Published research suggests that multimodal, multidisciplinary strategies that focus on system change (11,14,18,20–25), offer the greatest chance of success in terms of hand hygiene improvement and infection reduction.

The objective of any hand hygiene solution is therefore to build or strengthen capacity so that hand hygiene improvement is seen as and becomes an integrated component of a broader HAI prevention strategy.

**SUGGESTED ACTIONS:**

The following strategies should be considered by WHO Member States.

1. Promote hand hygiene adherence as a health care facility priority; this requires leadership and administrative support and financial resources.
2. Adopt at country, region, and facility levels the nine recommendations of the WHO Guidelines on Hand Hygiene in Health Care (Advanced Draft), in particular the implementation of multidisciplinary, multimodal hand hygiene improvement strategies within health care facilities that incorporate:
   a. Provision of readily accessible alcohol-based handrubs at the point of patient care.
   b. Access to a safe continuous water supply at all taps/ faucets and the necessary facilities to perform hand hygiene.
   c. Education of health-care workers on correct hand hygiene techniques.
   d. Display of promotional hand hygiene reminders in the workplace.
   e. Measurement of hand hygiene compliance through observational monitoring and feedback of performance to health-care workers.

**BACKGROUND AND ISSUES:**

There is substantial evidence that hand antisepsis reduces the incidence of HAI (9–24). Hand hygiene is therefore a fundamental action for ensuring patient safety, which should occur in a timely and effective manner in the process of care. However, unacceptably low compliance with hand hygiene is universal in health care (25). This contributes to the transmission of microbes capable of causing avoidable HAI. Better adherence to hand hygiene guidelines and policies has been shown to reduce the spread of HAI (26–32). The key targets for action are not only health-care workers but also policy-makers and organizational leaders and managers (33).
3. Where alcohol-based handrubs are not available or are too costly, consider local production of handrubs using the formula described in the WHO Recommended Hand Antisepsis Formulation: Guide to Local Production.

Definition: Point of care - refers to a hand hygiene product (e.g. alcohol-based handrub) which is easily accessible to staff by being as close as possible (as resources permit) to where patient contact is taking place. Point of care products should be within an arm’s reach of care/treatment delivery. This enables staff to quickly and easily fulfill the five moments for hand hygiene which have been developed from the WHO Guidelines on Hand Hygiene in Health Care (Advanced Draft) (http://www.who.int/gpsc/tools/en/). The product must be capable of being used at the required moment, without leaving the zone of activity. Point of care is usually achieved through staff-carried handrubs (pocket bottles) or handrubs fixed to the patients bed or bedside table (or around this area). Handrubs affixed to trolleys or placed on a dressing or medicine tray which are then taken into the zone of activity also fulfill this definition.

Looking forward:

1. Consider measuring the financial and economic aspects of health care-associated infections to assist in demonstrating their impacts.

2. Inform and educate patients about the importance of hand hygiene and their role in supporting improvements.

Applicability:

All healthcare facilities, where patient care and/or treatment is provided.

Table 1 – Potential Barriers to Implementation

<table>
<thead>
<tr>
<th>Political</th>
<th>Institutional/managerial</th>
<th>Individual/behavioural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Competing health priorities</td>
<td>• Costs of infrastructure</td>
<td>• No financial incentive to modify performance (continuous education)</td>
</tr>
<tr>
<td>• Failure to develop a business case to demonstrate (macro-) economic benefits</td>
<td>• Costs of alcohol-based handrub</td>
<td></td>
</tr>
<tr>
<td>Quality</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Lack of commitment</td>
<td>• Lack of commitment</td>
<td>• Lack of health-care worker buy-in</td>
</tr>
<tr>
<td>• Lack of infrastructure</td>
<td>• Existing culture not supportive</td>
<td>• Campaigns are not at right target</td>
</tr>
<tr>
<td>• No commitment to education (pre-service and in-service)</td>
<td>• Failure to convince managers and leaders of health benefits</td>
<td>• Lack of patient participation and empowerment</td>
</tr>
<tr>
<td>Perception</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Lack of awareness of the burden of disease</td>
<td>• Existing organizational culture not supportive</td>
<td>• Existing lack of institutional leaders buy-in</td>
</tr>
<tr>
<td>• Perception that hand hygiene is no longer a problem</td>
<td></td>
<td>• Lack of awareness of the issues</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Perception that hand hygiene is no longer a problem</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Low belief in the value of hand hygiene in terms of impacting on patient outcome</td>
</tr>
</tbody>
</table>

Strength of Evidence:

Based on experimental, clinical, and epidemiological studies, theoretical rationale, and a consensus of experts.

Potential Barriers to Implementation:

Barriers exist on a number of levels from national political commitment through to the individual health-care worker. Implementation is also influenced by levels of resources, general approaches to quality, and perception. The potential barriers are outlined in the Table 1:
RISKS FOR UNINTENDED CONSEQUENCES:

- Heightened patient and carer anxiety if messages are miscommunicated.
- Safety issues associated with ingestion of the alcohol-based handrub for paediatric patient populations, substance abuse patients, or those who are confused.
- Although very low risk, flammability issues and fire hazards associated with alcohol-based handrub. The benefits of utilizing this type of handrub far exceed the minimal risk.

REFERENCES:


OTHER SELECTED RESOURCES:

1. AAOS online fact sheet: Twelve steps to a safer hospital stay: www.orthoinfo.aaos.org/
2. AHRQ Publication No. 01-0040a: www.ahrq.gov/consumer/
9. Partners in Your Care: www.med.upenn.edu/mcguckin/handwashing/
10. Swiss Noso: http://www.swiss-noso.ch/

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