



REVIEW

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The WHO Clean Care is Safer Care programme: Field-testing to enhance sustainability and spread of hand hygiene improvements

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Summary The World Alliance for Patient Safety is an evolving programme of the WHO, established to raise the profile of patient safety within the global health care agenda. The decision taken in 2004 to focus the effort and attention of the First Global Patient Safety Challenge on the problem of health care-associated infection (HAI) is testimony to the fact that HAI is a significant patient safety hazard and continues to harm patients in the 21st century. Much of this harm is avoidable through better application of measures which already exist including universal implementation of hand hygiene improvement methods. Action on hand hygiene improvement is therefore at the core of the First Challenge, and field testing of the WHO implementation strategies developed in conjunction with the WHO Guidelines on Hand Hygiene in Health Care (Advanced Draft) is on track to complete by the end of 2008. Following this, a revised and updated guideline and suite of implementation tools will be published by the WHO. It is important to note that the First Global Patient Safety Challenge has mobilized an unprecedented number of countries over a short timeframe to commit to take action on HAI.

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Introduction to the WHO first global patient safety challenge

In May 2002, the WHO World Health Assembly passed resolution WHA55.18 which urged countries to pay the greatest possible attention to patient safety. The resolution has elevated the position of

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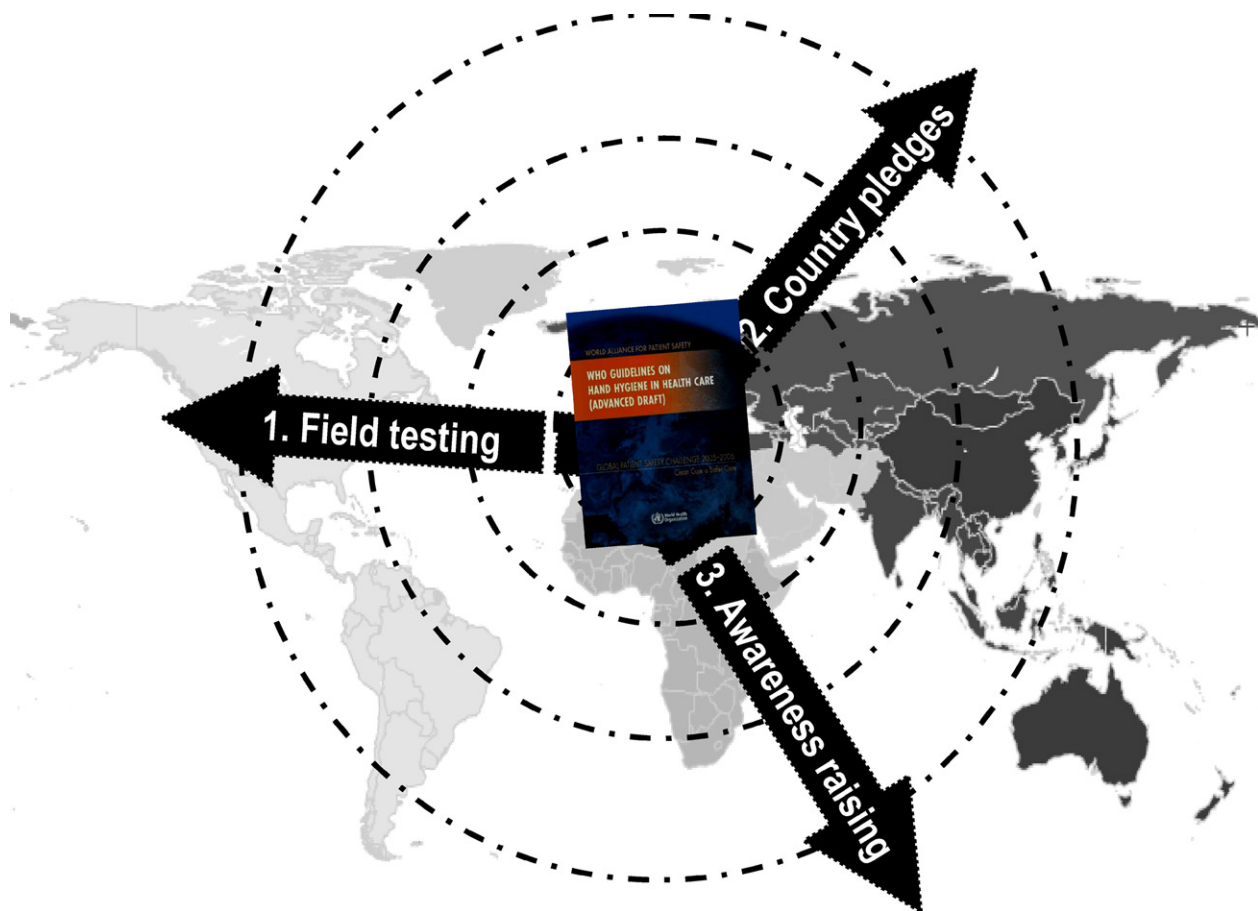


Figure 1 The three objectives of the First Global Patient Safety Challenge.

patient safety in health systems' improvement and contributed to the growing patient safety movement. Through its programmes, it has catalysed actions at the country level. In October 2004, WHO launched the World Alliance for Patient Safety (WAPS).

