



**World Health
Organization**

Patient Safety

A World Alliance for Safer Health Care

SAVE LIVES

Clean Your Hands

Health Care-Associated Infection and Hand Hygiene Improvement – Slides for the Hand Hygiene Co-ordinator

<insert name and position>

User instructions

- This presentation is provided to assist Hand Hygiene Co-ordinators to communicate with health-care workers to:
 - advocate good hand hygiene
 - explain the “My 5 Moments for Hand Hygiene” approach
 - outline their facility’s action plan to improve hand hygiene
- The slides are a sample template that the Co-ordinator might wish to adapt in line with information specific to their country or facility
- Slides may be deleted to condense the presentation according to the time allocation or the knowledge of the audience
- During any presentation, discussion should be encouraged to achieve an optimal understanding of the messages
- The presenter may decide to use “props” to aid in conveying messages, including bottles of alcohol-based handrub
- If all slides are used in full, a minimum timeframe of one hour will be required to complete the session

Overview of the Session

This session will:

- Set the scene for the continued need to advocate for good hand hygiene in health care
 - HCAI places a serious disease burden and significant economic impact on patients and health-care systems
 - Appropriate hand hygiene – the simple task of cleaning hands at the right times and in the right way saves lives
- Explain the “My 5 Moments for Hand Hygiene” approach
- There are 5 indications (moments) for hand hygiene in health care
- Global compliance with “My 5 Moments for Hand Hygiene” approach is universally sub-optimal
- Outline the Action Plan
 - <Insert name of facility> is preparing to implement an action plan for improved hand hygiene and reduction of HCAI*

Definition

Health Care-associated Infection (HCAI)

- Also referred to as “nosocomial” or “hospital” infection

“An infection occurring in a patient during the process of care in a hospital or other health-care facility which was not present or incubating at the time of admission. This includes infections acquired in the health-care facility but appearing after discharge, and also occupational infections among health-care workers of the facility”

HCAI: The worldwide burden

- Estimates are hampered by limited availability of reliable data
- The burden of disease both outside and inside health-care facilities is unknown in many countries
- No health-care facility, no country, no health-care system in the world can claim to have solved the problem

Estimated rates of HCAI worldwide

- At any time, hundreds of millions of people worldwide are suffering from infections acquired in health-care facilities
- In modern health-care facilities in the developed world: 5–10% of patients acquire one or more infections
- In developing countries the risk of HCAI is 2–20 times higher than in developed countries and the proportion of patients affected by HCAI can exceed 25%
- In intensive care units, HCAI affects about 30% of patients and the attributable mortality may reach 44%

The impact of HCAI

HCAI can cause:

- more serious illness
- prolongation of stay in a health-care facility
- long-term disability
- excess deaths
- high additional financial burden
- high personal costs on patients and their families



Most frequent sites of infection and their risk factors

URINARY TRACT INFECTIONS

34%

Urinary catheter
Urinary invasive procedures

Advanced age
Severe underlying disease
Urolithiasis
Pregnancy
Diabetes

13%

LOWER RESPIRATORY TRACT INFECTIONS

Mechanical ventilation
Aspiration
Nasogastric tube

Central nervous system depressants
Antibiotics and anti-acids
Prolonged health-care facilities stay
Malnutrition
Advanced age
Surgery
Immunodeficiency

SURGICAL SITE INFECTIONS

Inadequate antibiotic prophylaxis
Incorrect surgical skin preparation
Inappropriate wound care

Surgical intervention duration
Type of wound
Poor surgical asepsis
Diabetes
Nutritional state
Immunodeficiency
Lack of training and supervision

17%

Most common sites of health care-associated infection and the risk factors underlying the occurrence of infections

LACK OF HAND HYGIENE

14%

BLOOD INFECTIONS

Vascular catheter
Neonatal age
Critical care

Severe underlying disease
Neutropenia
Immunodeficiency
New invasive technologies
Lack of training and supervision

