Using WHO hand hygiene improvement tools to support the implementation of national/sub-national hand hygiene campaigns

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1. Introduction

The WHO First Global Patient Safety Challenge: Clean Care is Safer Care (CCiSC) has developed recommendations, guidelines and tools to facilitate the improvement of hand hygiene in health-care facilities worldwide, based on evidence and the experiences of pioneers and experts in the field of hand hygiene and data from field testing. These are all available on the CCiSC web site free of charge (http://www.who.int/gpsc/en/). National campaign leaders are encouraged to read these guidelines and explore the range of supporting documents and tools available at http://www.who.int/gpsc/5may/tools/en/index.html

2. Aim of the document

Guidelines and tools produced by CCiSC, which address different aspects of hand hygiene promotion and improvement, in all number over 40 documents. The first part of this document gives an overview of this apparently large number of documents, in the hope that this will help campaign leaders understand the appropriate application of these tools and why so many different tools are required.

The latter part of this document aims to provide some practical advice on how to plan use of the tools in centrally coordinated national/sub-national campaigns, involving several facilities.
3. Brief overview of the WHO CCiSC documents and approach to the promotion of hand hygiene in health care

3.1 The underpinning document is the WHO Guidelines on Hand Hygiene in Health Care (http://whqlibdoc.who.int/publications/2009/9789241597906_eng.pdf). This is based on current evidence, data from the field testing of implementation strategies and experiences during the past years of the global promotion of hand hygiene improvement.

Consensus recommendations are presented within the Guidelines and graded according to the level of evidence. They also include debates and discussions on issues which are not yet fully resolved, including barriers to implementation faced in different settings, as well as suggestions for overcoming these.

A summary of these Guidelines is also available (http://whqlibdoc.who.int/hq/2009/WHO_IER_PSP_2009.07_eng.pdf) with translations into the other official WHO languages to follow.

3.2 A wide range of tools (referred to collectively as the WHO Hand Hygiene Implementation Toolkit http://www.who.int/gpsc/5may/tools/en/index.html) are available to help health-care settings translate the WHO Guidelines on Hand Hygiene in Health Care into practice at the point of patient care. They were primarily designed with acute care facilities (e.g. hospitals) in mind. However, they can be adapted to suit any care situation. Although these tools are aimed at facility level, certain tools such as the Template Letter to Advocate Hand Hygiene to Managers could be used directly by campaign leaders.

The tools were developed taking the following considerations into account:

  - All hand hygiene indications recommended in the WHO Guidelines on Hand Hygiene in Health Care (see Part II of the Guidelines) are merged into five "moments". This approach facilitates understanding and ease of recall of the indications for performing hand hygiene in order to yield the maximum return in terms of patient safety related to care and treatment sequences, as well as to reduce the burden of
unnecessary hand hygiene. It also helps in training and standardizing compliance measurement. According to this concept, health-care workers are recommended to clean their hands:

1. Before touching a patient
2. Before a clean / aseptic procedure
3. After body fluid exposure risk
4. After touching a patient
5. After touching patient surroundings.

- This “5 Moments” concept has therefore been integrated into the various WHO hand hygiene tools to support education and training, compliance evaluation and feedback and to highlight the need for system change at the point of care (e.g. alcohol-based handrub at the point of care).
- The concept can be adapted readily to suit all settings, such as inpatient, outpatient, primary care and home-based care, and is currently used widely by many countries and health-care facilities.

- Handrubbing with alcohol-based handrubs is recommended as the primary mode of hand hygiene.
- Handwashing with soap and water is recommended when hands are visibly dirty, following an exposure risk to body fluids or spore forming microorganisms e.g. when caring for patients infected with *Clostridium difficile*.
- WHO recommends a tried and tested Multimodal Hand Hygiene Improvement Strategy which has five core components which aim to enhance a patient safety approach.

These are:

1. System change (alcohol-based handrubs at point of care/access to safe continuous water supply, soap and towels);
2. Training and education (regular training for all health-care workers to facilitate behaviour change);
3. Evaluation and feedback (monitoring hand hygiene, infrastructure, perceptions and knowledge and providing feedback both to measure impact and encourage improvements in indicators);
4. Reminders in the workplace (for prompting and raising awareness in health-care workers);
5. Institutional safety climate (facilitating wider institutional support and patient participation).

- The recommendation is that implementation of hand hygiene improvement be undertaken in a stepwise manner (see Part III of the WHO *Guide to Implementation*), so for a facility where a hand hygiene improvement programme has to be initiated, five steps (stages) should be undertaken:

  1. Facility preparedness (Months 1-2),
  2. Baseline evaluation (Months 3-5),
  3. Implementation (Months 6-8),
  4. Follow-up evaluation (Months 9-10),
  5. Action planning and review (Months 11-12)

These concepts are summarized in Figure 1, while Figure 2 demonstrates the applicability of the "5 Moments" in a range of settings.

