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# Iranian healthcare workers' perspective on hand hygiene: A qualitative study

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**KEYWORDS**
Hand hygiene;
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**Summary**
*Background:* Hand hygiene (HH) has been identified as one of the simplest, but most important, methods to prevent cross-infection in healthcare facilities. In spite of this fact, the HH compliance rate remains low among healthcare workers (HCWs). Several factors may affect HH behavior. In this study, we aimed to assess various aspects of HH from the perspective of HCWs.
*Method:* This qualitative study was conducted in two hospital settings in Shiraz, Iran. Eight focus group discussions (FGDs) and six in-depth interview sessions were held with ICU and surgical ward nurses, attending physicians, medical and nursing students and supporting staff. Each FGD and interview was transcribed verbatim, open codes were extracted, and thematic analysis was conducted.
*Results:* Three themes emerged from the thematic analysis including: ''the relationship between personal factors and HH compliance,'' ''the relationship between environmental factors and HH compliance'' and ''the impact of the health system on HH adherence, including the role of adequate health systems, administrative obligations and the effect of surveillance systems.''

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*Conclusion:* Several factors played a significant role in improving HCWs HH compliance, such as the regular adherence to health system tenets. HH compliance may be improved through application of realistic policies and better supervision. In addition, appropriate education may positively affect HH behavior and attitudes.


## Introduction

Hand cleanliness is the single most important factor in preventing the spread of pathogens and antibiotic resistance in healthcare settings. Patients can acquire healthcare-associated infections (HAIs) during diagnosis and treatment. HAIs can be devastating and may result in disease complications, long term disability and increased morbidity and mortality [1].

HAIs affect millions of patients worldwide each year and can result in higher healthcare costs [2,3]. Therefore, HAI prevention must be a top priority.

Hand hygiene (HH), either by washing hands with water and soap or by using alcohol-based hand rubs, is one of the simplest, but most important, methods to prevent cross-infection and to decrease the rate of HAIs [4—6].

In spite of this fact, the rate of HH compliance by HCWs remains traditionally low, between 40 and 45% [7]. However, rates have increased to 65% when a facility makes a strong effort to improve proper practices [8]. To increase HCWs' HH compliance, various policies have been developed, guidelines issued and promotional campaigns made worldwide.

Several issues can affect HH compliance rates [9,10]. Studies indicate that HCWs' knowledge, beliefs and attitudes influence adherence to HH guidelines [9,11,12]. Self-reported factors for poor HH adherence include: (1) hand-washing agents cause irritation and dryness; (2) running water and sinks are inconveniently located or in short supply; (3) there is a lack of soap and paper towels; (4) too busy/insufficient time; (5) understaffing/overcrowding; (6) the patients' needs take priority and (7) the low risk of acquiring an infection from patients [8,11,13—16].

Following a literature review, we determined that no qualitative study regarding HCWs HH has been performed in Iran. Therefore, the objective of this study was to assess various aspects of HH from the perspective of HCWs in Iran.

## Materials and methods

This qualitative study was conducted in one public teaching hospital and 1 private hospital in Shiraz, Iran, between August and October 2012. The hospitals did not have specific hand hygiene or infection control policies and both hospitals provide limited hand hygiene training seminars for staff.

We used a purposive sampling method driven by the objectives of the study to include staff from critical points of care, such as ICU and surgery. Our sample consisted of 80 HCWs; 16 intensive care unit (ICU) nurses, 14 surgical ward nurses, 24 support staff, 6 attending physicians, 20 medical students (interns working in ICUs and surgical wards) and 6 nursing students. All 80 HCWs completed an FGD session.

Data collection involved eight focus group discussions (FGDs) and six in-depth, one-on-one interviews. Due to the physicians' work schedules, they did not participate in the FGDs. Instead, in-depth interviews were held with participating physicians. Announcements for participation in the FGD were coordinated with hospital administrators and educational supervisors, and participation was voluntary. FGD sessions for each group of participants of the same profession, department and hospital were carried out separately in a location chosen by the participants and hospital administrators (see Table 1).

One facilitator conducted all FGD sessions using a semi-structured interview format while a colleague took notes and made audio-recordings. Interviews included open-ended questions, which lead to fostering new ideas directed by participant responses (Appendix 1). Each interview continued until no new responses/perceptions came forward from the participants. This point is referred to as data saturation and indicates that further continuation of the FGD will not provide new information. Every FGD session began with a standard introduction, which consisted of meeting the researchers, a brief description of the study's aims and procedures and