



**World Health
Organization**

Infection Prevention & Control

**Prof. Benedetta Allegranzi &
the IPC Global Unit team
SDS/HIS, WHO HQ**

***20 ottobre 2017, Il convention nazionale
dei clinical risk managers***

Outline

- The burden of health care-associated infections and antimicrobial resistance
- The role of infection prevention and control (IPC) to reduce this burden in the context of the global health agenda
- IPC implementation in the context of patient safety culture and quality improvement

Considerations for a WHO European strategy on health-care-associated infection, surveillance, and control

Lancet Infect Dis 2005; 5: 243-50
Didier Pittet, Benedetta Allegranzi, Hugo Sax, Luigi Bertinotti, Ercole Concia, Barry Cookson, Jacques Fabry, Hervé Richet, Pauline Philip, Robert C Spencer, Bernardus W K Gantier, Stefano Lazzari

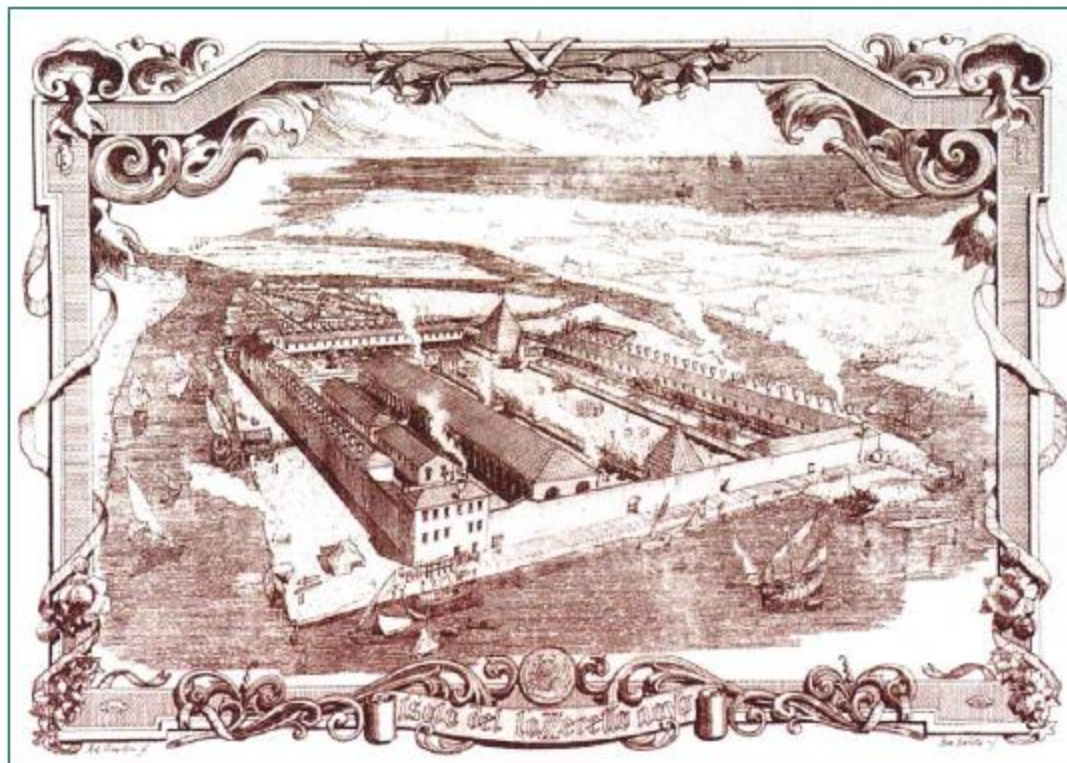
Health-care-associated infection (HAI) is a major issue of patient safety with a substantial impact on morbidity, mortality, and use of additional resources worldwide. In April 2004, the WHO Regional Office for Europe organised the first international consultation to address the issue of HAI in eastern and central Europe. The main objectives of the consultation were to identify the primary needs and obstacles for the prevention and control of HAI at country level, to design the essential components of an international strategy to effectively address the issue of HAI, and to identify specific priorities and recommendations for interventions by the WHO and other international institutions. An update on HAI activities and related networks throughout Europe, together with the outcome of the meeting, are presented, with special emphasis on future considerations for a European WHO strategy on HAI prevention.

