

## Review Article

# Practical challenges in following hand hygiene guidelines during the COVID-19 pandemic: an Indian perspective

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**Received:** 10 June 2021

**Accepted:** 13 July 2021

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## ABSTRACT

Promoting good hygiene is one of the most basic and efficient tools that all countries must continue to adopt throughout the COVID-19 pandemic. COVID-19 has spread far and wide with basically no locale left unblemished. The speed of the spread and the disturbing demise rates have seen numerous nations and wards acquaint measures with forestalling the spread of COVID-19, and hand washing highlight firmly in these. Hand washing has gotten extensive consideration during the COVID-19 pandemic. It is a basic, essential preventive measure that a great many people can do freely. However, in India, the specific issues hamper compelling hand washing. This article will mention to us what are the issues confronted and how we can improve in these viewpoints.

**Keywords:** Hand hygiene, COVID-19, Challenges

## INTRODUCTION

Presently the world is in the clutches of an unceasing COVID-19 pandemic and such a situation has been unprecedented in the lifespan of the current world population with the pandemic having widespread socio-economic and health care implications.<sup>1-3</sup> Moreover the psychological ramifications of the pandemic cannot be belittled with several studies reporting peaked incidence of stress, anxiety, depression, frustration, and uncertainty as the COVID-19 pandemic has emerged progressively.<sup>4-6</sup> In this background, international health care agencies like the WHO, UNICEF, and the CDC have come up with multiple publications on the guidelines for tackling the spread of COVID-19 at the community level.<sup>7-9</sup> The mainstays for prevention of the COVID-19 virus recommended three practices which were summed up by the acronym “SMS” which stand for sanitization, masks, and social distancing, all of which are equally important.<sup>10</sup> In this context, we tend to focus on the guidelines on hand washing practices

advised by the international public health agencies and to explore the practicality and sustainability of following these guidelines, especially in resource-poor settings in India.

### HAND WASHING PRACTICES RECOMMENDED: IS IT FEASIBLE EVERYWHERE?

As indicated by WHO, a viable hand wash includes a cleanser and scouring hands on the two sides for 20 seconds. Around 4 litres of water is needed for a 30 to 40 seconds hand wash and still, if the tap is closed while scrubbing hands, a minimum of 2 litres of water is necessary. In general, around 20 to 40 litres of water is required for washing hands five times a day.<sup>11</sup> In India and other developing countries where water resources are scarce, the message ignores a crucial question. What if enough clean water unavailable? For instance, by the past gauge, a group of four to five individuals will require 100 to 200 litres of water for each day just to wash their hands. This will be around 200 litres of wastewater

generated consistently, bringing about an increase in the requirement for water from human homes by 20 to 25 percent.<sup>12</sup>

More than 50 percent of the districts of India are threatened by depletion or pollution of groundwater and almost 33 percent of India already had droughts or drought-like conditions this year even before summer, a World Bank study states.<sup>13</sup> According to UNICEF, nearly 20 percent of urban Indians do not have running water and soap facilities at home.<sup>14</sup> About 600 million Indians face acute water crisis<sup>15</sup>. The water crisis strikes the vulnerable in an especially difficult way. Thus, we find that strictly following recommended guidelines by international agencies becomes difficult for the local population in most places in India, mainly urban slums and rural areas.

### **HAND WASHING PRACTICE AMONG HEALTH CARE PROFESSIONALS**

At the forefront are the health care staff who are at the maximum risk of contracting the infection due to their contact with patients and contaminated surfaces. This can be combated by applying a palmful of alcohol-based hand rub, covering all hand surfaces and rubbing until dry, according to the WHO guidelines.<sup>16</sup> Depending on current studies, hand hygiene is frequently ignored by health care workers in both developed and emergent nations, with compliance rates falling to below 20% in certain situations.<sup>17</sup> Overcrowding of medical care facilities, absence of independent patient territories, unavailability of adequate hand rub items that are alcohol-based, and reliable are among the many problems that impede successful hand hygiene procedures in resource-limited healthcare environments.<sup>18-19</sup> Besides, studies have identified low knowledge and enforcement of hand washing among medical care staff in several states in India wherein COVID-19 rates are alarming.<sup>20-23</sup> Thus, adequate resources, awareness, and frequent reinforcement to promote correct hand-hygiene techniques among health care workers are currently of utmost importance.

