, which leads to increased incidence of hospital acquired infection among children. The purpose of the study is to identify what barriers and factors lead to non-compliance of hand hygiene practices among nurses particularly in pediatric ward setting. Nosocomial infections are an indication that universal precautions are not being followed. Acquiring infections can lead to complexity of current health issue, long term illness, long hospital stay and increased cost of hospitalization. In hospitals infection control departments are established to monitor the practices among healthcare professionals, and provide guidance accordingly. Guidelines are established in order to promote safe practices. Hand hygiene is an integral component of universal precautions. Most of the infections are transferred through hands from one patient to another by health care personnel. Nosocomial infections are most common infections in pediatric intensive care unit and increase the cost of hospitalization. It was found that these infections increase the cost of hospitalization up to \$39219 (Elward, 2005). Living in a country where resources are limited, it is quite alarming figure. This data indicate that following basic precautions could not only lead to safe practices but also reduce the burden of cost. In an article by Pessoa-Silva, et al., (2013), compliance of hand washing is reported. It was an intervention based study with a follow up of 9 months. Physicians and nurses were observed for hand washing practices. 49% of health care workers were observed to be compliant to hand washing. Interventions were done to increase the compliance of hand washing practices. The interventions included feedback on hand hygiene performance and infections, reminders and focus group session. These interventions were effective and increased the rate of compliance to hand washing. The rate of compliance increased to 64% at follow up survey. It is evident that continuous reminders and feedback are necessary in order to maintain the practices. Another study focuses on hand hygiene by alcohol based hand rub or with soap and water before and after contact with patients or between the procedures on same patient. The transmission of infection with hands mainly includes gastrointestinal diseases and respiratory diseases. Availability of a sink with soap and water is essential in each examination room as well. Liquid soaps are preferred to bar soap as bar soaps have tendency to grow water borne microorganisms. These precautions are necessary to reduce the transmission of hospital acquired infections to children (Committee on Infectious Diseases, 2007). Another study was done in pediatric setting to see the quality and quantity of time given to isolated and non-isolated patients and the frequency of hand washing was observed in physicians and nurses. It revealed no significant difference in quality and quantity of time. However, only 42% of medical staff washed their hands before and after contact with patients and were more likely to do it with non-isolated patients than isolated patients. (Cohen, Austin, Weinstein, Matlow & Redelmeier, 2008). This finding shows that the need of hand washing precautions is more in isolation than non-isolation area. Although it is one study identifying this finding, more work is required in this field to identify the need in general. The rate of hospital acquired infections is directly related to the use of invasive procedures and noncompliance of hand hygiene among health care workers and families of children. A study was done to see the effectiveness of teaching hand hygiene to parents through

video and simple instructions. It was concluded that video sessions were more effective in teaching hand hygiene technique to parents. This shows that bringing innovations in teaching styles can be beneficial for learners. (Chen & Chiang, 2006). A study was done in Karachi, Pakistan in pediatric oncology ward which was aimed to see the incidence of hospital acquired infections in oncology patients. It showed an incidence rate of 3.1/100 patients admitted to the hospital and most common were blood stream infections. (Siddiqui, Wali, Haque & Fadoo, 2011). According to a yearly surveillance report of a tertiary care hospital in Karachi, only 61% nurses on average were observed to be compliant to hand washing in the pediatric general ward setting and only 70% nurses did hand washing in pediatric oncology ward. (Surveillance report AKUH, 2012). This statistics is alarming and it can be estimated that universal precautions are followed to a very small extent which can introduce hospital acquired infections among children.

Another study conducted by Fleck (2004) mentioned that around 1.8 million children die of diarrhea every year due to poor hand washing practice in developing countries. Although uncontaminated water is also compulsory for maintenance of healthy environment and reduction in contagious diseases, the study suggests that appropriate and timely hand washing can alone make a big difference. For the purpose of this study, the team of WHO visited poor households of Karachi for a year and educated the family members about how to do hand washing and when to do it. It was discovered that the families which complied with hand washing had 53% lower chances of diarrhea as compared to families who did not comply with hand washing. Also it was discovered that the rate did not change significantly if a family used an ordinary soap instead of anti-bacterial soap. Another classical study focused on determinants of poor hand hygiene. Nurses were asked to fill a questionnaire regarding it and few determinants emerged from it. It was identified that time and self-efficacy and positive attitude towards hand hygiene is important. Furthermore, social influence and a combination of strategies like educational programs, hand hygiene compliance and feedback are important factors in hand hygiene compliance. (De Wandel, Maes, Labeau, Vereecken & Blot, 2010). This study was found to be interesting in a way that it attempted to explore the determinants which lead to poor compliance to hand hygiene. But still it is required to do research in this regard specifically.

A lot of research has been done regarding compliance to hand washing practices, infection control practices and interventions to increase the compliance. Also, statistics about hand washing practices has been discussed. However, the barriers or factors nurses face which may lead to less compliance of hand hygiene have not been researched widely. Despite extensive research done on hand hygiene, there is still a need to study reasons for poor compliance with hand hygiene practices among health care workers. Identifying and addressing these issues can be more effective and beneficial for nurses. These factors can be different from one hospital setting to other like unavailability of soap or hand rub or water and lack of knowledge about hand washing technique and its importance in transmission of infections. Other factors can be increased workload, ignorance, lack of accountability towards own actions and less reminders in care setting. Barriers pertaining to specific setting can be identified and managed appropriately in order to decrease the incidence of nosocomial infections in pediatric care setting.

Many studies have focused on the barriers and issues nurses face in ward settings which lead to less compliance to hand washing which is the basic intervention to decrease the chances of nosocomial infections. By reducing infections particularly in pediatrics, safe practices can be promoted and incidence of hospital acquired infection can be decreased. These studies can give an insight in nurses and other health care professionals about the promotion of safe practices by identifying the barriers to hand washing practices.

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