

Clean hands Do Save Lives

Simplifying the Message: Achieving Behaviour Change

Julie Storr

Claire Kilpatrick

5. SAFETY CLIMATE

Live

Verb

1. Live and breathe hand hygiene by demonstrating it is in the organizational DNA.

Visible & meaningful leadership support

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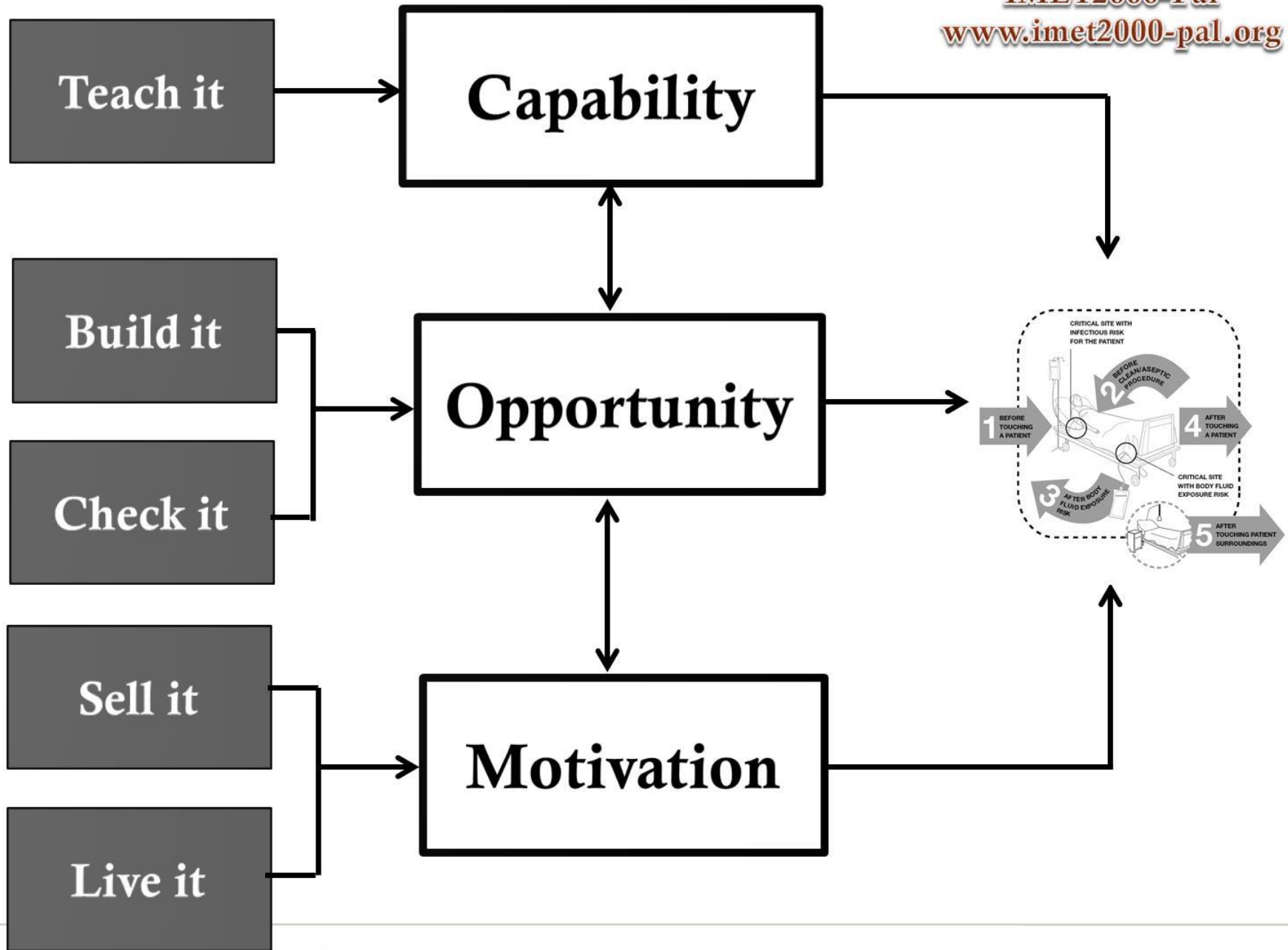
Leadership

- Cultivate a culture of excellence
- Communicate this to staff
- Focus on overcoming barriers
- Deal directly with resistant staff
- Inspire....
 - Saint, et al. (2010)



Implementation tools

- Template Letter to Advocate Hand Hygiene to Managers
- Template Letter to Communicate Hand Hygiene Initiatives to Managers
- Guidance on Engaging Patients and Patient Organizations in Hand Hygiene Initiatives
- Sustaining Improvement – Additional Activities for Consideration by Health-Care Facilities
- **SAVE LIVES**: Clean **Your** Hands Promotional DVD
- Videos



The aim: to make it more likely that the appropriate processes of technical care will be expertly executed

Needed equipment and qualified health personnel alert to patient preferences

STRUCTURE

Appropriate process of technical care, expertly executed

PROCESS

Improvement in health

OUTCOME

Improving hand hygiene – it's all about human factors thinking



Integrating human factors with infection prevention and control

Julie Storr, Dr Neil Wigglesworth, Claire Kilpatrick

In this thought paper, the authors discuss the application of human factors principles within infection prevention and control activities. They argue that the time has come to strengthen infection prevention and control capacity and capability by embedding human factors principles, methods, expertise and tools. They suggest that a root and branch review, through a human factors lens, of infection prevention measures could help develop interventions that work safely within the complex sociotechnical system that is healthcare.

At the Health Foundation, we are working to identify, test and demonstrate ways to manage risk in systems of care, and reduce the number of failures. We are conducting research and running improvement programmes to provide vital evidence and learning that can be shared across the health service.

Health Foundation thought papers present the authors' own views. We would like to thank Ms Storr, Dr Wigglesworth and Ms Kilpatrick for their work, which we hope will stimulate ideas, reflection and discussion.

Thought paper
May 2013

- Systems (approaches, thinking)
- Process (design, control, redesign)
- Physical environment
- Checklists, briefings
- Culture (organisational, department, team)
- Communication
- Quality improvement terms

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The WHO Hand Hygiene Self-assessment Framework

Assessment



Action



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World Health Organization | **Patient Safety** | **SAVE LIVES**
A World Alliance for Safer Health Care | Clean Your Hands

Your Action Plan for Hand Hygiene Improvement

Template Action Plan for WHO Framework

Intermediate Results

- System change**
 - Baseline assessment – map resources required for hand hygiene at the point of care in those places where it is not yet available – record and describe what additional products are needed
 - Hand hygiene products – provide products and related instructions at the point of care progressively across the whole facility with a clear implementation timeframe
 - Management support – take your facility's proposal for system change to the facility's senior managers – discuss and secure short-and long-term support, including finances, for continuous product procurement
- Training / education**
 - Needs assessment – plan hand hygiene training centered on the WHO 5 Moments, based on staff knowledge, perception, and practice monitoring
 - Planning – create and implement a programme for the validation of observers
 - Execution – provide updated training programmes for staff based on a needs assessment
 - Management support – secure support from senior managers for regular training, including resources/finances
 - Sustainability – implement a process for confirming staff training completion – develop a plan for continuous education and updates (including innovative approaches such as a buddy system)
- Evaluation & feedback**
 - Regular evaluation – undertake regular hand hygiene compliance observations, at least annually and monitor other indicators (e.g. product consumption, knowledge, perception)
 - Access to expertise – utilize expertise (e.g. epidemiologist, data manager) for data analysis
 - Feedback – establish and maintain a system for recording and reporting rapidly to both staff and senior managers, describing their results against expected results, and openly communicate results across the organization & beyond
 - Target setting – set annual targets for compliance results/rates
- Reminders in workplace**
 - Capacity – follow a plan for regular refreshment of reminders such as posters and replace if damaged
 - Delivery of messages – provide and display posters and leaflets in all clinical settings
 - Sustainability – plan to produce and distribute supplementary or refreshed reminders on an on-going basis, including innovative ideas other than posters and leaflets
- Safety climate**
 - Multimodal approach – continue to self-assess, using the WHO Hand Hygiene Self-Assessment Framework, at least annually and clearly describe changes compared to previous evaluations
 - Budget – secure a regular budget for ongoing activities aimed at hand hygiene sustainment and further improvement
 - Capacity – establish long-term functions for professionals in charge of hand hygiene activities and stimulate staff to become champions and/or role models
 - Communication – in addition to regular communications on hand hygiene progress and results, spread the message through other channels (e.g. internal journal, web pages, official institutional events)
 - Patient/community engagement – develop basic information and educational materials on hand hygiene for patients, relatives and visitors

An innovation to simplify & enhance improvement – WHO Five Moments

Journal of Hospital Infection (2007) 67, 9–21



ELSEVIER

Available online at www.sciencedirect.com



www.elsevierhealth.com/journals/jhin

REVIEW

**'My five moments for hand hygiene':
a user-centred design approach to understand,
train, monitor and report hand hygiene**

H. Sax^{a,b}, B. Allegranzi^b, I. Uçkay^a, E. Larson^{b,c}, J. Boyce^{b,d},
D. Pittet^{a,b,*}

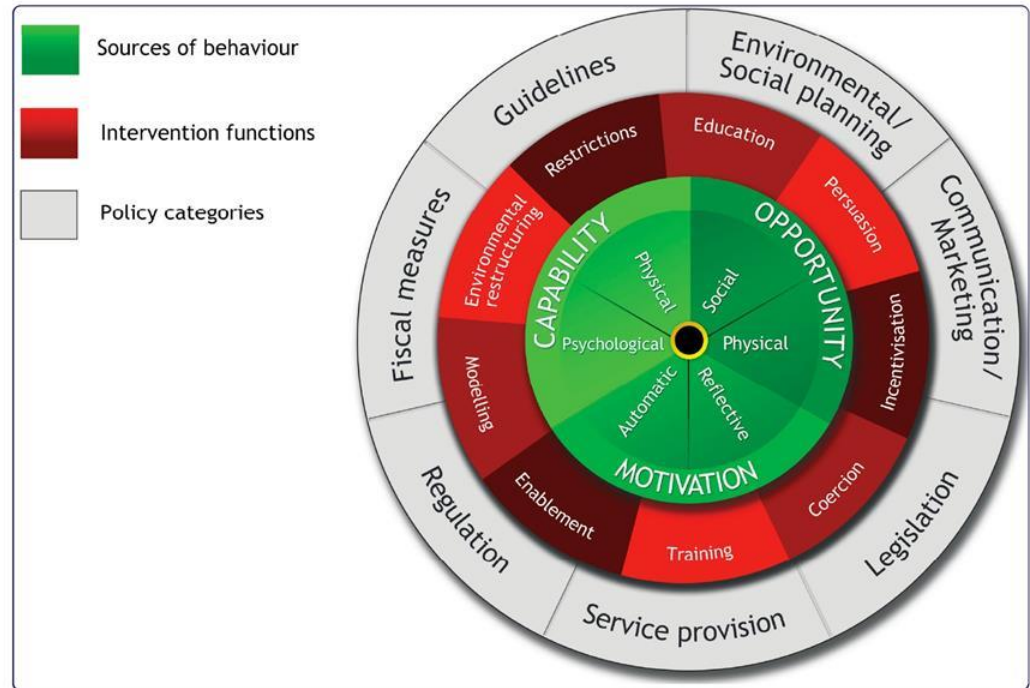
Five Moments – based on behaviour change theory



How do we change behaviour?