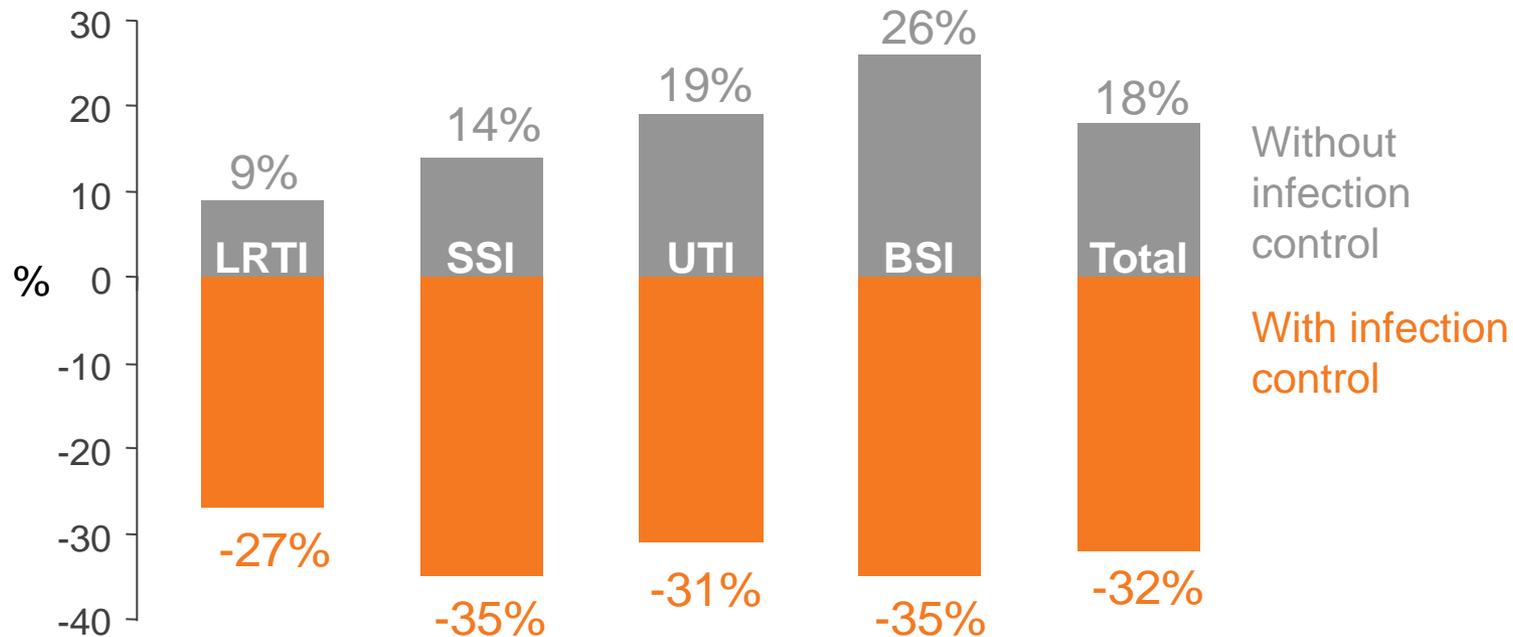
Prevention of HCAI

- Validated and standardized prevention strategies have been shown to reduce HCAI
- At least 50% of HCAI could be prevented
- Most solutions are simple and not resource-demanding and can be implemented in developed, as well as in transitional and developing countries

