

Hand Wash a Primary Step to Prevent Infection

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Editorial

Hand hygiene is the single most important and preventable method to avoid nosocomial infections [1]. Hospital staffs are the major source in the transmission of nosocomial infections via organisms of their hands [2]. Out of 4 million neonatal deaths in world, one-third are associated with infections [1,2]. While in countries with high neonatal mortality (>45 per 1000 births), 50% of these deaths are attributed to infections [2]. Around 1.4 million people worldwide suffers from serious nosocomial infection [3]. In developing countries nosocomial infection rate varies from 6% to 27% [4].

Nosocomial infections are mostly transmitted by the hands of health care workers and hand washing causes a significant reduction in the rate of infections [5]. Practice of hand wash and its compliance is poor in hospital settings specially in developing countries [6]. Essential maternal and neonatal care methods like rule of 6C by WHO should be strictly followed i.e. clean hands, clean perineum, clean delivery surface, clean cord cutting and tying instruments, clean cutting surface. Mothers should be promoted for exclusive breastfeeding, temperature maintenance, avoid touching of baby repeatedly by other family members specially without proper hand wash and overcrowding, all these basic things can reduce infection-related neonatal deaths by 20-50% [7].

Three groups of organisms resides in hands i.e. residential flora, transient flora and these can be removed easily by proper hand wash. Hygienic hand washing refers to the washing hands with an antiseptic and water to remove dirt and loose transient flora to prevent cross-transmission. Hygienic hand rub refers to rubbing hands with a small quantity (2-3 mL) of a highly effective and fast-acting antiseptic agent. While going to NICU a person should remove all watch, jewellery from fingertips to elbows, artificial nails, nail-paint, sleeves should be above elbows, avoid phone, remove jackets and coats, avoid if suffering from cold or illness, wear clean gowns. Before entering to NICU, people should wash hands for at least 2 minutes with the following six steps in sequence: palms and fingers and web spaces, back of hands, fingers and knuckles, thumbs, finger tips and wrists and forearm upto elbow and each step should be followed for 20 seconds [8]. Hospital staffs who touch neonates, including nurses, attending physicians, physicians-in-training (residents and fellows) and other health care workers, as well as visitors should follow the correct hand wash technique. Nothing should be placed over hands after hand wash.

Isopropyl, ethyl, or n-propanol, in 60%-90% (vol/vol) alcohol hand rub is known to be effective in preventing nosocomial infections [9]. Evidence proves that when basic hand hygiene apparatus such as alcohol hand rub are easily accessible, usage of hand rub among health workers increases. High usage of these hand rubs can be promoted by keeping these at convenient place especially with high patient density area. Place for hand wash and hand rub should be available in all NICU, PICU, Emergency, labour room, patient prone for infection, cancer patients, immuno-compromised patients etc.

Newborns in Neonatal Intensive Care Units (NICUs) are at especially high risk of nosocomial infections because of prematurity, fragile skin and underdeveloped immune systems. Frequent need for instrumentation (e.g. central venous catheters), invasive procedures and frequent contact with staff increases chances of infection. Many studies have examined the routine hand hygiene practices of health care workers, and most have found the overall adherence rates to be <50% [10]. Various barriers have been reported previously including skin irritation and dryness from repeated wash, availability of sink, water, clean towel or tissue paper and antiseptic, quality of cleansing agent, glove use, no guidelines, inadequate knowledge, lack of role model, casual attitude, environment and equipments, after touching contaminated objects and instruments after hand wash, lack of time, high work load, males, other people, forgetfulness, lack of recognition of cross infection [11].

The “My 5 Moments for Hand Hygiene” approach outlines the key moments which are applicable to the NICU setting also. This approach recommends hand washing before touching a patient, before clean/aseptic procedures, after body fluid exposure/risk, after touching a patient, and after touching patient surroundings [12].

15th October is celebrated as global hand washing day. Hand washing practices can be promoted by regular sessions and proper guidelines. Instructions chart at all sinks can increase awareness about correct method of hand wash. Nothing can replace proper hand wash.

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