Every 2 years, the WAPS establishes a programme of work to address a patient safety issue relevant to all WHO Member States. These programmes are referred to as global patient safety challenges, and the First Global Patient Safety Challenge, "Clean Care is Safer Care", is concerned with galvanizing global commitment and action on the reduction of health care-associated infection (HAI) [1]. "Clean Care is Safer Care" has three objectives (Fig. 1).

Principally, the Challenge was conceived to facilitate global awareness-raising about the issue of HAI and its connection with hygiene and cleanliness in health care settings, focusing attention on the burden and impact of these infections on infection control and patient safety. Globally, over 1.4 million people at any given time suffer from a HAI worldwide [2]. The WHO Guidelines on Hand Hygiene in

Health Care [1] cite over 700 references to support the role of hand hygiene in HAI prevention. It is clear that methods to improve hand hygiene and reduce infection do exist [3–5]. Hand hygiene improvement has logically formed a central focus of activity. However, this Challenge promotes and supports actions on HAI in blood safety, injection and immunization safety, water and sanitation and safe emergency and surgical procedures. Secondly, the Challenge employed the vehicle of ministerial sign-up. Through this approach, Ministers of Health have been encouraged to sign a statement of commitment to tackle HAI and resolve to implement Clean Care is Safer Care strategies. To date, 87 WHO Member States, representing 78% of the world's population, have signed this pledge (Fig. 2). This represents an impressive feat of mobilization of Member States, over the relatively short lifetime of the First Global Patient Safety Challenge. Finally, the technical inputs and outputs have resulted in the production of the First WHO Guideline solely to focus on hand hygiene in health care.



Figure 2 Status of Country Pledges, July 2008.

Outputs of the Clean Care is Safer Care programme

Implementation is concerned with the institutionalization of hand hygiene through application of the WHO Guideline recommendations. To put these into practice at the health care facility level, a five-part multimodal implementation strategy has been developed to address:

- System change
 - Alcohol-based handrub at the point of care
 - Access to soap and clean running water
- Training and education
- Monitoring and evaluation (including hand hygiene compliance monitoring)
- Reminders in the workplace
- Safety climate, including patient partnership activity

System change is at the centre of the strategy, with an emphasis on alcohol-based handrub at the point of care, to facilitate effective hand hygiene of non-soiled hands. Hand washing with soap and water is promoted to enable cleaning of soiled hands, particularly in the context of diarrhoeal illness/spore-forming organisms.

The strategy is underpinned by an implementation toolkit. [Box 1](#) lists some of the components of the toolkit which together form the technical outputs of the First Challenge. These are available to all Member States. The tools have been designed to prevent wheel reinvention, assist local teams in implementation of hand hygiene improvement strategies, and encourage adaptation and localization.

[Fig. 3](#) illustrates examples of localization of one of the central implementation tools, the promotional and educational concept “My Five Moments for Hand Hygiene” [6].

Field-testing: the official WHO pilot sites

The process of implementation consists of five steps incorporating facility preparedness, baseline measurement, launching the intervention, post-intervention measurement and action planning and review. This hand hygiene improvement methodology involves a long-term cycle of intervention activity, measurement, feedback and review, with a minimum 5-year strategy recommended. It is being field-tested in each of the WHO regions with the aim of gathering intelligence on the

Box 1

Technical outputs	
1	The WHO guidelines on hand hygiene in health care (advanced draft: final version in preparation)
2	WHO guidelines on hand hygiene in health care (advanced draft); a summary
3	Implementation toolkit, comprising
3A	Guide to implementation
3B	Tools for system change, e.g. WHO alcohol-based handrub formulation—guide to local production Alcohol-based handrub production planning and costing tool Alcohol-based handrub tolerability and acceptability survey
3C	Tools for training and education, e.g. Educational session slide presentation Training DVD: ‘‘My Five Moments for Hand Hygiene’’ Hand hygiene pocket leaflet Hand hygiene brochure
3D	Tools for measurement and evaluation, e.g. Perception and knowledge surveys Ward structure survey Observational compliance monitoring survey Manual for observers Soap and handrub consumption survey
3E	Tools to remind staff in the workplace, e.g. ‘‘Five Moments’’ posters How to handrub posters How to handwash posters
3F	Tools to facilitate culture change, e.g. Advocacy leaflets Templates for letters to senior managers and leaders

feasibility, acceptability and applicability of the guideline recommendations in a wide range of different healthcare settings. Learning from this process will result in the necessary modifications and improvements of the suite of available tools and the WHO Guidelines on Hand Hygiene in Health Care. Field-testing has been made possible with the support of WHO Regional Patient Safety Focal Points and WHO representatives at the country level, as well as collaboration with expert technical and academic partners and professional associations. The official pilot sites are listed in [Box 2](#).