### **HAND HYGIENE DURING TRAVEL**

With the starting of trains from May in India, many difficulties have been faced during the journey with the lack of a constant supply of running water and long queues waiting for hand-washing becoming a major practical problem. Moreover, the increase in the water requirements necessitates frequent re-filling stops during train travel and subsequent increase in clean water demands which might not be able to be met locally. Besides, disinfection procedures, maintaining social distancing, availability of sanitizers, etc. poses major challenges.<sup>23,24</sup> The average price-tag of around Rs.50 for a 100 ml bottle of popular branded hand sanitizers might be out of reach for the common Indian. Thus, we see that maintaining adequate hand hygiene as per the standard

guidelines might not always be possible in a country like ours.

### **RECOMMENDATIONS AGAINST COVID-19 INFECTION**

A major emphasis should be on ensuring adherence to hand washing guidelines with minimal wastage of scarce water resources and hand cleanliness and water sparing necessities to go inseparably. The requirement for the hour is to spread information on being water productive by shutting taps or utilizing sensor taps that shut off naturally when one's hands are not under the tap during the cleanser scouring measure. WHO recommends using drained rice water, seawater, laundry or dishwater and water from boiled vegetables for hand washing in places lacking running water facilities and awareness to be created among the public in following conservation of scarce water resources and principles of recycling.<sup>25</sup>

More emphasis to be placed on hand hygiene training among health care workers and it should be ensured that these practices are followed in day to day practice. Initially, each ward/ (CCU) can assign an anonymous observer to note the hand hygiene practices followed by each health care worker including doctors, and to give feedback to them on a one to one basis. This will indeed help the health care workers to be more aware of their shortcomings and to take measures to correct themselves, so that following good hand hygiene practice becomes second nature to them.

The Government should take measures during travel to provide subsidised hand sanitizers for every passenger prepared locally by engaging the community. Community participation is the action of community people working together, related to geographical closeness, exceptional interest, or comparable conditions to handle issues influencing the prosperity of such people as depicted by the Centre for Disease Control (CDC).<sup>26</sup> It is a powerful tool for bringing about improvements in the atmosphere and actions that will enhance the community's wellbeing. Participation in the Community also includes alliances and coalitions that help mobilise capital and influence processes, improve partnership relationships, and function as catalysts for policy, programme, and practice improvement.<sup>26</sup> Thus, in the light of such a definition, in the current situation, local self-help groups can be trained to prepare hand sanitizers as per the WHO recommendations and to sell it at the entrance of the railway stations, bus stands, or in market places with a small profit margin of 5 to 10 rupees over and above the production cost. This will be advantageous to both parties as, while this will provide a means of economic independence to the members of the self-help groups, the public too would be benefitted as, they would have access to effective hand sanitizers without having to pay more for expensive branded hand sanitizers available commercially in the market. Principles of social marketing can be used to promote this product among the

general public, to ensure compliance, and to allay doubts about the effectiveness of the product.

On similar lines, corporates can be roped in to establish RO drinking water outlets at strategic points at subsidized rates to the community as part of their corporate social responsibility. For example, government offices, bus stands, railway stations, market places can be places where these outlets can be constructed. The water discarded during the RO water filtration process can be collected and used for hand washing purposes by the public without allowing it to go waste; thus following the principles of recycling.

Many good public health initiatives have failed in the past due to lack of awareness and community participation and hence, ensuring the same is the need of the hour from the side of the government agencies. Local youth clubs, adolescent welfare societies, gram panchayats, and self-help groups can be roped in to spread awareness and ensure community participation in following prescribed guidelines for hand washing, social distancing, and using masks to effectively combat COVID-19.

## CONCLUSION

The take-home message thus would be that adopting general recommendations by International agencies in resource-poor settings of low and middle-income countries. Major challenges regarding hand hygiene can only be tackled by following multi-pronged practical strategies at every level by all the stakeholders involved.

## ACKNOWLEDGEMENTS

Authors are thank full to all members of SBVU, University for providing constant support.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: Not required*

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**Cite this article as:** Vasudevan J, Dsouza MJ, Boratne AV, Bahurupi YA. Practical challenges in following hand hygiene guidelines during the COVID-19 pandemic: an Indian perspective. *Int J Community Med Public Health* 2021;8:4078-81.