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Michie et al 2011

Videos in clinical medicine – NEJM 2010

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PERFORMING MEDICAL PROCEDURES

Hand Hygiene

Yves Longtin, M.D.

Hugo Sax, M.D.

Benedetta Allegranzi, M.D.

Franck Schneider

Didier Pittet, M.D.

University of Geneva Hospitals, Geneva, Switzerland.

Indications



Indications for hand hygiene
have been defined by the
Centers for Disease Control and Prevention
and the
World Health Organization

NEJM Hand Hygiene Video – has gone global

Hand Hygiene VIDEOS in The New England Journal of Medicine in YOUR language

Share Print

Produced in collaboration with the WHO Collaborating Centre on Patient Safety, University of Geneva Hospitals & Faculty of Medicine, Geneva, Switzerland

Hand Hygiene NEJM English



Hygiene des mains NEJM French



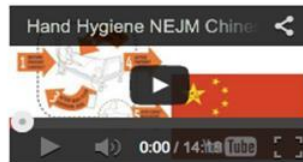
Higiene de manos NEJM Spanish



Hand Hygiene NEJM Arabic



Hand Hygiene NEJM Chinese



Hand Hygiene NEJM Russian



Händehygiene NEJM German

Hand Hygiene NEJM Indonesian

Hand Hygiene NEJM Italian

Translated in :

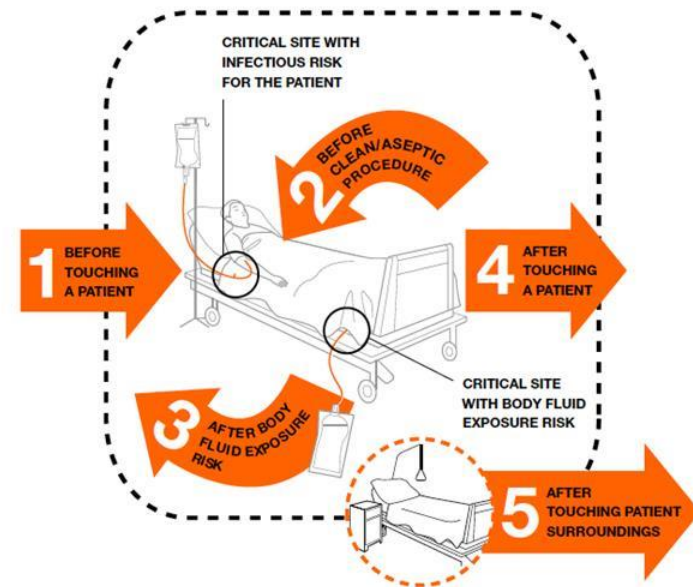
- French
- Portuguese
- Japanese
- Spanish
- Italian
- German
- Chinese
- Russian
- Romanian
- Turkish

Available soon

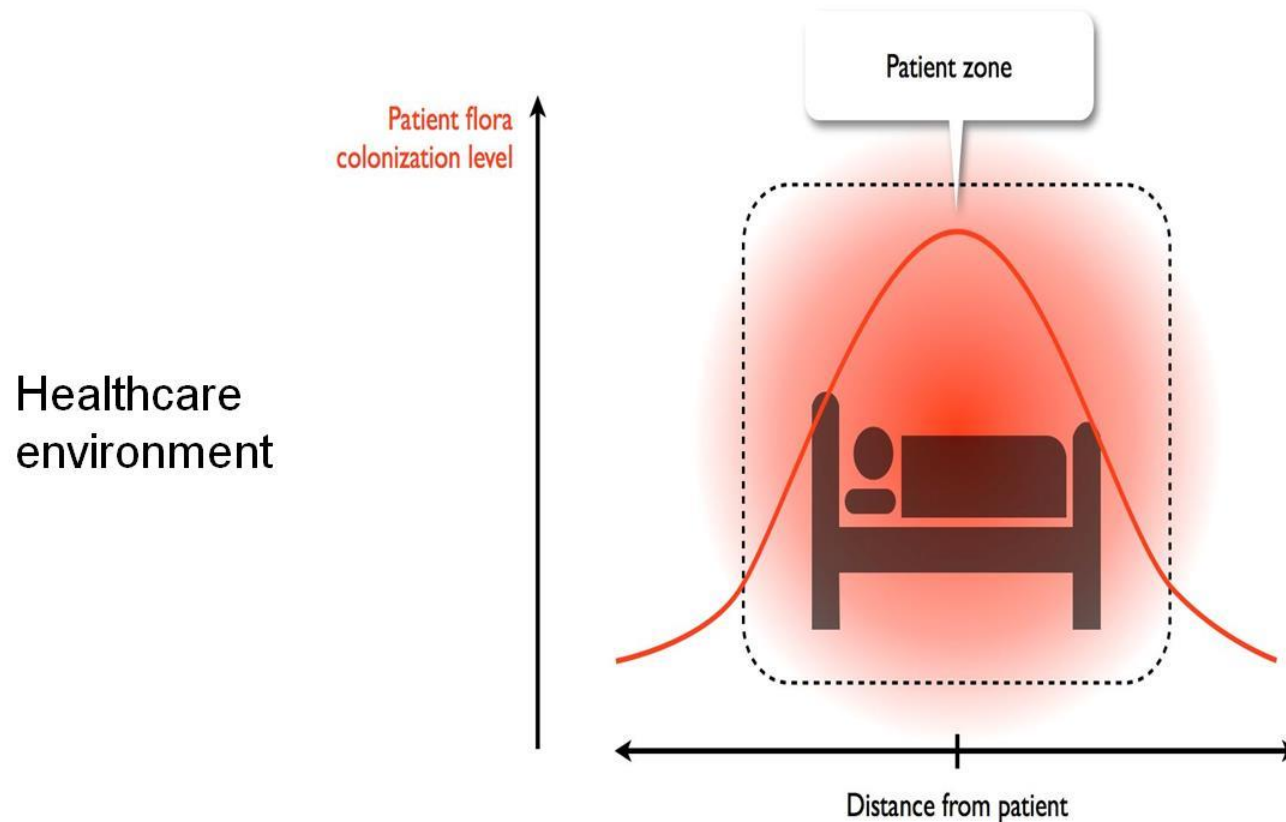
- Shewali
- Urdu.....