A health-care-associated infection (HAI) is generally defined as "an infection occurring in a patient in a hospital or other health-care facility in whom the infection was not present or incubating on admission to that hospital/facility".¹ Some of these infections, such as surgical site infections, can occur after patient discharge, depending on the incubation period and the length of stay. The concept of HAI extends also to infections acquired by health-care workers as a result of their work within the health-care system.

HAI have a substantial impact on morbidity and mortality. They prolong the duration of hospital stay, require additional diagnostic and therapeutic interventions, and generate added costs to those already

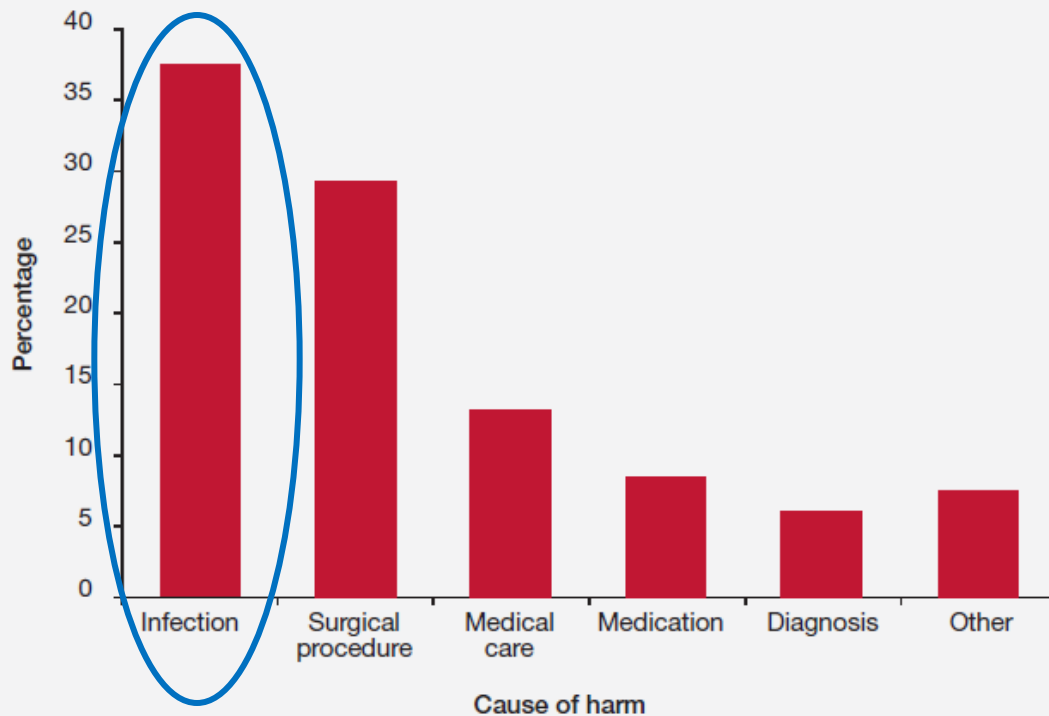
incurred by the patients' underlying diseases. Furthermore, hospitals are notorious as a source for the emergence, selection, and spread of multidrug-resistant bacteria that can cause severe clinical syndromes that are difficult and expensive to treat and may even become virtually incurable. Health-care settings also act as a reservoir for the dissemination of resistant organisms to the community and may, in some cases, become the epicentre for the spread of emerging endemic agents.

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IBEAS* study – WHO report

1. Pneumonia
2. Surgical wound infection
3. Pressure ulcers (owing to immobility)
4. Sepsis and septic shock
5. Injury requiring treatment in the intensive care unit
6. Phlebitis
7. Health impacts due to delayed diagnosis or misdiagnosis
8. Lesion of an organ due to a medical intervention or procedure
9. Haemorrhage or haematoma due to a medical intervention or procedure
10. Bacterial infection of the blood due to a device such as a catheter.



Ibero-american study of adverse events (IBEAS)* :
AD incidence 20%

*Argentina, Colombia, Costa Rica, Mexico and Peru.
Aranaz-Andres JM, et al.
BMJ Qual Saf 2011
& *WHO Report*

Global burden of health care-associated infections (HAIs)

Globally, hundreds of millions of people every year are affected by HAIs, many of which are completely avoidable.