**Figure 1 Schematic representation of the rationale for the tools developed for implementation**
4. The WHO Hand Hygiene Implementation Toolkit

It is important to recognize that there are two key WHO tools which overall inform a multimodal implementation strategy and implementation steps in a general and over-arching manner. These are the Guide to Implementation of the WHO Multimodal Hand Hygiene Improvement Strategy and the Template Action Plan. The former is divided into three parts. Part 1 provides an overview of the document and issues related to implementation; Part II addresses the multimodal strategy and the use of tools and Part III, the implementation steps. The second tool, as the name implies, is a template for developing and executing an action plan.

The whole implementation toolkit is aimed at translating the five elements of the multimodal strategy into practice (Figure 3); thus a range of tools exists for each strategy component. The titles of each of these tools are indicative of their content. The tools which are required to be used in any given facility will depend on the initial assessment of that facility, which can be facilitated at local level by the use of the WHO hand hygiene self-assessment framework tool http://www.who.int/gpsc/country_work/hhsa_framework.pdf

Facilities can feel overwhelmed and saturated by the number of actions and tools and can become confused about how all of this applies to their activities. It is therefore essential that campaign leaders adopt a targeted and well-planned approach and use the self-assessment framework and template action plan as appropriate to help with this.
Figure 3 The Toolkit for implementing the WHO Guidelines on Hand Hygiene in Health Care

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<tr>
<td>Alcohol-based Handrub Planning and Costing Tool</td>
<td>Slides for Education Sessions for Trainers, Observers and Health Care Workers</td>
<td>Observation Form and Compliance Calculation Form</td>
<td>How to Handrub Poster</td>
<td>Template Letter to Communicate Hand Hygiene Initiatives to Managers</td>
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<tr>
<td>Soap / Handrub Consumption Survey</td>
<td>Slides Accompanying the Training Films</td>
<td>Soap / Handrub Consumption Survey</td>
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<td>Protocol for Evaluation of Tolerability and Acceptability of Alcohol-based Handrub in Use or Planned to be Introduced: Method 1</td>
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<td>Protocol for Evaluation and Comparison of Tolerability and Acceptability of Different Alcohol-based Handrubs: Method 2</td>
<td>Observation Form and Compliance Calculation Form</td>
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5. A targeted and planned approach - points to consider for national/sub-national campaigns when beginning to develop or use tools in a campaign

Campaign leaders should consider the following points prior to and during their campaign, including when reflecting on the long-term sustainability of practices:

- the most relevant tools to meet local needs, based on country regulations and policies, the current situation in facilities and the objectives of the campaign. The WHO hand hygiene self-assessment framework tool will be of use in understanding the current status of hand hygiene promotion and practices in individual facilities. Some tools may be optional for some settings; some may not be at all useful but should be given serious consideration at regular intervals;
- the need for translation of the tools into local languages (those available in other official WHO languages can be found through www.who.int/gpsc);
- the need for adaptation to suit local needs, culture and conditions existing in facilities (while maintaining the evidence-based standards set by WHO);
- the process for adapting and translating (guidance related to reproducing, adapting and translating the tools can be found at http://www.who.int/gpsc/copyright/en/index.html);
- a template for identifying each tool and action to be taken (use/no use, need to modify etc), the person responsible for the action decided, timeframe, etc could be useful;
- a model for compiling/packaging the necessary toolkit and ‘signposting’ it as well as the modality for disseminating, including the feasibility of printing, checking on and refreshing awareness-raising posters;
- a programme for training the trainers from each facility in the use of the tools;
- the resources for collecting data related to compliance, knowledge etc and analyses, which are integral to the implementation and improvement strategy;
- a process for collecting and analysing information related to use of the tools - usability, applicability, relevance, etc for refining future actions and scale up;
- the indicators for measuring success at a campaign (national/sub-national) level;
- the process for collecting and analysing baseline and follow-up evaluation data on indicators. The capacity for data collection, entry and analysis at the facility level and at a central level must be built in from the outset. A system for collating data into a centralized database for analysis and reporting will need to be developed;
- a mechanism for active, regular feedback. There needs to be a system for local feedback aimed at facility health-care workers and management and at the national/sub-national level including policy-makers;
- a recording and cataloguing system for all actions taken, success factors and barriers encountered at facility and/or national level could be very useful in order to learn from and share experiences;
- strategies for ensuring a range of actions to improve compliance, including exploring the root cause why failures have occurred and undertaking targeted behavior change activities;
- a plan for publishing results and experiences in journals or websites to help others involved in similar activities. The WHO team will also be happy to know of progress and/or challenges (go to http://www.who.int/gpsc/5may/share/en/index.html or email savelives@who.int).

Additionally, a mechanism for publicizing campaigns is important. Guidance on advocacy and communications including involving the media has also been developed by the team at WHO and can be obtained from http://www.who.int/gpsc/5may/resources/sclh_briefing-kit_media-working.pdf.

Many local tools may already be available within facilities and countries. While not discouraging local efforts, it is important to ensure that these tools have standards similar to those set by WHO and to check the WHO web pages regularly for updated evidence and supporting tools, taking the opportunity to utilize these whenever possible to support national/sub-national campaigns.

Additional tips on organizing national/sub-national campaigns can be found at: http://www.who.int/gpsc/national_campaigns/startig_national-hh-campaign.pdf