SENIC study: Study on the Efficacy of Nosocomial Infection Control

- >30% of HCAI are preventable

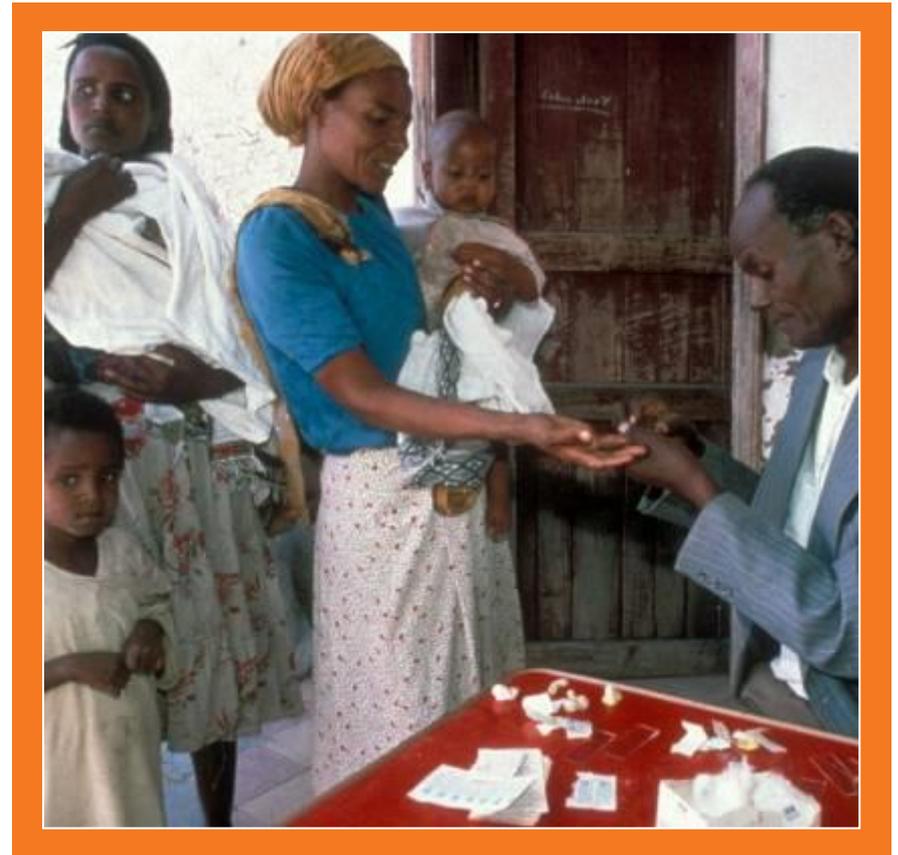
Relative change in NI in a 5 year period (1970–1975)



Haley RW et al. *Am J Epidemiol* 1985

Hand transmission

- Hands are the most common vehicle to transmit health care-associated pathogens
- Transmission of health care-associated pathogens from one patient to another via health-care workers' hands requires **5 sequential steps**