- **HAI frequency:** On average, **1 in every 10 patients** is affected by HAIs worldwide and **1 in every 10 affected patients** dies of HAI.
- In acute care hospitals, out of every 100 patients, **7 in developed and 15 in developing countries** will acquire at least one HAI.
- **Intensive care:** In high-income countries, up to 30% of patients are affected by at least one HAI in intensive care units; in developing countries the frequency is at least 2–3 times higher.
- **Neonatal care:** neonatal infection rates in developing countries are **3-20 times higher** than in industrialized countries

ECDC Point Prevalence Study 2011-12

(ECDC, Point Prev Report 2011-12)

HAI type	LN-INT	P50 (LN-INT)	HAI inc.%	(95% CI)	N HAIs /year	(95% CI)	% of total HAIs	(95% CI)
Pneumonia/LRT	8.9	6.7	0.95	(0.58-1.66)	860 938	(522 771-1 500 038)	24.4	(14.8-42.5)
Urinary tract	8.0	6.3	0.98	(0.58-1.72)	888 106	(527 129-1 554 275)	25.2	(14.9-44.0)
Surgical site	15.0	9.3	0.60	(0.33-1.17)	543 149	(298 167-1 062 673)	15.4	(8.4-30.1)
Bloodstream	11.3	8.7	0.35	(0.19-0.93)	312 822	(171 262-844 423)	8.9	(4.9-23.9)
Gastro-intestinal	13.3	9.3	0.29	(0.14-0.66)	258 327	(127 121-593 452)	7.3	(3.6-16.8)
Systemic	7.5	5.7	0.26	(0.11-1.82)	236 387	(100 646-1 647 657)	6.7	(2.9-46.7)
Skin/soft tissue	12.8	9.0	0.11	(0.05-0.31)	103 146	(43 564-277 627)	2.9	(1.2-7.9)
Other HAI types	13.2	7.9	0.36	(0.17-0.85)	326 903	(151 302-770 238)	9.3	(4.3-21.8)
Total HAIs ^(a)					3 529 778	(1 941 962-8 250 382)		

