Hand washing: A Step towards clean and safer care in health-care associated infections

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Abstract
Health-care associated infections (HCAIs) are considered as the major health hazards and account for a major global disease burden. They pose a health threat towards patients and health care workers. Clean Care is Safer Care is the slogan of the first Global Patient Safety Challenge, a core component of WHO’s. Hand hygiene (HH) has long been considered as one of the most important infection control measures for preventing HCAIs. In the present review article, an attempt has been made to review various aspects of hand hygiene and its growing importance in controlling health care associated infections.

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Introduction
Health care associated infections (HCAIs) are one among many health hazards affecting significant number of patients, physicians and medical professionals. HCAIs account for a major global disease burden and they pose a health threat to patients and health care workers. These affect hundreds of millions of people worldwide, cause resistance to antibiotics, complicate the delivery of patient care and generate additional expenditure to medical expenditure already incurred by the patients undergoing treatment [1]. Hospital acquired infections are reported to affect millions of people worldwide [2]. The risk of HCAIs is around 20 times more among adults in developing than developed countries, while 50 % of all infants in neonatal units acquire HCAIs with the fatality rate of 56% in developing countries [3]. Improper hospital waste management is also reported to be one of the cause for HCAIs and is practically unknown to patients and health care workers due to lack of surveillance in most of the outskirt places [4]. Health care delivery may also expose the hospital workers towards infections like tuberculosis, needle stick injuries, HIV, etc. Hence the prevention of HCAIs is better than control.

Prevention strategies
The key towards this Global health issue lies in prevention rather than treatment. Clean Care is Safer Care is the slogan of the first Global Patient Safety Challenge, a core component of WHO’s World Alliance for Patient Safety launched in 2004 [5]. One of the easy and effective method of avoiding HCAIs is the improvement in hand hygiene [6]. Three major strategies have been recommended to minimize HCAIs. These include [7]
1. Campaigns to generate awareness of HCAIs
2. Commitment and Leadership at the highest level
3. Testing and Reinforcement of implementation strategies

Hand hygiene (HH)
Hand hygiene has long been considered as one of the most important infection control measures for preventing HCAIs. Doctors may substitute hygiene practices, hand disinfection and universal precautions with increased prescription of antibiotics which adds to antimicrobial resistance. Compliance rates for health-care workers with recommended hand hygiene procedures generally fall below 50% [8]. It has been observed that the single most important preventive measure against HCAIs is to practice hand hygiene either by washing with soap or disinfection. Inspite of its importance, maintaining hand hygiene is often given minimal importance by hospital staff. HH compliance rates < 50% have been documented along with difficulties in improving them [9].
Guidelines on hand hygiene in healthcare on the basis of consensus recommendations have been issued by WHO. Previous literature on ways to improve hand hygiene practices have focused on USA and Europe, whereas studies from developing countries are less
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common. Promotion of appropriate hand hygiene practices is complex and tedious process. Successful promotion in health hygiene settings requires system change, education and motivation of caregivers, leadership and administrative support, and, in some instances, empowerment of patients. Cost-effectiveness and sustainability are important elements of any hand-hygiene promotion. Behavioral, educational, organizational, socio-cultural, socioeconomic and sociopolitical factors are also involved.

The campaigns on hygiene have produced a sustained improvement in compliance with hand hygiene recommendations with the reduction of infections as shown by many studies. An interventional study by Luby and colleagues [10] reported the effect of hand hygiene promotion on prevention of childhood infections in a low income population of Karachi, Pakistan. After the intervention, the rate of diarrhea and pneumonia were decreased by almost 50%. The study suggested that there was a decrease of 56% cases, there were reports of less likely visit to physician and 26% reduction in hospitalization. This suggests that implementation of multifaceted interventional, behavioral hand hygiene program with continuous monitoring and performance feedback, increase supplies necessary materials for hand washing and institutional support is important for improving the compliance of hand hygiene guidelines.

Conclusion
The challenges for implementation of hand hygiene practices are enormous, but so are the rewards: preventing illness, saving lives, improving patient safety and providing an overall better quality of care to millions of patients and families. HCAIs are unintended, undesirable, and intolerable but many are preventable. It is time that hand hygiene promotion should be made a priority for public health and health care policymakers, medical and nursing schools, chief medical and executive officers. Healthcare workers and community members with potential possibility of exposing to HCAIs should be a role model to help highlight, support, prioritize, and fund research and interventions to improve hand hygiene behaviour. The improvement in hand hygiene is feasible, affordable, and effective in a healthcare setting with limited resources. The WHO strategy and derived tools represent evidence-based, ready-to-use solutions for planning and supporting hand hygiene promotion in healthcare facilities worldwide, including developing countries. The adoption of the strategy on a national scale by other countries is a major achievement to show patient safety as a visible priority and could lead to future implementation in other countries especially low middle income countries.
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