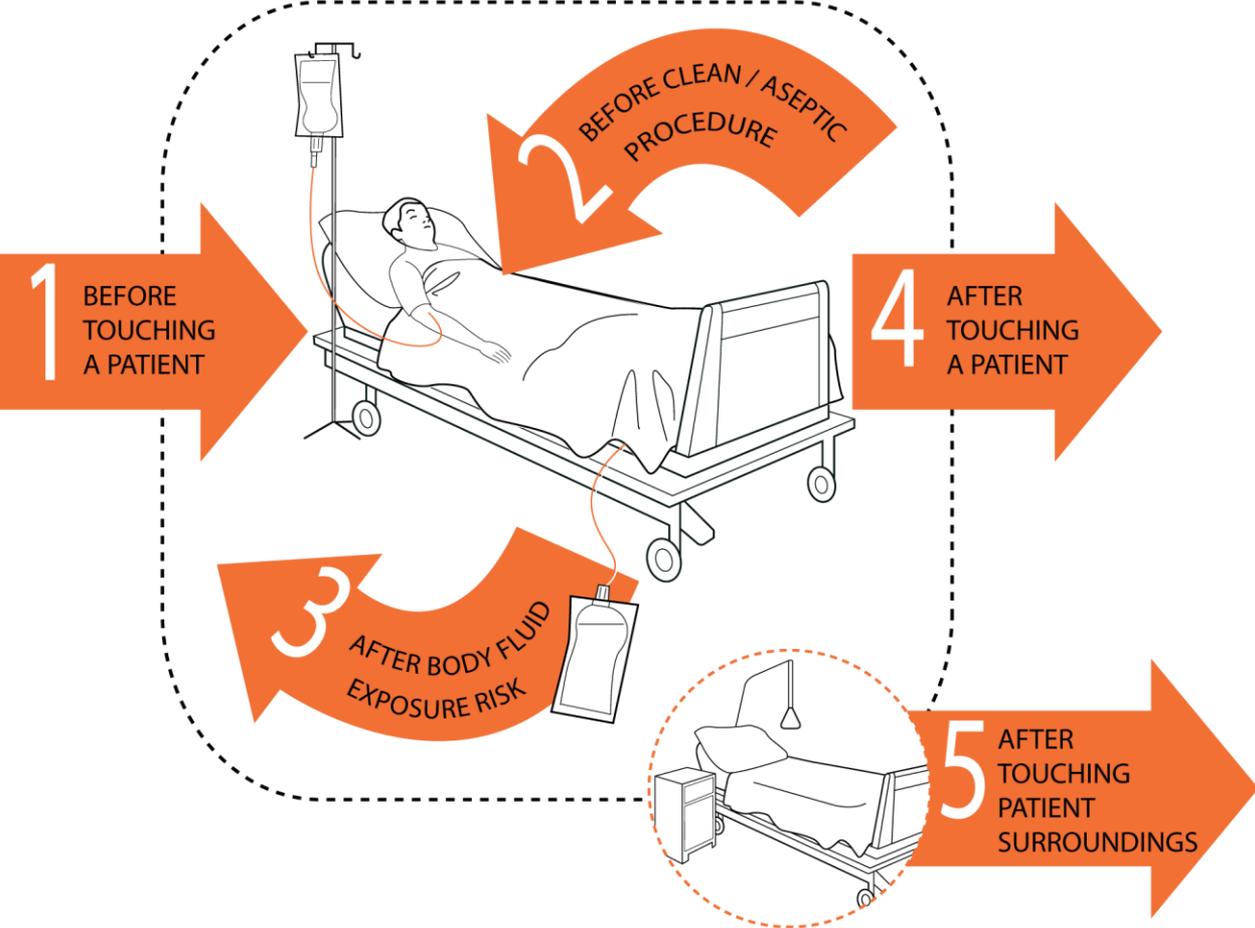
5 stages of hand transmission

one	two	three	four	five
Germs present on patient skin and immediate environment surfaces	Germ transfer onto health-care worker's hands	Germs survive on hands for several minutes	Suboptimal or omitted hand cleansing results in hands remaining contaminated	Contaminated hands transmit germs via direct contact with patient or patient's immediate environment

Why should you clean your hands?

- Any health-care worker, caregiver or person involved in patient care needs to be concerned about hand hygiene
- Therefore hand hygiene concerns **you!**
- **You** must perform hand hygiene to:
 - **protect the patient** against harmful germs carried on **your** hands or present on his/her own skin
 - **protect yourself** and the health-care environment from harmful germs

The “My 5 Moments for Hand Hygiene” approach



How to clean your hands

- Handrubbing with alcohol-based handrub is the preferred routine method of hand hygiene if hands are not visibly soiled
- Handwashing with soap and water – essential when hands are visibly dirty or visibly soiled (following visible exposure to body fluids)¹

¹ If exposure to spore forming organisms e.g. *Clostridium difficile* is strongly suspected or proven, including during outbreaks – clean hands using soap and water

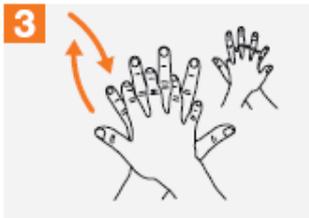
How to handrub



Apply a palmful of the product in a cupped hand, covering all surfaces;



Rub hands palm to palm;



Right palm over left dorsum with interlaced fingers and vice versa;



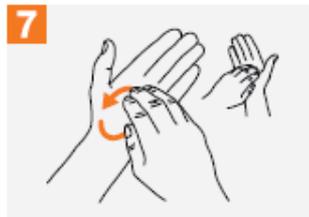
Palm to palm with fingers interlaced;



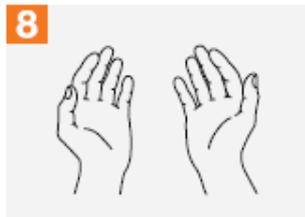
Backs of fingers to opposing palms with fingers interlocked;



Rotational rubbing of left thumb clasped in right palm and vice versa;



Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;



Once dry, your hands are safe.

To effectively reduce the growth of germs on hands, **handrubbing** must be performed by following all of the illustrated steps.

This takes only 20–30 seconds!

How to handwash



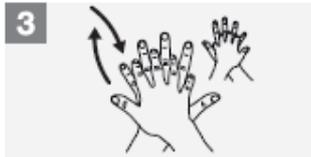
Wet hands with water;



Apply enough soap to cover all hand surfaces;



Rub hands palm to palm;



Right palm over left dorsum with interlaced fingers and vice versa;



Palm to palm with fingers interlaced;



Backs of fingers to opposing palms with fingers interlocked;



Rotational rubbing of left thumb clasped in right palm and vice versa;



Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;



Rinse hands with water;



Dry hands thoroughly with a single use towel;



Use towel to turn off faucet;



Your hands are now safe.