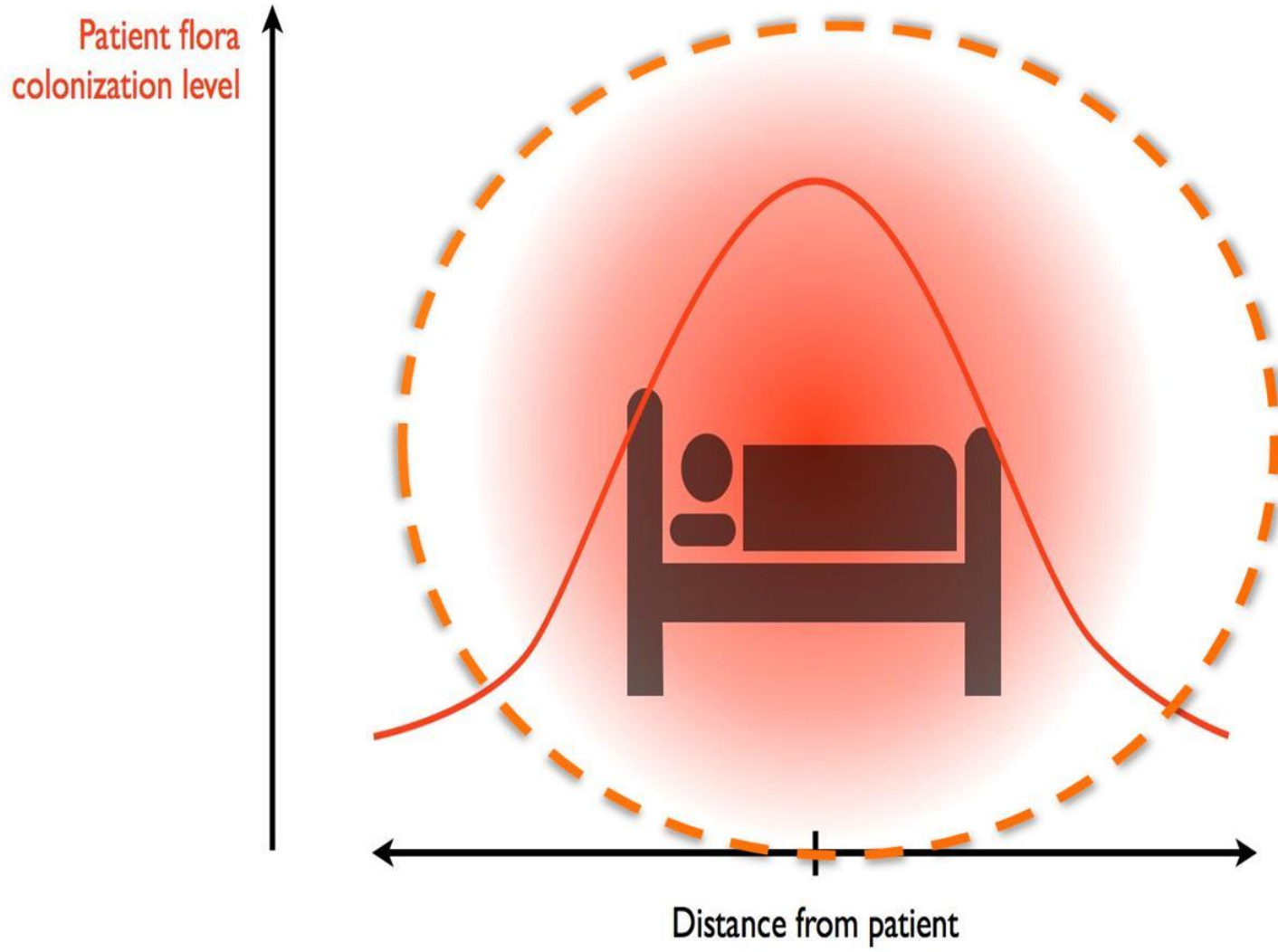
In summary: Five moments -

- Lean risk based approach
- Based on the 80/20 principle
- Addresses overuse, underuse and misuse of hand hygiene in health care
- Influenced by ergonomics and workflow, neuroscience, psychology and **based on germ transmission**



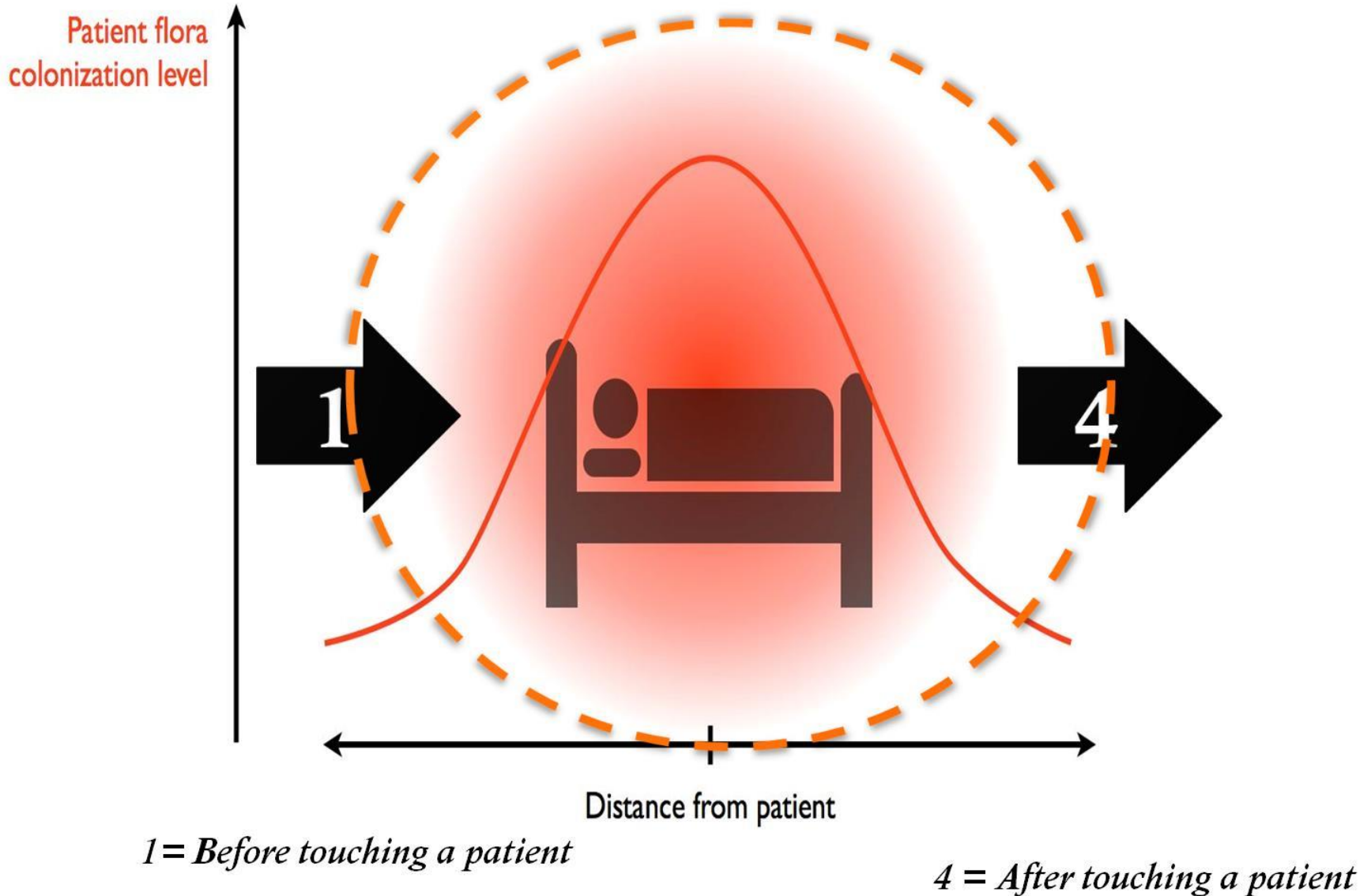
5M starts with the theory of germ transmission





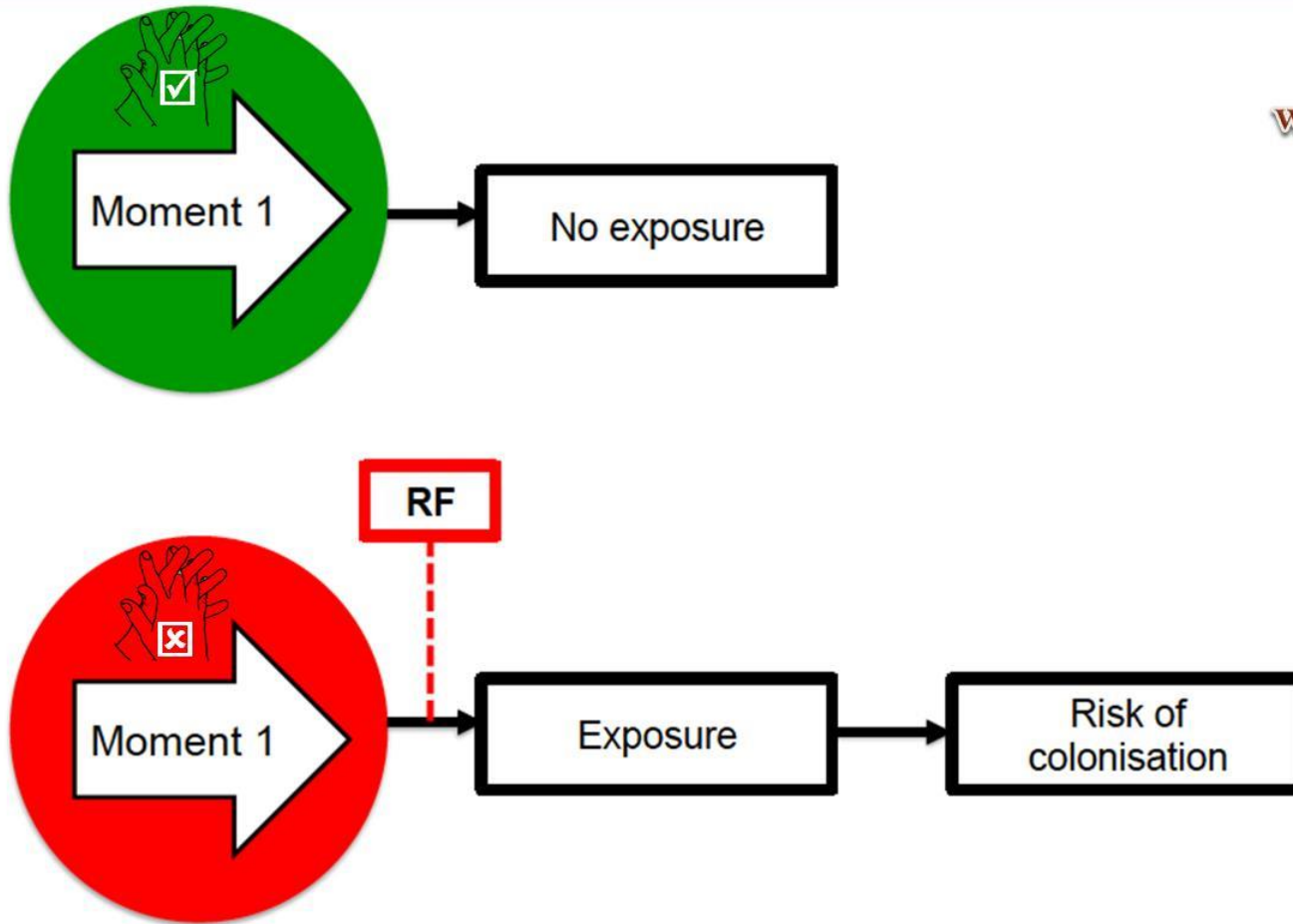
Target: colonisation

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The potential impact on patients of omitting hand hygiene (Moment 1)