The pilot testing is reaching its conclusion and results will be used, where appropriate, to shape the final recommendations of the Guidelines and enable modification and improvement of the suite of implementation tools.

The complementary test sites

Demand from practitioners and colleagues in the field to participate in the field-testing and gain

access to the full range of implementation tools was high, and so a parallel testing mechanism was established using a web-based community forum. Any health care facility, anywhere in the world has been able to join the field-testing by enrolling as a complementary test site (CTS). Support offered by the WHO WAPS to complementary test sites is limited and mainly web-based. However, through the web-based community forum, facilities have been able to ask questions related to the implementation and evaluation. Experiences and solutions related to the implementation have also been shared with other test sites. This has provided a discussion forum exclusively for CTSs and an opportunity for mutual support and exchange during the implementation process. CTSs agree to undertake assessment of a limited set of parameters during implementation, but the most fundamental requirement necessary for enrolment is the agreement to provide a short written report to the WHO at the end of the implementation. This serves as formal feedback on feasibility and appropriateness of tools. To date there are over 200 CTSs, and the evaluation data, received from these virgin sites coupled with the

Box 2

WHO region	Country	City	Hospital	Hospital wards
AFRO	Mali	Bamako	Hôpital du Point G	Pilot testing complete in nine units including medicine, surgery, emergency, anaesthesia and intensive care, gynaecology and obstetrics
AMRO/PAHO	Costa Rica	San Jose	Hospital Nacional de Niños	Targeted on sub-set of wards, including infectious disease
EMRO	Saudi Arabia	Riyadh	Riyadh Medical Complex	Hospital-wide.
	Saudi Arabia	Riyadh	King Abdulaziz Medical City, Saudi Arabia	Nine pilot areas including male and female surgical wards.
	Pakistan	Islamabad	Pakistan Institute of Medical Sciences (PIMS)	Medical, surgical and neonatal ICUs
EURO	Italy	National network	Network of ICUs	Pilot testing complete in 45 ICUs in partnership with WHO
SEARO	Bangladesh	Chittagong	Chittagong Medical College Hospital	Neonatal care, surgical, orthopaedics, paediatrics ICU, adult ICU, representing 450 beds.
WPRO	Hong Kong SAR	China	Queen Mary Hospital	Pilot testing is complete 3 additional sites Caritas Medical Centre Tuen Mun Hospital Yan Chai Hospital

more in-depth scientific evaluation from the official test sites will allow for a far-reaching review of the strategy.

Through the process of field-testing valuable information has been obtained relating to the barriers and facilitators of implementing such a strategy. A number of test sites are implementing alcohol-based handrubs at the point of care and, in parallel, working on long-term strategies to ensure that infrastructural deficiencies are addressed, particularly relating to strengthening of water supply systems within health care facilities.

Conclusions

The First Global Patient Safety Challenge has generated significant momentum in the 3 years of its existence, largely by mobilising countries, health-care leaders, patients and patient organizations, and technical experts to support the work through positive action. At the global level there is a universal expansion of the application of system change to address hand hygiene improvement. More and more countries are moving towards alcohol-based handrubs as a central feature of their infection control strategy. As the research into the global

burden of disease due to HAI develops, it will be possible to more accurately track the impact of programmes such as Clean Care is Safer Care on HAI. The growing network of WHO regional patient safety focal points is resulting also in tangible regional action. Regional resolutions on patient safety are further strengthening the likelihood of long-term regional action on HAI. Clean Care is Safer Care is receiving further acknowledgement at the regional and country level, manifesting itself in a growing number of national and regional-level plans which incorporate action on HAI. Such actions are crucial if the initiative is to effect long lasting improvement.