To effectively reduce the growth of germs on hands, **handwashing must last 40–60 seconds** and should be performed by following all of the illustrated steps.

Hand hygiene and glove use

- The use of gloves does not replace the need to clean your hands!
- You should remove gloves to perform hand hygiene, when an indication occurs while wearing gloves
- You should wear gloves only when indicated (see the Pyramid in the Hand Hygiene Why, How and When Brochure and in the Glove Use Information Leaflet) – otherwise they become a major risk for germ transmission

Compliance with hand hygiene

- Compliance with hand hygiene differs across facilities and countries, but is globally <40%¹
- Main reasons for non-compliance reported by health-care workers²:
 - Too busy
 - Skin irritation
 - Glove use
 - Don't think about it

¹Pittet and Boyce. *Lancet Infectious Diseases* 2001;

²Pittet D, et al. *Ann Intern Med* 1999

Time constraint = major obstacle for hand hygiene



Adequate handwashing with
water and soap requires
40–60 seconds

Average time usually adopted
by health-care workers:
<10 seconds

Alcohol-based
handrubbing: **20–30 seconds**

SAVE LIVES

Clean Your Hands

A WHO Patient Safety Initiative



**World Health
Organization**

A consensus-based, tested improvement strategy now exists

- WHO Multimodal Hand Hygiene Improvement Strategy
- Field tested in eight pilot centres and over 350 additional health-care facilities worldwide
- Based on the recommendations of the WHO Guidelines for Hand Hygiene in Health Care
- 5 core components; 5 indications (moments) for hand hygiene

What is the WHO Multimodal Hand Hygiene Improvement Strategy?

Based on the evidence and recommendations from the WHO Guidelines on Hand Hygiene in Health Care (2009), a number of components make up an effective multimodal strategy for hand hygiene

ONE System change

Access to a safe, continuous water supply as well as to soap and towels; readily accessible alcohol-based handrub at the point of care



TWO Training / Education

Providing regular training to all health-care workers



THREE Evaluation and feedback

Monitoring hand hygiene practices, infrastructure, perceptions and knowledge, while providing results feedback to health-care workers



FOUR Reminders in the workplace

Prompting and reminding health-care workers



FIVE Institutional safety climate

Creating an environment and the perceptions that facilitate awareness-raising about patient safety issues

Realistic targets for improvement (1)

<insert details of the targets for hand hygiene improvement or HCAI reduction set by your facility> e.g.

- Improve compliance by x% in Year 1
 - Improve compliance by y% during Years 1–5
 - Increase compliance by z% by 2020
 - Reduce infection rates by x% over a z-year period
-
- Targets will be influenced by baseline data

Realistic targets for improvement (2)

- Targets should be realistic

If baseline compliance is 20%, it is unrealistic to set a target of 60% after 1 year of an intervention

- Targets are dependent upon the necessary hand hygiene infrastructures being in place

<Note: WHO Patient Safety has a global target of year on year improvements / sustaining the gains up to 2020>

Tools available to help you improve hand hygiene at <insert facility name> (1)