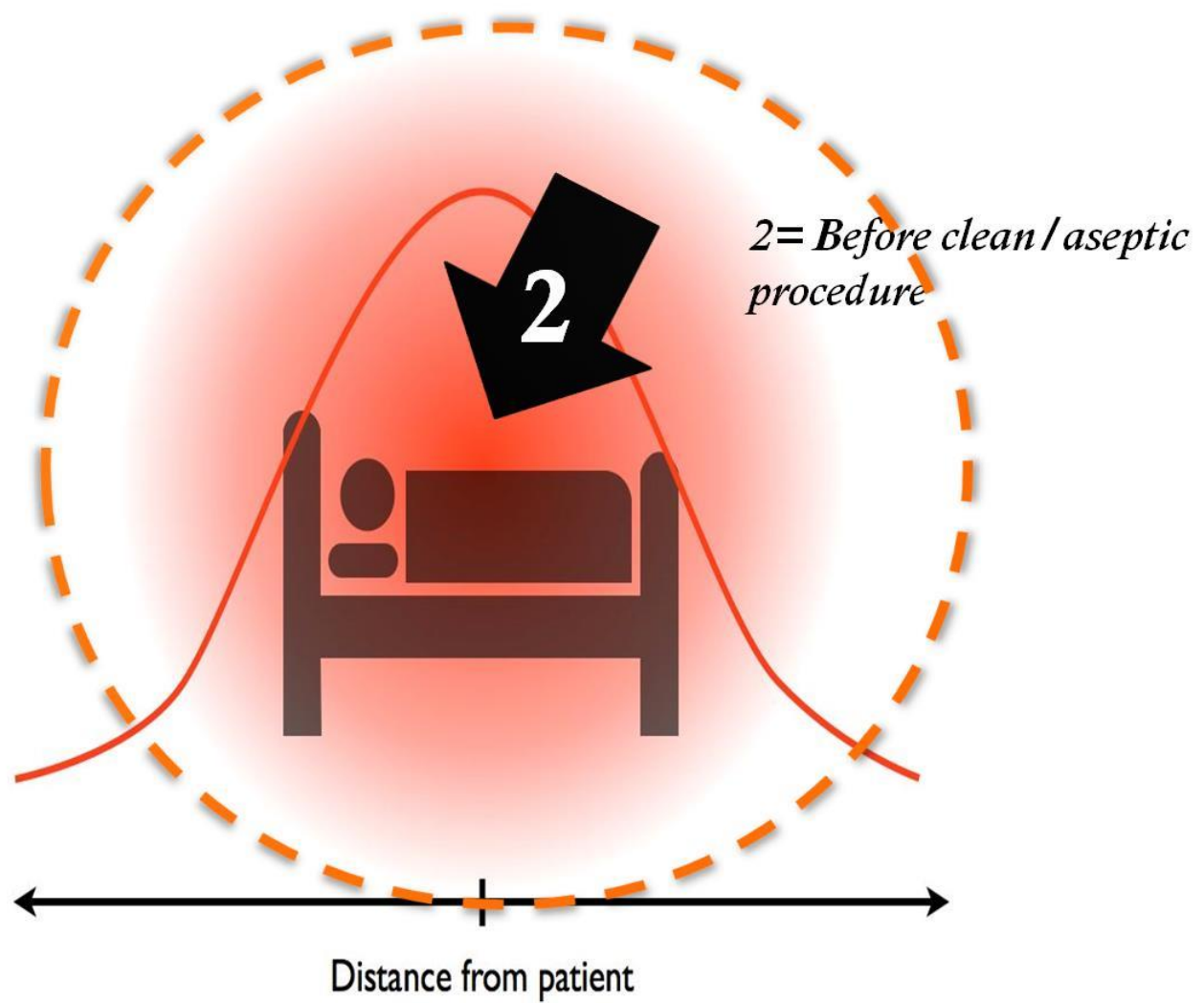
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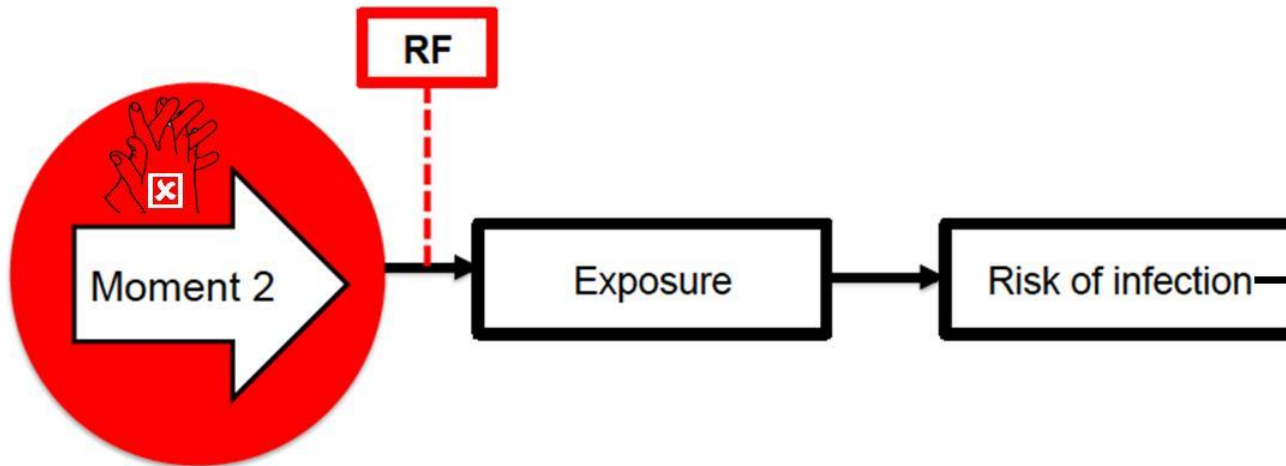
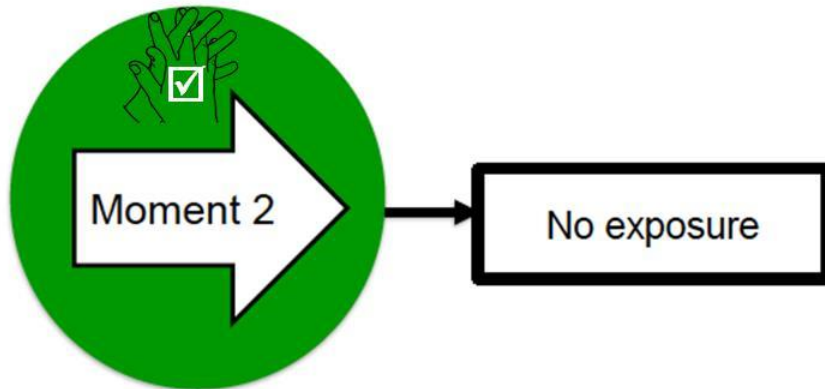
Target: infection

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Patient flora
colonization level



The impact on patients of omitting hand hygiene (Moment 2)



Potential impact:

1. Phlebitis
2. Central line associated bloodstream infection
3. Surgical wound infection
4. Catheter associated urinary tract infection
5. Bacteraemia
6. Septicaemia
7. **Plus:**
 - I. Cost
 - II. Quality of life

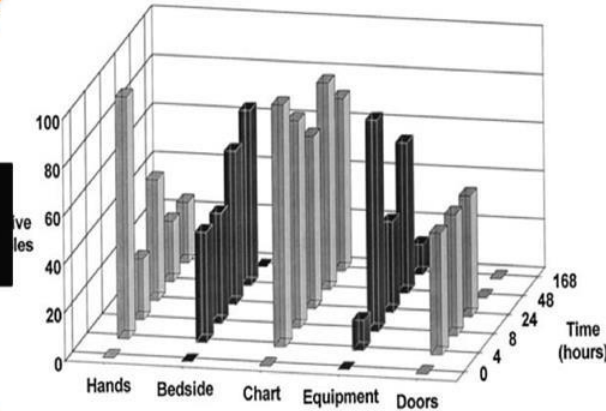
5 = After contact with patient surroundings

4 = After touching a patient

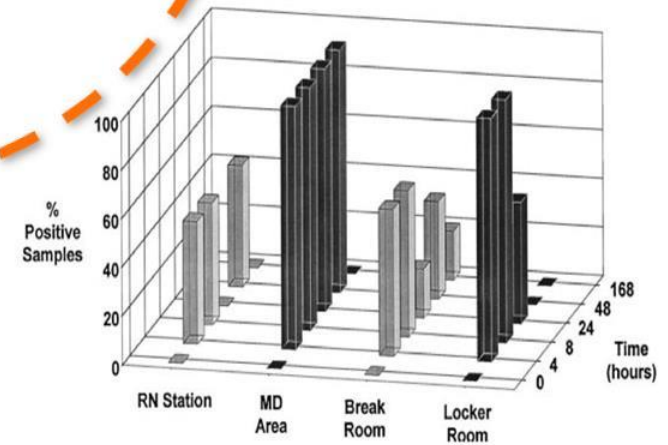
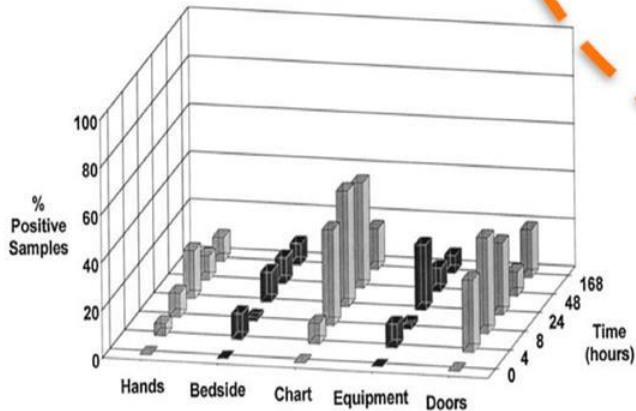