HAI prevalence: 6%

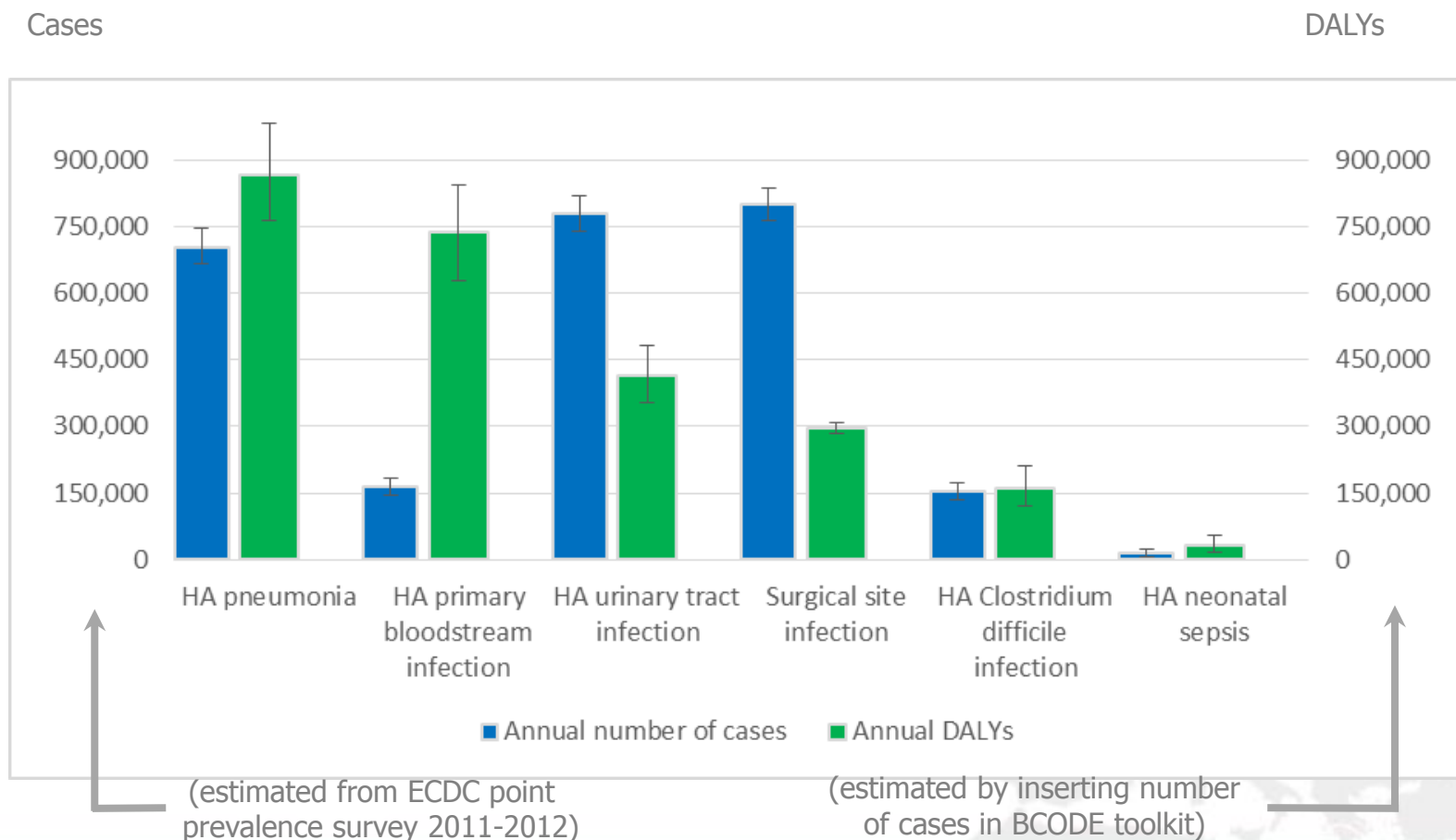
87,539 affected patients every day

Estimated incidence per year: 3,2 M (1,9-5,2) affected patients

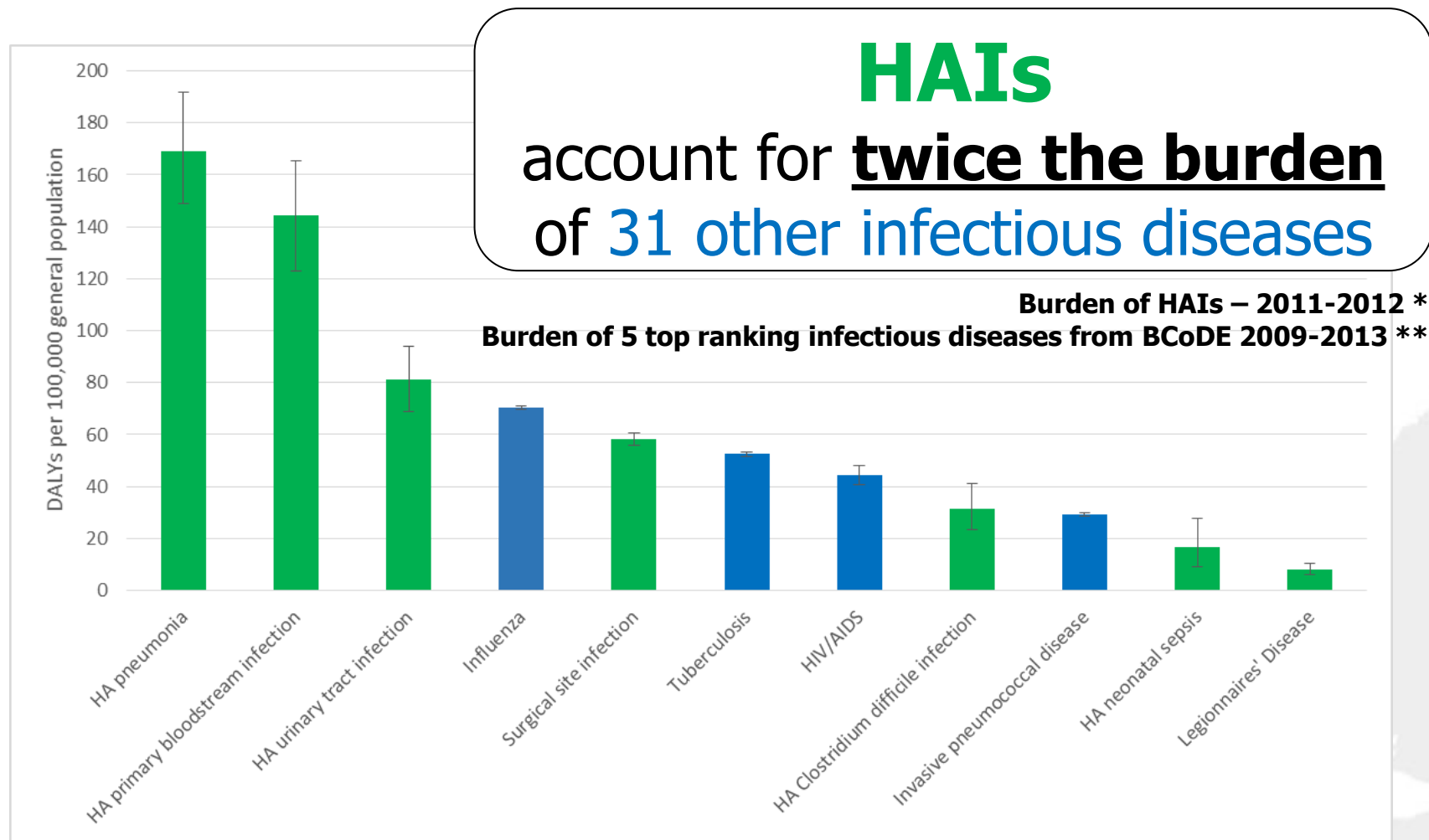
Comparing number of cases and burden of disease



