WHO Global Challenge 2005-06
Preventing Health Care-Associated Infection

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Average infection rate:
8-12% of patients in acute care
hospitals in developed countries
Risk is higher in critical care (15-40%)
Risk is 2 to 20 fold higher in developing
countries

Burden of disease outside hospitals is
unknown
No hospital, no country, no health-care
system in the world can claim to have
solved the problem

Health care-associated
infections
Every year in the US,
preventable diseases, including
nosocomial infections,
are responsible for 44’000-98’000
deaths
In UK, nosocomial infections may be
responsible for > 5’000 deaths/year
Health care-associated infections

Every year in the US,
preventable diseases

US$17 to US$29 billion/year

For 44,000–98,000 deaths

In UK, nosocomial infections responsible for > 5,000 deaths/year

In UK, nosocomial infections responsible for > 5,000 deaths/year

From Notes on Hospitals published in 1863

The very first requirement in a hospital is that it should do the sick no harm

Health care-associated infections

–affect hundreds of millions of patients worldwide every year
–more serious illness
–prolong hospital stay

Health care-associated infections

–long-term disability
–excess deaths
–massive additional financial burden
–high costs on patients and their families

World Alliance for Patient Safety

World Alliance for Patient Safety

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Global Patient Safety Challenge for 2005-2006: Clean Care is Safer Care

Why health care-associated infection as a first priority for patient safety?

Health care-associated infection is a major patient safety problem
- Affects a large number of individuals worldwide
- Multifaceted causation related to:
  - systems and processes of care provision
  - economical constraints on systems and countries
  - human behaviour

Health care-associated infection is a major patient safety problem
- Data to assess the size and nature of the problem and to create the basis for monitoring the effectiveness of actions
- Patient safety gap
  Some healthcare institutions and systems control the risk to patients much better than others

Health care-associated infection: solutions to the problem
- Prevention strategies reduce infections in developed, transitional and developing countries
- Most solutions are simple and not resource-demanding
- Several health-care settings have succeeded in reducing the risk to patients, but others have not

Health care-associated infection: solutions to the problem
- Gaps in patient safety arise because existing tools and interventions are not being implemented widely
- Gaps not only between countries, but also within the same country... both in developed and developing countries
Infection control in developing countries

Unfavourable social background
Badly structured and equipped facilities
Technological gap

Lack of adequate conditions in hospitals
- Inadequate hygiene conditions
- Inadequately / insufficiently equipped
- Lack of microbiological information
- Understaffing
- Overcrowding
- Low staff preparedness

Consequences
- Unsafe invasive procedures
- Nosocomial outbreaks of introduced community pathogens
- Spread of multiresistant organisms
- Higher health care-associated infection rates (2 to 20-fold)

Aim of the Alliance
Making health care safer
Primum non nocere
"First, do no harm"

Global patient safety challenge:
Clean Care is Safer Care
WHO strategy 1: Clean products

Blood safety

- Promotion of optimal hand hygiene associated with procedures for collection, processing and use of blood products
- Promotion of donor skin antisepsis to prevent blood contamination
- In-service education and training on safe transfusion practices at the bedside

WHO strategy 2: Clean equipment

Injection Safety

- Promotion of optimal hand hygiene practices at time of injections and immunization
- Promotion of donor skin antisepsis to prevent blood contamination
- In-service education and training on safe transfusion practices at the bedside
- Strengthening of high-level commitment within countries to use auto-disable syringes
- Actions to ensure the safe disposal of sharps as part of integrated waste management in health care

WHO strategy 3: Clean practices

Clinical Procedures Safety

- WHO Injection Safety
- Safe Injection Global Network (SIGN)
- Promotion of optimal hand hygiene practices at time of injections and immunization
- Promotion of donor skin antisepsis to prevent blood contamination
- In-service education and training on safe transfusion practices at the bedside
- Strengthening of high-level commitment within countries to use auto-disable syringes
- Actions to ensure the safe disposal of sharps as part of integrated waste management in health care
Emergency and Essential Surgical Care

- Specific education programmes promoting safety in surgical procedures, tailored to the needs of health-care facilities
- Surgical hand preparation using either antimicrobial soap and water or alcohol-based hand rub
- Access to safe emergency and essential surgical care including the availability and use of best practice protocols on clinical procedures and equipment

WHO strategy 4: Clean Environment
Safe water, waste disposal and sanitation in health-care

Water, Sanitation and Health unit
Protection of the Human Environment

- Ensuring access and water quality to support hygiene, and hand hygiene in particular, at the level of health care facilities
- Ensuring sound management of waste, particularly of highly infectious healthcare waste such as syringes and sharps

1st Challenge: Clean Care is Safer Care

Improve hand hygiene
Blood safety
Injection & immunization safety
Safe surgical procedures
Water, sanitation & waste management

Ignaz Philipp Semmelweis
Vienna
Fighting puerperal fever
Health-care workers’ compliance with hand hygiene practices is less than 40% on average.