Other pods

Non-care areas

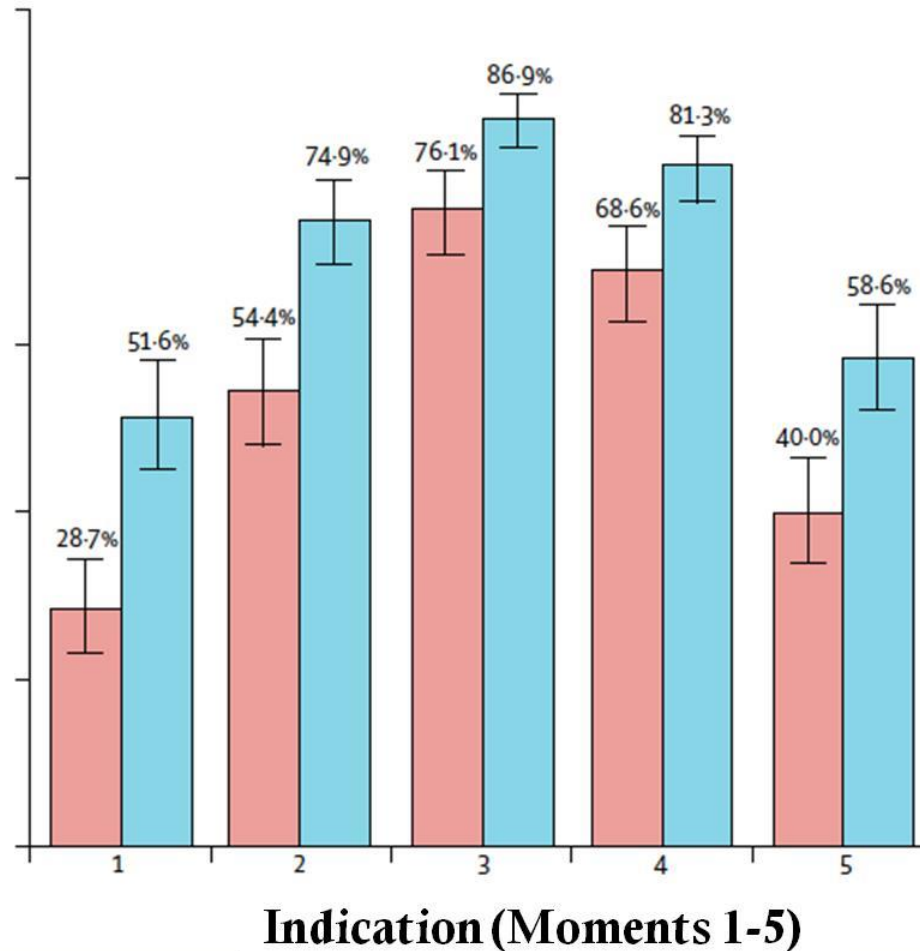


Initial pod



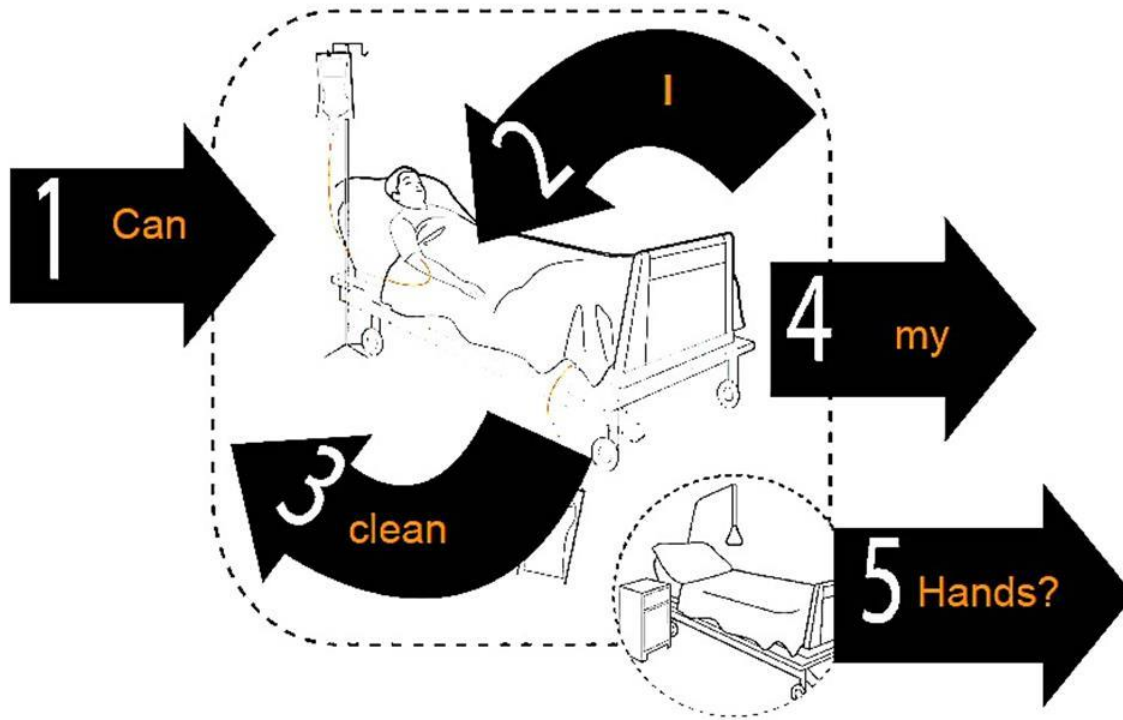
Oelberg DG, Joyner SE, Jiang X, Laborde D, Islam MP, Pickering LK. Detection of pathogen transmission in neonatal nurseries using DNA markers as surrogate indicators. Pediatrics 2000;105:311-5.

Compliance before and after (indication)



Blending Five Moments and the Multimodal Strategy

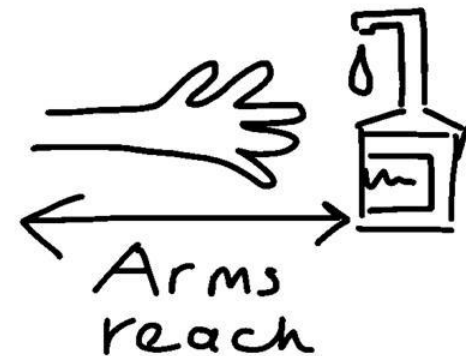
Simplifying the messages

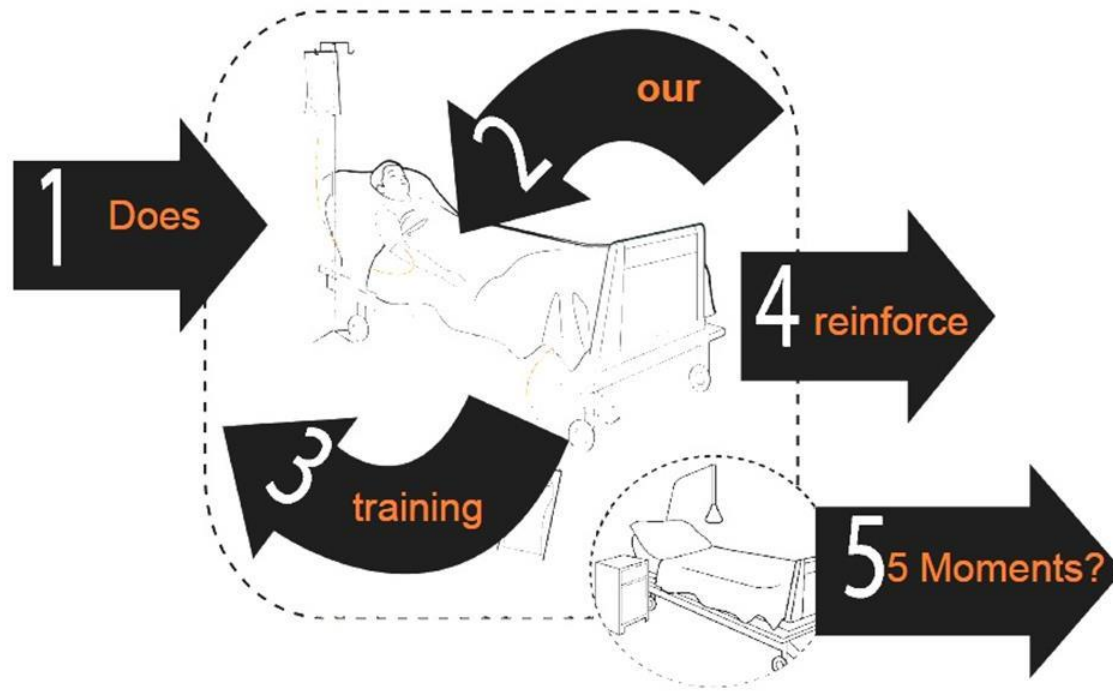


System change

build
verb

1. Build the right environment to make it easier to do the right thing i.e. practice hand hygiene reliably at the right time and in the right way.