- **2.6 million** annual number of cases of HAIs are associated with more than 91,000 deaths (76,000 to 108,000)
- **Cumulative burden: 501 DALYs per 100,000 inhabitants (HAIs account for twice the burden of 31 other infectious diseases)**



Comparing the burden of HAIs with other infectious diseases (BCoDE project 2015)



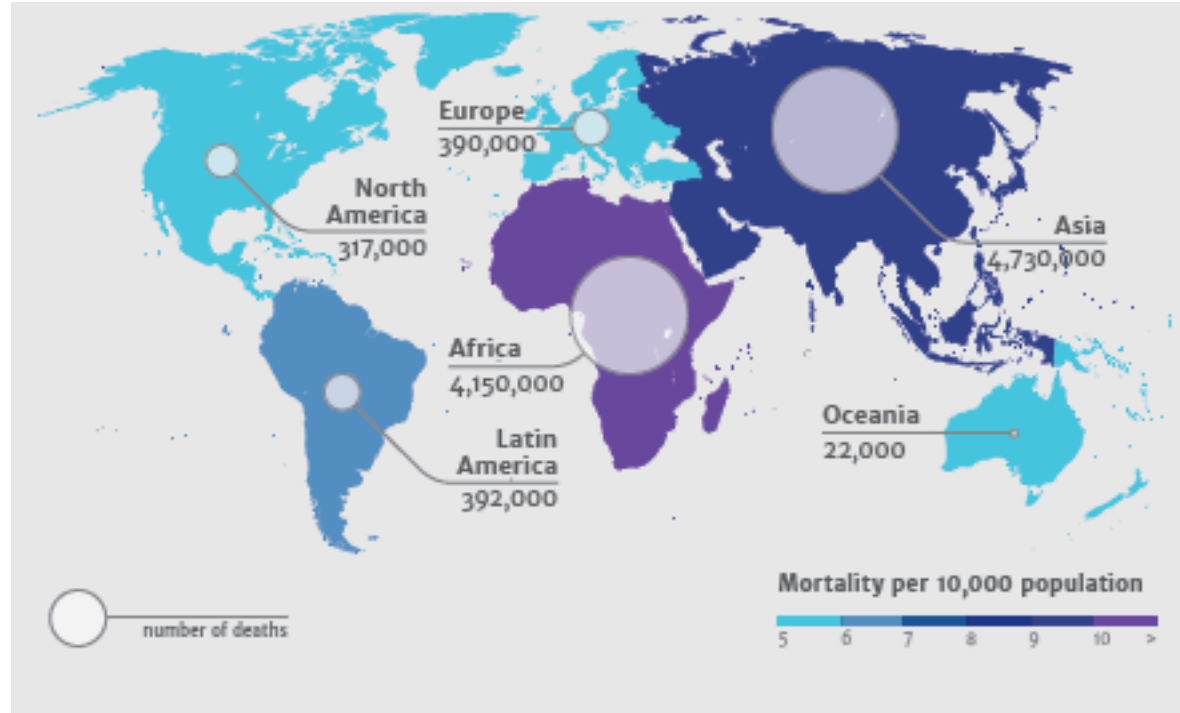
Source: *Cassini A, et al. PLoS Med 2016;13(10):e1002150 (18 October 2016) . ** Cassini A, et al. PLoS Med (submitted).