At the country level, the phenomenal buy-in from Ministries of Health to the country pledges demonstrates impressive political support for patient safety improvement and a commitment to embed simple and effective but essential measures. Thirty percent of pledge-countries have taken additional enhanced action through the initiation or strengthening of national campaigns on hand hygiene. Each of these actions and activities has one central goal—a sustained change in the behaviour of individual health care workers towards better compliance with hand hygiene, thereby reducing the likelihood of harm to patients

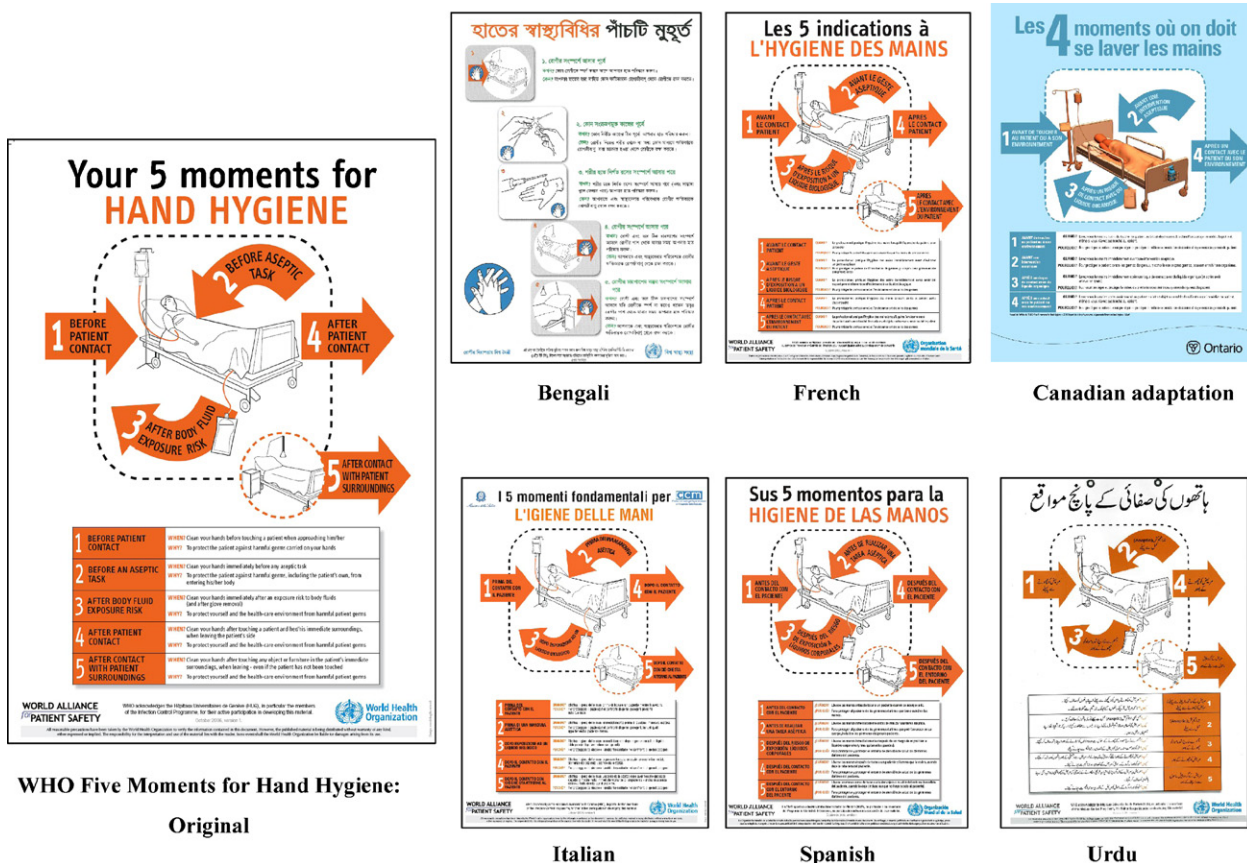


Figure 3 Localization of “My Five Moments for Hand Hygiene” posters.

due to avoidable HAI. The combined sum of each of the elements of the First Global Patient Safety Challenge is ensuring a move towards global institutionalisation of some of the most fundamental infection control practices, starting with clean hands for safer healthcare.

Links:

Complementary test site: http://www.who.int/gpsc/country_work/pilot_testing.info/en/index.html

Field-testing: http://www.who.int/gpsc/country_work/en/

Multimodal strategy: http://www.who.int/gpsc/news/simple_guideline/en/index.html

My five moments for hand hygiene: http://www.who.int/gpsc/tools/Five_moments/en/index.html

National campaigns: http://www.who.int/gpsc/national_campaigns/en/

Pledge statement template in Arabic, Chinese, English, French, Spanish and Russian: http://www.who.int/gpsc/resources/example_pledge.statement/en/index.html

WHO Guidelines on Hand Hygiene in Health Care (full version): http://www.who.int/patientsafety/information_centre/guidelines_hhad/en/index.html

WHO Guidelines on Hand Hygiene in Health Care (summary, available in Chinese, English, French, Russian, Spanish) <http://www.who.int/gpsc/tools/en/>

WHO World Alliance for Patient Safety homepage: <http://www.who.int/patientsafety/en/>.

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Conflict of interest

None.

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