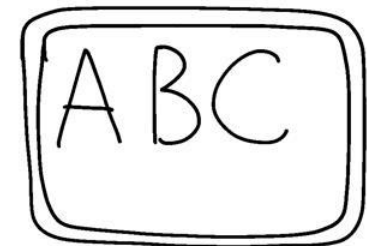


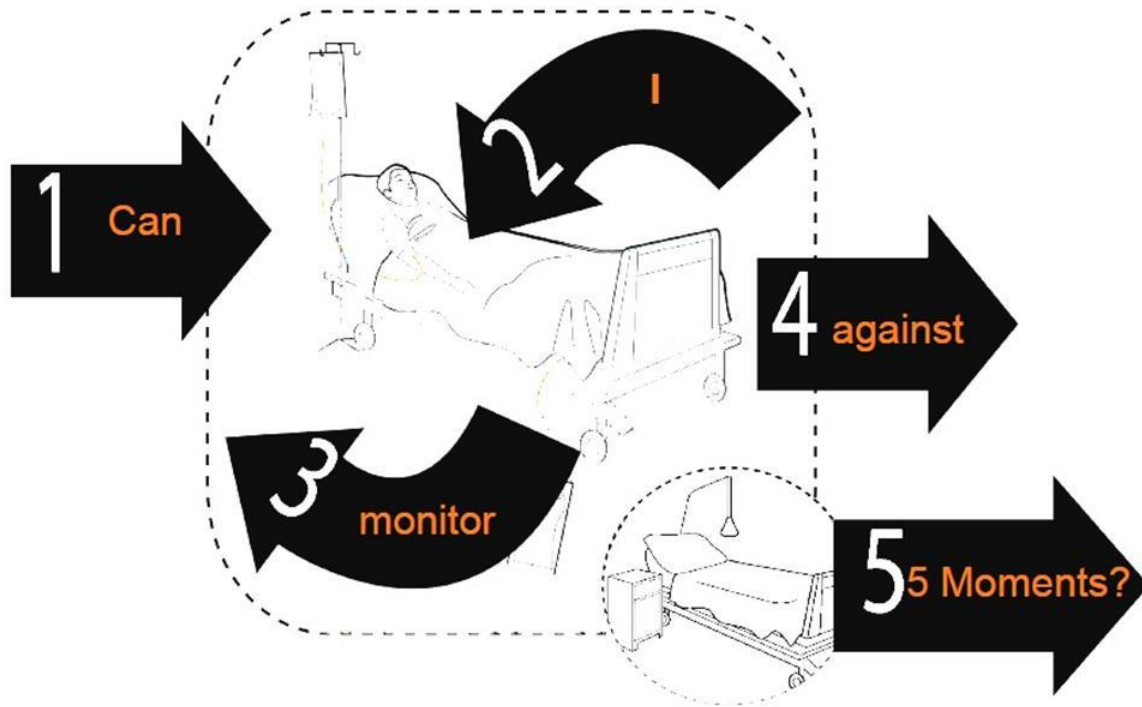
Training and education

teach

verb

1. Teach hand hygiene in a way that influences behaviour change.

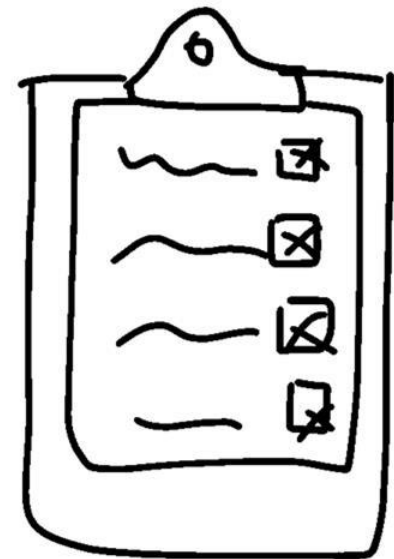


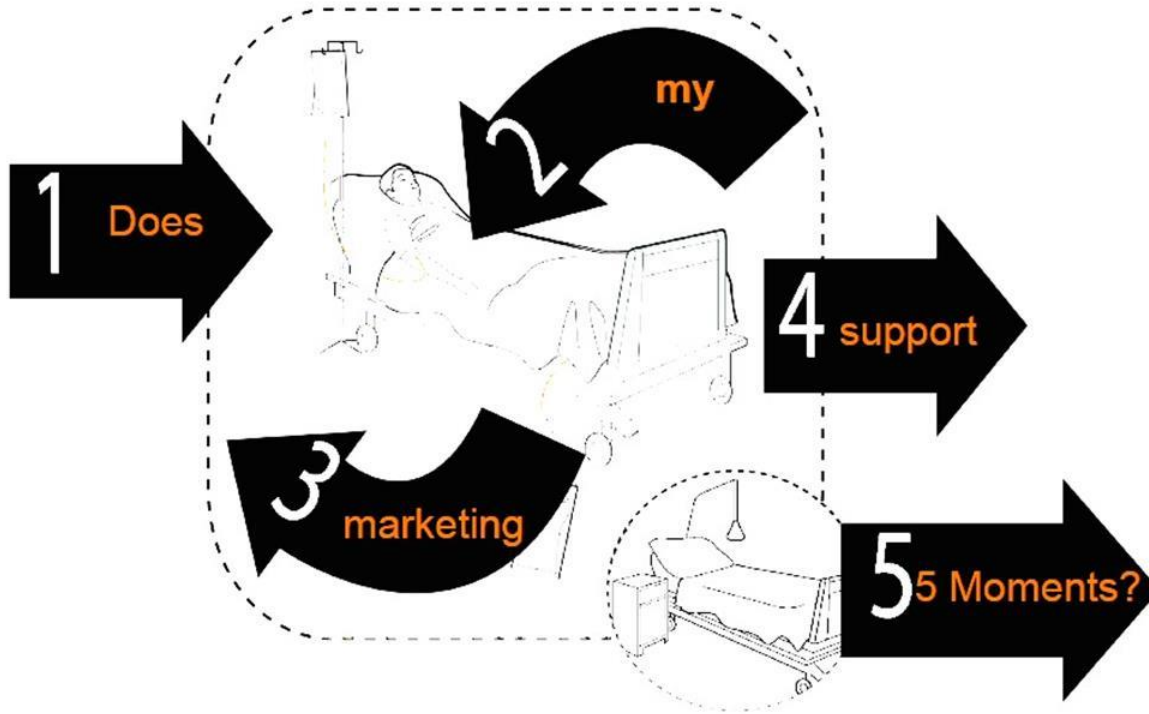


Evaluation and feedback

Check
verb

1. Check that the strategy is working (or not) through measurement and feedback.



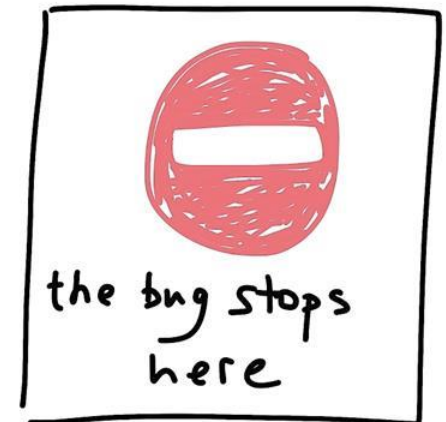


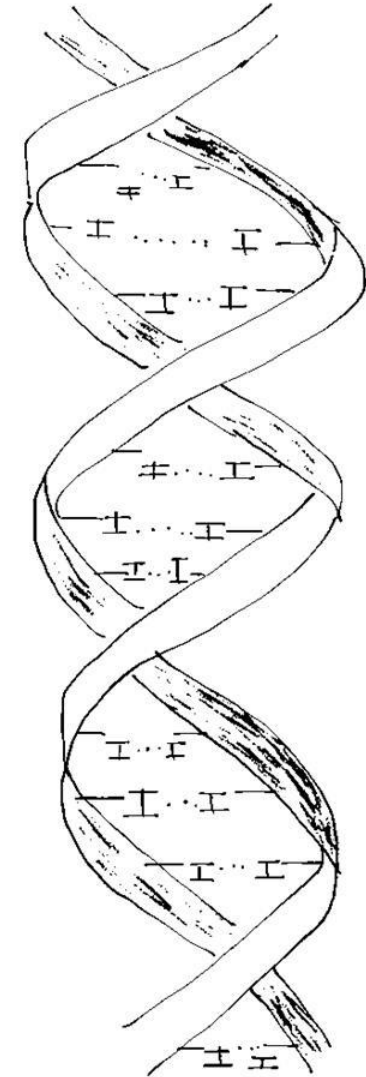
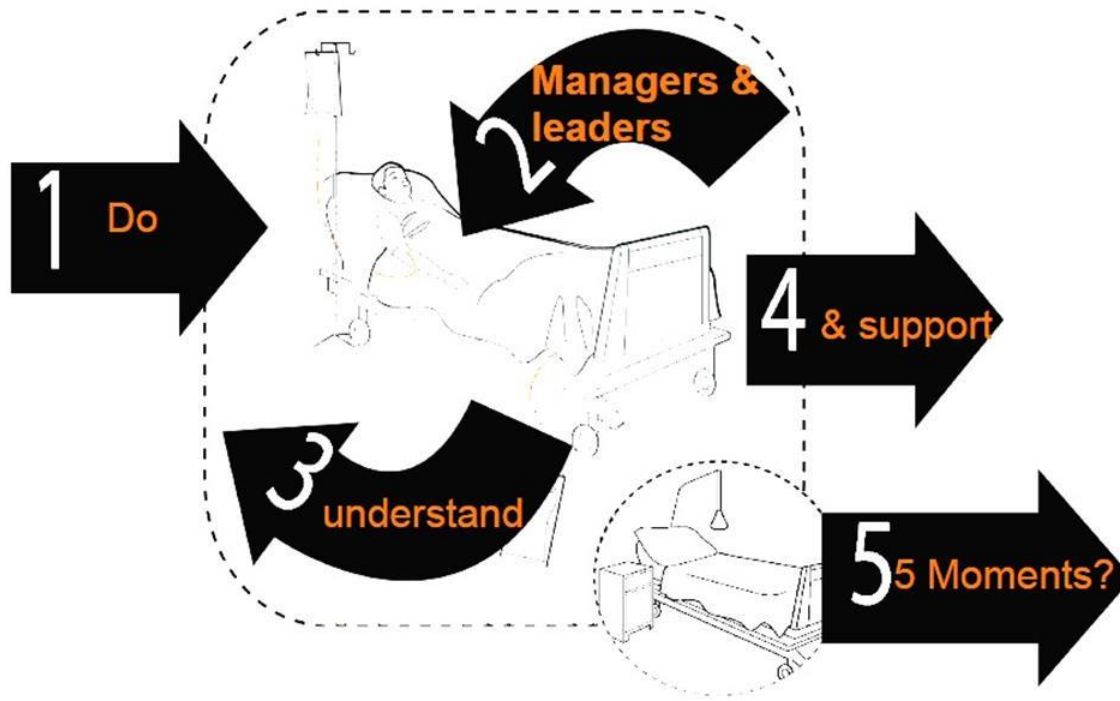
Reminders

Sell

verb

1. Sell hand hygiene effectively.





Safety climate

Live
Verb

1. Live and breathe hand hygiene by demonstrating it is in the organizational DNA.

Embedding hand hygiene in a flow of treatment and/or care

Simplifying the action

Workflow scenario

• A nurse walks into a six-bedded bay from the nurses station to talk to patient A about a procedure due to take place later that day. The patient has difficulty moving unaided and asks to be helped to move to be more comfortable.

• The nurse helps her to sit up, arranges her pillows, moves the bedside table closer and helps her to have a drink of water. While this is occurring the patient mentions that her IV cannula site is “really hurting”.

• The nurse takes a look, the site is slightly red.
• She touches the intact skin around the cannula site and explains she will remove this.

• She walks out of the bay to the treatment room.

• She returns with the necessary equipment, and proceeds to remove the cannula.
• She writes in the notes at the end of the bed and then sits down on the bedside chair.