The Ever Expanding Global Concern of AMR

Mortality & Economic impact

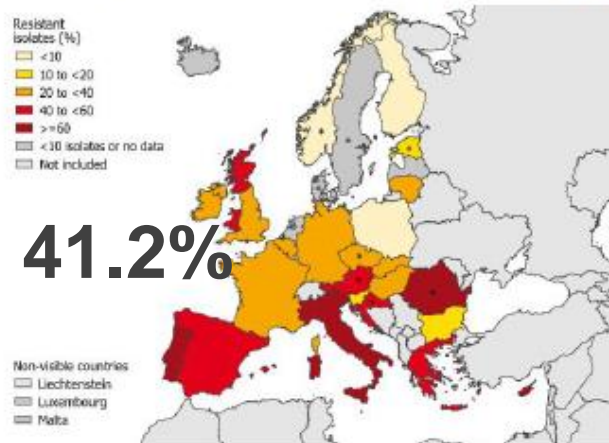
- By 2050, lead to 10 million deaths/year
- Reduction of 2 to 3.5 percent in GDP
- Costing the world up to \$100 trillion

Deaths attributable to AMR every year by 2050

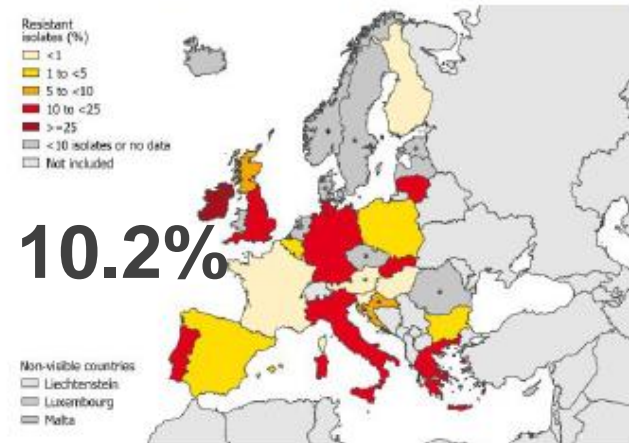


Resistance patterns in HAI pathogens in Europe

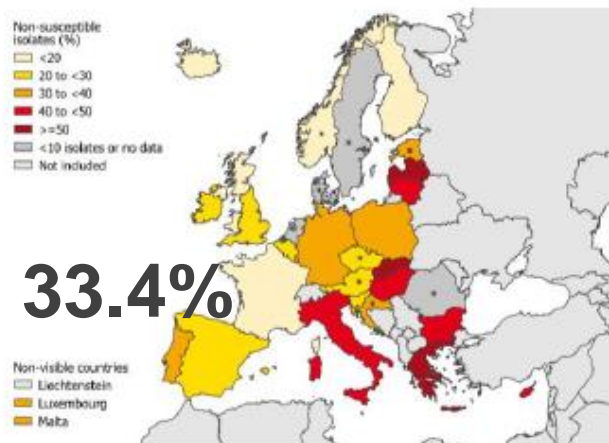
a. Meticillin-resistant *Staphylococcus aureus* (MRSA)



b. Vancomycin-resistant *Enterococcus* species (VRE)



c. Third-generation cephalosporin-non-susceptible *Enterobacteriaceae*



d. Carbapenem-non-susceptible *Enterobacteriaceae*

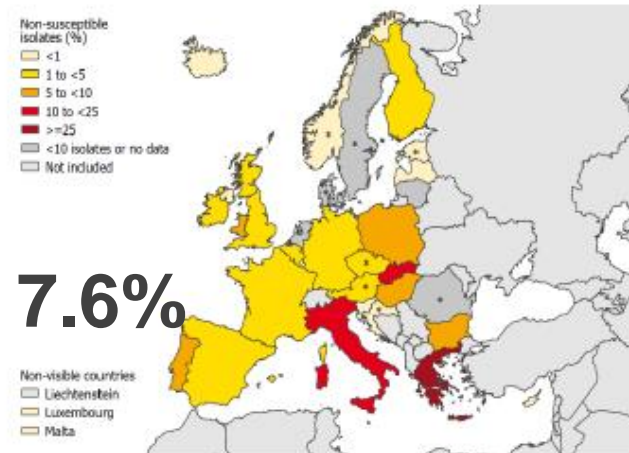


Figure 3. *Klebsiella pneumoniae*: percentage (%) of invasive (blood and cerebrospinal fluid) isolate resistant to carbapenems, EU/EEA, 2012