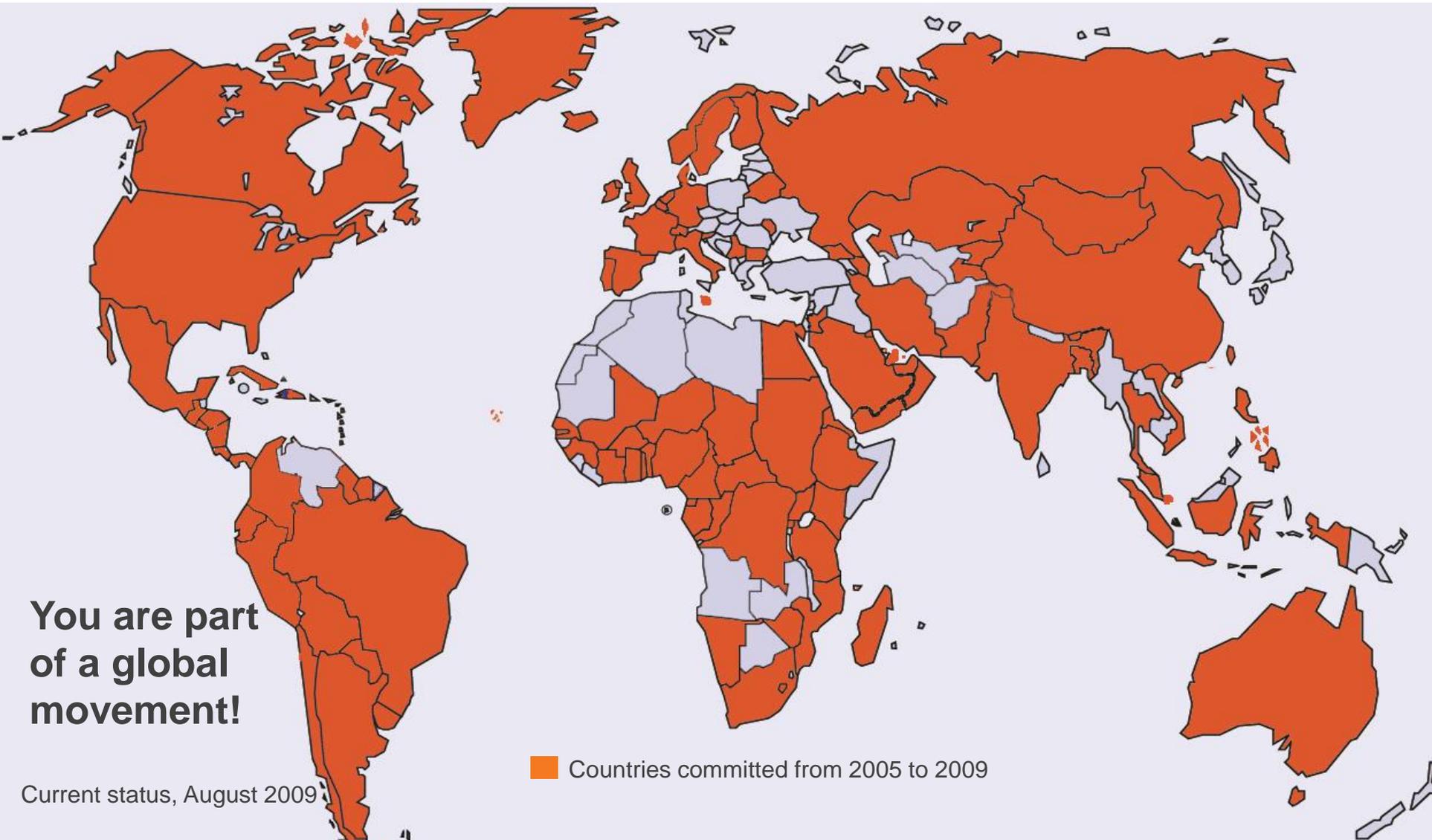
<Select the tools from this list that you will use to support your Action Plan and help the health-care workers at your facility to improve hand hygiene>

- WHO Guidelines on Hand Hygiene in Health Care (2009):
Present the evidence for hand hygiene improvement
- Facility/Country-specific Guidelines
- Hand Hygiene Technical Reference Manual
- Hand Hygiene Why, How and When Brochure
- Education Sessions and Training Films
- Hand Hygiene: When and How Leaflet

Tools available to help you improve hand hygiene at <insert facility name> (2)

- Glove Use Information Leaflet
- Posters displayed throughout the facility
 - Your 5 Moments for Hand Hygiene*
 - How to Handrub*
 - How to Handwash*
- **SAVE LIVES: Clean Your Hands** Screensaver
- A Frequently Asked Questions document
- Key Scientific Publications

Many countries worldwide are committed to improve hand hygiene



Summary

- HCAI places a serious disease burden and significant economic impact on patients and health-care systems
- Appropriate hand hygiene – the simple task of cleaning hands at the right times and in the right way – saves lives
- There are 5 indications (moments) for hand hygiene in health care
- Global compliance with the “My 5 Moments for Hand Hygiene” approach is universally sub-optimal
- *<insert name of facility>* has implemented an action plan to improve hand hygiene and reduce infection
- Your support and compliance with the initiatives is essential to save lives in our facility

Further information...

- Contact *<insert name of key contact at your facility>*
- Visit the **SAVE LIVES: Clean Your Hands** website at:
www.who.int/gpsc/5may/en/