• She starts discussing the procedure and its implications.
• Patient A becomes very tearful and the nurse stands and gives her a hug, holding her hand reassuringly.

• After some time, patient A has become more calm and asks the nurse to help her walk to the bathroom.

• The nurse carefully helps her out of bed, slowly walks to the bathroom, holding her hand, enters the bathroom and helps the patient sit on a chair in front of the sink.

• The nurse says she will return in 5 minutes and leaves the bathroom to do other tasks meantime.

With hand hygiene & Moments

• A nurse walks into a six-bedded bay from the nurses station to talk to patient A about a procedure due to take place later that day. The patient has difficulty moving unaided and asks to be helped to move to be more comfortable.

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• The nurse says she will return in 5 minutes and leaves the bathroom to do other tasks meantime.

1

4

1/2

3

4

The way forward - a balancing act between:

HEALTHCARE EPIDEMIOLOGY

Robert A. Weinstein, Section Editor

Searching for an Optimal Hand Hygiene Bundle: A Meta-analysis

Marin L. Schweizer,^{1,2,3} Heather Schacht Reisinger,^{1,2} Michael Ohl,^{1,2} Michelle B. Fomanek,^{1,3} Amy Blevins,⁴
Melissa A. Ward,² and Eli N. Perencevich^{1,2}

¹The Center for Comprehensive Access and Delivery Research and Evaluation, Iowa City Veterans Affairs Health Care System; ²Department of Internal Medicine, Carver College of Medicine; ³Department of Epidemiology, College of Public Health; and ⁴Hardin Library for the Health Sciences, University of Iowa, Iowa City

Many studies have evaluated bundled interventions to improve hand hygiene compliance. However, there are few evidence-based recommendations on optimal interventions for implementation. We aimed to systemati-

Annals of Internal Medicine

SUPPLEMENT

The Top Patient Safety Strategies That Can Be Encouraged for Adoption Now

Paul G. Shekelle, MD, PhD; Peter J. Pronovost, MD, PhD; Robert M. Wachter, MD; Kathryn M. McDonald, MM; Karen Schoelles, MD, SM; Sydney M. Dy, MD, MSc; Kavosh Shojania, MD; James T. Reston, PhD, MPH; Alysa S. Adams, PhD; Peter B. Angood, MD; David W. Bates, MD, MSc; Leonard Bickman, PhD; Pascale Carayon, PhD; Sir Liam Donaldson, MChB, MSc, MD; Naihua Duan, PhD; Donna O. Farley, PhD, MPH; Trisha Greenhalgh, BM BCh; John L. Haughom, MD; Eileen Laka, PhD, RN; Richard Lilford, PhD; Kathleen N. Lohr, PhD, MA, MPhil; Gregg S. Meyer, MD, MSc; Marlene R. Miller, MD, MSc; Duncan V. Neuhouser, PhD, MBA, MHA; Gary Ryan, PhD; Sanjay Saint, MD, MPH; Stephen M. Shortall, PhD, MPH, MBA; David P. Stevens, MD; and Kieran Walsh, PhD

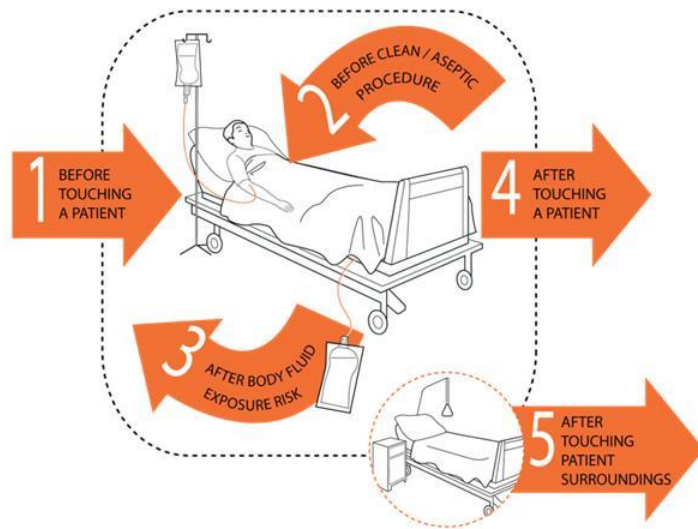
See the rest of the supplement on the submission of the... We chose 18 topics for in-depth review. As a first step

Hand hygiene, AMR and the future

Simplifying the messages to save lives

The role of hand hygiene to combat antimicrobial resistance

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A global challenge with global commitment,
providing a global solution

“An alarming and irreversible crisis on the same level as global warming”

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PENGUIN
SPECIALS

**THE DRUGS
DON'T WORK**

A GLOBAL THREAT

**PROFESSOR DAME
SALLY C. DAVIES**



New patient and public information on AMR

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World Health
Organization

Hand hygiene
and Antibiotic Resistance

WHO Information for Patients and Consumers

What is 'antibiotic resistance'? Sometimes an antibiotic that used to work in the past for a certain type of bacterial infection no longer works. This happens when the bacteria change and so can no longer be killed or inhibited by the antibiotic. The antibiotic (and others of the same "type") is then unable to cure an infection caused by these bacteria. In other words, the bacteria become resistant and can continue to multiply in a patient's body even while taking the antibiotic. The name for this is **antibiotic resistance** and is usually caused by the overuse and misuse of antibiotics.

What can patients do to limit the development of antibiotic resistance in hospital?

When patients are in hospital, they can help stop antibiotic-resistant bacteria spreading by cleaning their hands.

Here are some examples of when:

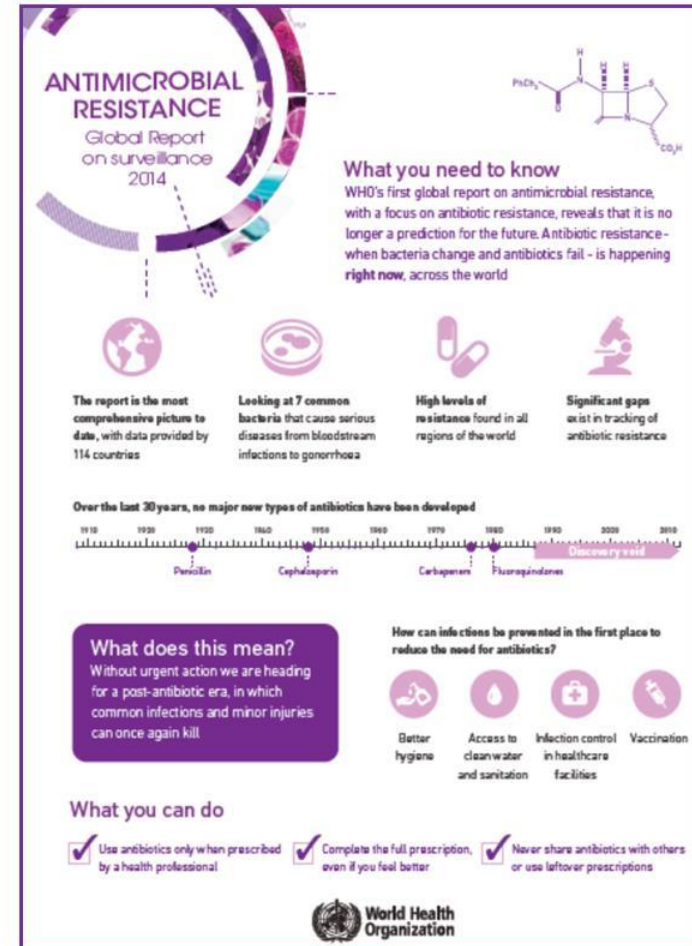
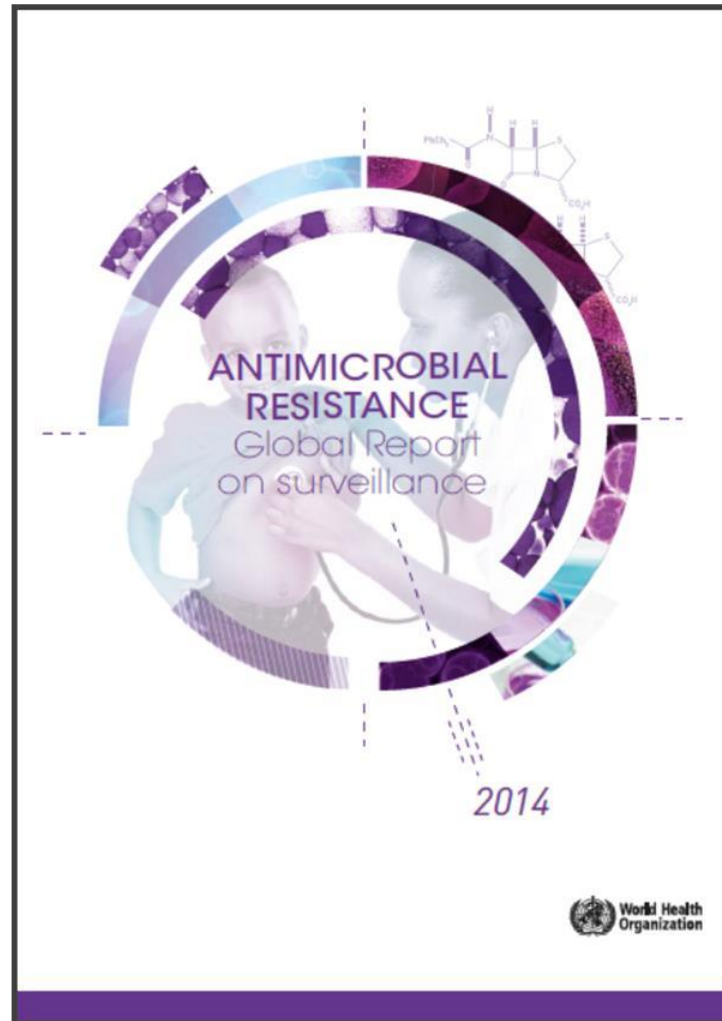
- a) before touching their own wound dressing or IV line site;
- b) after touching other patients;
- c) after using the toilet.