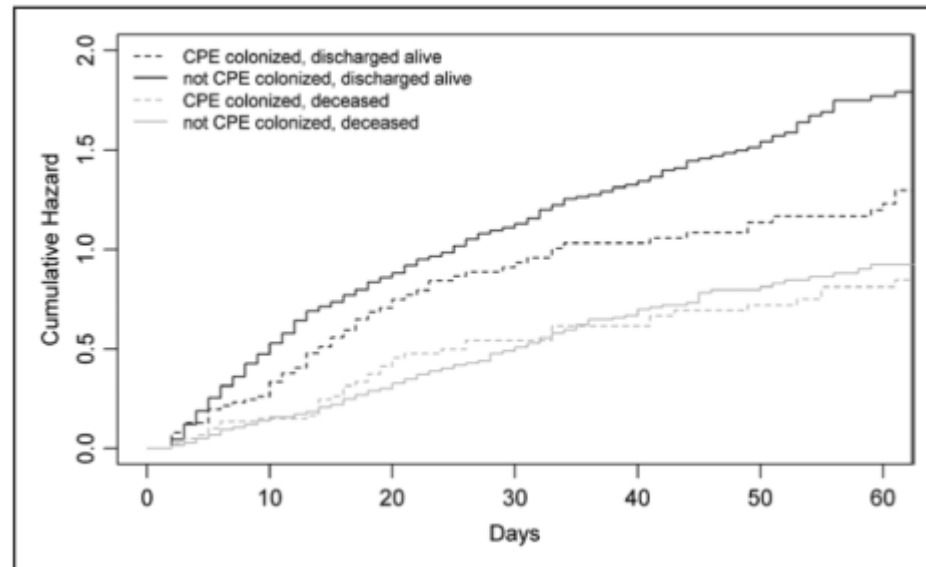
Figure 4. *Acinetobacter* spp.: percentage (%) of invasive (blood and cerebrospinal fluid) isolates resistant to carbapenems, EU/EEA, 2012



CPE and ICU mortality

Risk Factor	Deceased in the ICU (<i>n</i> = 301)	
	Subdistribution Hazard Ratio (95% CI)	<i>p</i>
Carbapenemase-producing Enterobacteriaceae colonization ^a	1.79 (1.31–2.43)	< 0.001
Age	1.00 (0.99–1.01)	0.628
Gender (female)	1.28 (1.02–1.62)	0.034
Acute Physiology and Chronic Health Evaluation II score	1.13 (1.11–1.15)	< 0.001
Reason for admission (nonsurgical)	0.99 (0.73–1.34)	0.962
Solid tumor	1.54 (1.15–2.06)	0.004
Hematopoietic malignancy	1.62 (1.04–2.51)	0.032
Chronic hepatic failure	1.32 (0.80–2.19)	0.278
Transplant ^b	1.45 (0.69–3.04)	0.328
Chronic dialysis ^c	0.65 (0.35–1.19)	0.163
Immunodeficiency ^d	1.59 (1.11–2.27)	0.011

^aCarbapenemase-producing Enterobacteriaceae colonization was included as a time-dependent covariate.