Reasons for not cleansing hands

**Time and system constraints**

- High demand for hand hygiene is associated with low compliance
- Full compliance with conventional guidelines is unrealistic

Voss and Widmer - ICHE 1997; 18:205
Pittet et al, Annals Intern Med 1999; 130:126

Time constraint = major obstacle for hand hygiene

Handwashing ... an action of the past (except when hands are visibly soiled)

Alcohol-based hand rub is standard of care
Alcohol-based hand rub at the point of care
Before and after any patient contact
Before and after glove use
In between different body site care

« Talking walls »

My son, if they don’t get me, you will become multiresistant
Handrub is the natural killer of cross transmission

Dirty Staph
...out of hospital

Doctor Freud, in this hospital, it’s become impossible to cause infections any more!

Geneva’s University Hospitals against Dirty Staph: war has been declared

Results
Compliance with Hand Hygiene (%)

www.hopisafe.ch
Hospital-wide nosocomial infections; trends 1994-1998


Key parameters for success

- System change
- Administrative support
- Education of health-care workers
- Monitoring and feedback of performance
- Change in behaviour
- Associated with reduction in cross-transmission and infection rates

Global Patient Safety Challenge for 2005–2006:

To reduce health care-associated infections worldwide

Clean Care is Safer Care

Hand Hygiene

is the primary measure to prevent health care-associated infection and to reduce the spread of multi-resistant microorganisms

The Guidelines

http://www.who.int/patientsafety
Contents of the Advanced Draft Guidelines

Part I. Review of scientific data
Part II. Consensus recommendations
Part III. Outcome measurements
Part IV. Promoting hand hygiene on a large scale
Part V. Information to the public

Evidence-based recommendations in 8 key areas:
1. Indications for hand hygiene action
2. Correct techniques for ensuring adequate hand hygiene
3. Surgical hand preparation
4. Selection and handling of hand hygiene agents
5. Skin care
6. Use of gloves
7. Educational and motivational programmes including cultural and religious factors to be considered
8. Government and institutional responsibilities

Objective of the WHO Guidelines on Hand Hygiene in Health Care (Advanced Draft)

To provide health-care workers, administrators and health authorities with a thorough review of hand hygiene and in depth information to overcome obstacles to improvement
Handwashing with soap and water when hands are visibly dirty

Adoption of alcohol-based hand rub is the gold standard in all other clinical situations, whenever possible.

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**Hand hygiene promotion**

Use *multi-modal strategies*:
- education and motivation of caregivers
- system change: hand hygiene agents available at the point of care
- leadership and clinical governance
- administrative support
- patient participation
- monitoring by performance indicators

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The Implementation of the WHO Guidelines is a *global challenge*

To develop strategies at country level including hand hygiene campaigns and other actions, to reduce health care-associated infections worldwide, *regardless of the health-care setting and level of development*.

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Regions in which District testing may occur

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Such a *CHALLENGE* is quite a *challenge*.

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Access to water
Water quality

Current Task Forces
WHO Hand Hygiene in Health Care

• Patient involvement
• Education
• Religious and cultural aspects of hand hygiene
• Global implementation of the WHO alcohol-based formulation

Current Task Forces
WHO Hand Hygiene in Health Care

- Glove use and re-use
- Water quality for handwashing
- Communication and campaigning
- National Guidelines on Hand Hygiene
- Frequently asked questions developed

Education can also be simple

World Health Organization Hand Hygiene Guidelines
Professor Didier Pittet, University of Geneva
Sponsored by Deb Canada www.debcanada.com

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Global patient safety: Clean Care is Safer Care

What are the perspectives?

Impact of hand hygiene education in the community in a developing country
Luby et al. Lancet 2005; 366: 225–33
- Cluster-randomized study (villages)
- Rural community in Pakistan
- Intervention: education with focus on hand hygiene and distribution of soap

Results
- ↓ diarrhoea
- ↓ skin infections
- ↓ respiratory infections
- ↓ mortality among children

Pittet D.
Clean hands reduce the burden of disease
Lancet; 366: 185-86, 2005

Global implications...
Solidarity

Nairobi, Kenya, Africa, January 2005

Is it feasible?

Durban, South-Africa, January 2005

http://www.who.int/patientsafety

“Simple measures save lives… The opportunity for action has never been greater, nor its need more urgent…”

Sir Liam Donaldson – Professor Didier Pittet

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“It is our duty to patients, their families, and health-care workers…

Let us move forward together!

Each of us can make a small difference; significant improvement requires an effort from all of us.”

Sir Liam Donaldson – Professor Didier Pittet