Patients can also work alongside their health-care workers, by politely asking if they have cleaned their hands before touching them and before a clean task - WHO has a document on this

(http://www.who.int/gpsc/5may/5may2013_patient-participation/)

Type a word or phrase to search for, or a
webpage address, title, or bookmark

WHO Global Report and Infographic on AMR



<http://www.who.int/drugresistance/documents/surveillancereport/en/>

AMR Global Report - Key messages

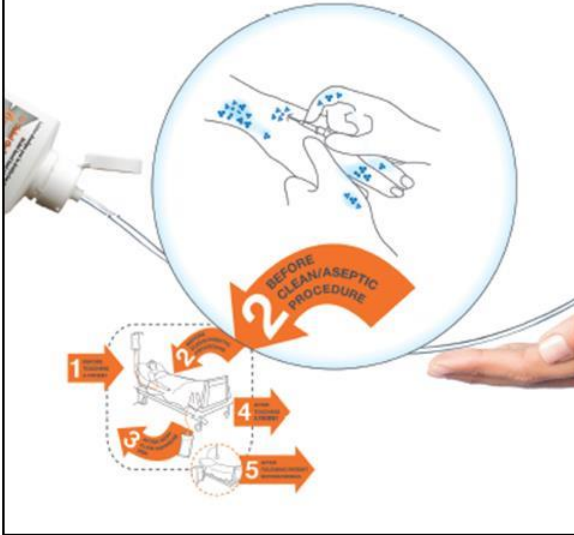
- Data for any of the selected 9 bacteria–antibacterial drug combinations of public health importance obtained from **114 Member States**
- **AMR is a serious and current threat to public health in every WHO region**, with the potential to affect anyone, of any age, in any country
- Systematic literature reviews on health and economic burden due to AMR in infections caused by resistant

E. coli, *K. pneumoniae*, and MRSA

- *Patients with infections caused by resistant bacteria generally have an increased risk of worse clinical outcomes and death, and consume more health-care resources*

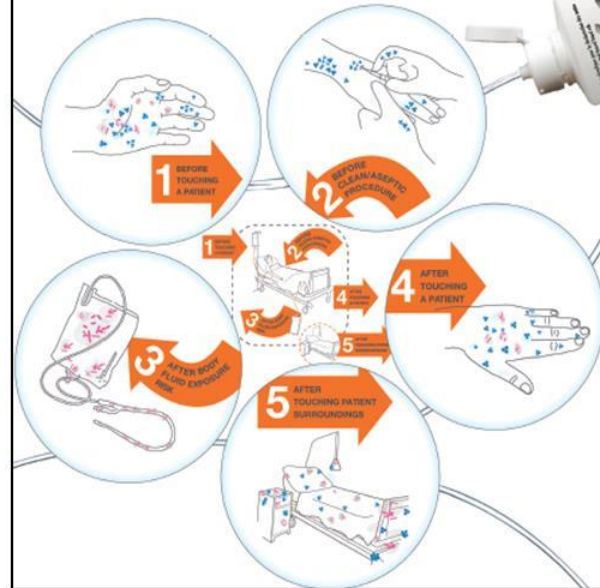
It takes just
5 Moments
 to change
 the world

Clean your
 hands, stop
 the spread of
 drug-resistant
 germs!



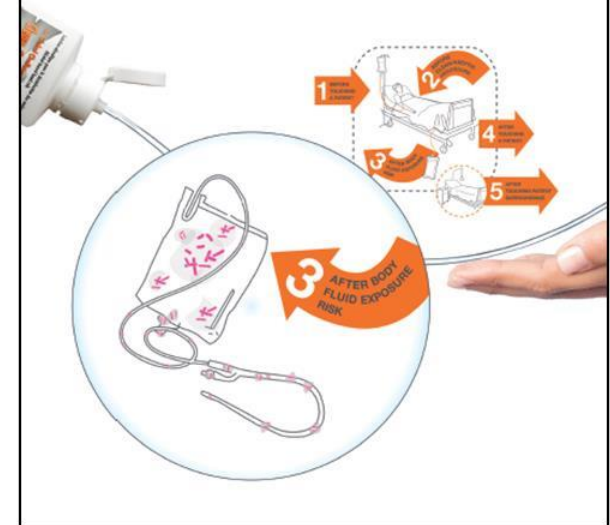
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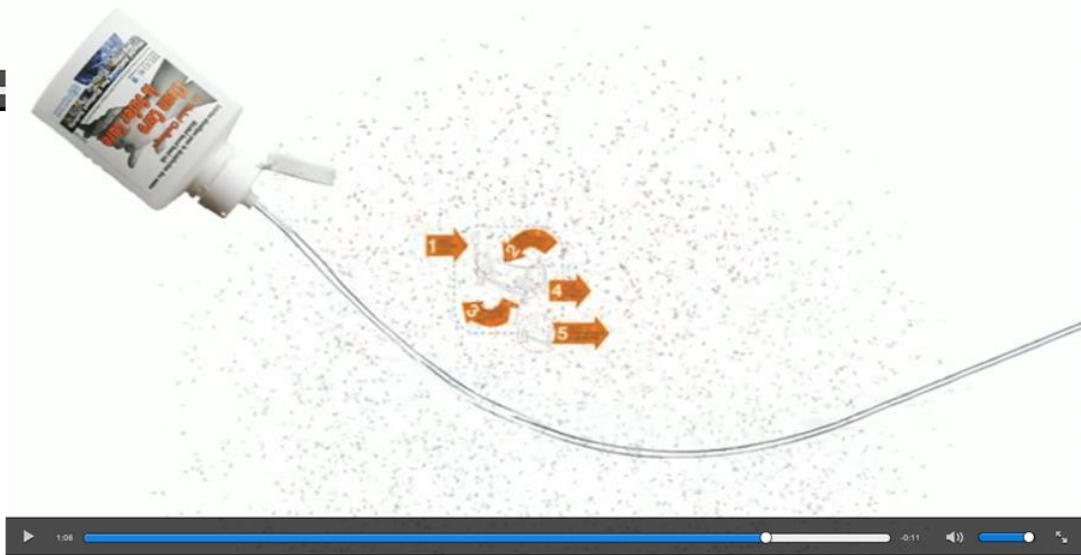
It takes just
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New WHO 5 Moments Screensaver

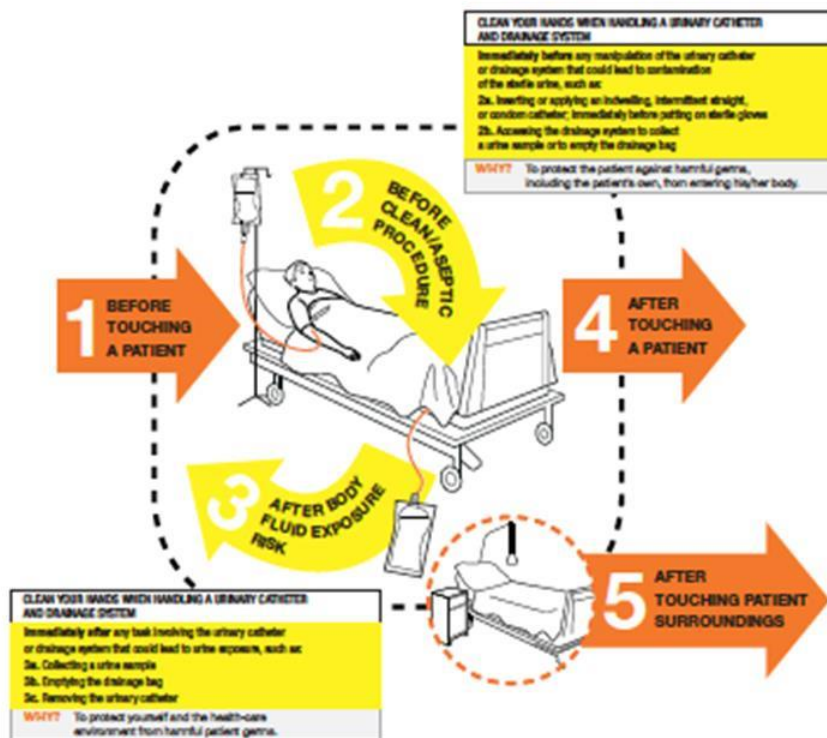
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My 5 Moments for Hand Hygiene **IMET2000-Pal**

Focus on caring for a patient with a Urinary Catheter

www.imet2000-pal.org



5 KEY ADDITIONAL CONSIDERATIONS FOR A PATIENT WITH A URINARY CATHETER

- Make sure that there is an appropriate indication for the indwelling urinary catheter.
- Use a closed urinary drainage system, and keep it closed.
- Insert the catheter aseptically using sterile gloves.
- Assess the patient at least daily to determine whether the catheter is still necessary.
- Patients with indwelling urinary catheters do not need antibiotics (including for asymptomatic bacteriuria), unless they have a documented infection.



World Health
Organization

SAVE LIVES
Clean Your Hands

**No Action Today
No Cure Tomorrow**



Timeline of patient safety

What has contributed to the development of the patient safety agenda to shape where it is today?

Click ► below to continue



1847

Dr Ignaz Semmelweis controversially suggests that doctors in obstetric clinics in Vienna start washing their hands with chlorinated lime to remove 'cadaverous particles'.

This led to a drop in mortality from over 18% to less than 1%.



1960s–80s

Several public inquiries into hospital failures led to the establishment of the Hospital Advisory Service, the first NHS inspectorate.

These included Ely Hospital (allegations of ill-treatment of patients), South

Reading

- Allegraniz B., Sax H, Allegranzi B, Uckay I, Larson E, Boyce J, Pittet D. 'My five moments for hand hygiene': a user-centered design approach to understand, train, monitor and report hand hygiene. *J Hosp Infect* 2007;67:9-21
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- Storr J, Wigglesworth N, Kilpatrick C. Integrating human factors with infection prevention and control: 2013. A Thought Paper developed for the Health Foundation
- WHO Guidelines on Hand Hygiene in Health Care. Geneva: World Health Organization, 2009. http://whqlibdoc.who.int/publications/2009/9789241597906_eng.pdf

Questions & discussion