HAI Pathogens and AMR patterns NNIS 2009–2010

Pathogen, antimicrobial ^a	CLABSI			CAUTI			VAP			SSI		
	No. of isolates reported	No. (%) of isolates tested	Resistance, %	No. of isolates reported	No. (%) of isolates tested	Resistance, %	No. of isolates reported	No. (%) of isolates tested	Resistance, %	No. of isolates reported	No. (%) of isolates tested	Resistance, %
<i>Staphylococcus aureus</i>	3,735			442			2,043			6,415		
OX/METH		3,611 (96.7)	54.6		438 (99.1)	58.7		1,974 (96.6)	48.4		6,304 (98.3)	43.7
<i>Enterococcus</i> spp.												
<i>E. faecium</i>	2,118			654			25			517		
VAN		2,069 (97.7)	82.6		639 (97.7)	82.5		23 (92)	82.6		509 (98.5)	62.3
<i>E. faecalis</i>	2,680			1,519			45			1,240		
VAN		2,578 (96.2)	9.5		1,446 (95.2)	8.4		41 (91.1)	9.8		1,187 (95.7)	6.2
<i>Klebsiella (pneumoniae/oxytoca)</i>	2,407			2,365			854			844		
ESC4		2,109 (87.6)	28.8		1,998 (84.5)	26.9		747 (87.5)	23.8		710 (84.1)	13.2
Carbapenems		1,858 (77.2)	12.8		1,520 (64.3)	12.5		617 (72.2)	11.2		582 (69.0)	7.9
MDR1		1,932 (80.3)	16.8		1,650 (69.8)	16.1		658 (77.0)	13.4		621 (73.6)	6.8
<i>Escherichia coli</i>	1,206			5,660			504			1,981		
ESC4		1,067 (88.5)	19.0		4,656 (82.3)	12.3		429 (85.1)	16.3		1,627 (82.1)	10.9
FQ3		1,137 (94.3)	41.8		5,513 (97.4)	31.2		466 (92.5)	35.2		1,876 (94.7)	25.3
Carbapenems		931 (77.2)	1.9		3,579 (63.2)	2.3		344 (68.3)	3.5		1,330 (67.1)	2.0
MDR1		992 (82.3)	3.7		3,929 (69.4)	2.0		365 (72.4)	3.3		1,390 (70.2)	1.6
<i>Enterobacter</i> spp.	1,365			880			727			849		
ESC4		1,309 (95.9)	37.4		818 (93.0)	38.5		690 (94.9)	30.1		816 (96.1)	27.7
Carbapenems		1,041 (76.3)	4.0		614 (69.8)	4.6		530 (72.9)	3.6		594 (70.0)	2.4
MDR1		1,123 (82.3)	3.7		667 (75.8)	4.8		579 (79.6)	1.4		648 (76.3)	1.7
<i>Pseudomonas aeruginosa</i>	1,166			2,381			1,408			1,156		
AMINOS		819 (70.2)	10.0		1,495 (62.8)	10.9		920 (65.3)	11.3		664 (57.4)	6.0
ESC2		1,120 (96.1)	26.1		2,294 (96.3)	25.2		1,355 (96.2)	28.4		1,097 (94.9)	10.2
FQ2		1,114 (95.5)	30.5		2,337 (98.2)	33.5		1,378 (97.9)	32.7		1,111 (96.1)	16.9
Carbapenems		982 (84.2)	26.1		1,883 (79.1)	21.3		1,162 (82.5)	30.2		872 (75.4)	11.0
PIP/PIPTAZ		809 (69.4)	17.4		1,792 (75.3)	16.6		1,059 (75.2)	19.1		818 (70.8)	6.8
MDR2		1,096 (94)	15.4		2,250 (94.5)	14.0		1,342 (95.3)	17.7		1,053 (91.1)	5.3
<i>Acinetobacter baumannii</i>	629			185			557			119		
Carbapenems		522 (83)	62.6		128 (69.2)	74.2		449 (80.6)	61.2		102 (85.7)	37.3
MDR3		617 (98.1)	67.6		183 (98.9)	77.6		552 (99.1)	63.4		114 (95.8)	43.9



Health care without avoidable infections

The critical role of
infection prevention
and control



<http://www.who.int/gpsc/en/>



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Why IPC is so important for patient outcomes

>30%
Reduction

Effective IPC programmes lead to more than a 30% reduction in HAI rates

25-57%
Reduction

Surveillance contributes to a 25-57% reduction in HAIs

50%
Reduction

Improving hand hygiene practices may reduce pathogen transmission in health care by 50%

13-50%
Reduction

Strong IPC plans, implemented across the USA between 2008 and 2014, reduced central line-associated bloodstream infections by 50%, surgical site infections (SSIs) by 17% and MRSA bacteraemia by 13%

56%
Reduction

MRSA declined by 56% over a four-year period in England in line with a national target

44%
Reduction

A safety culture and prevention programme reduced SSI risk in African hospitals by 44%

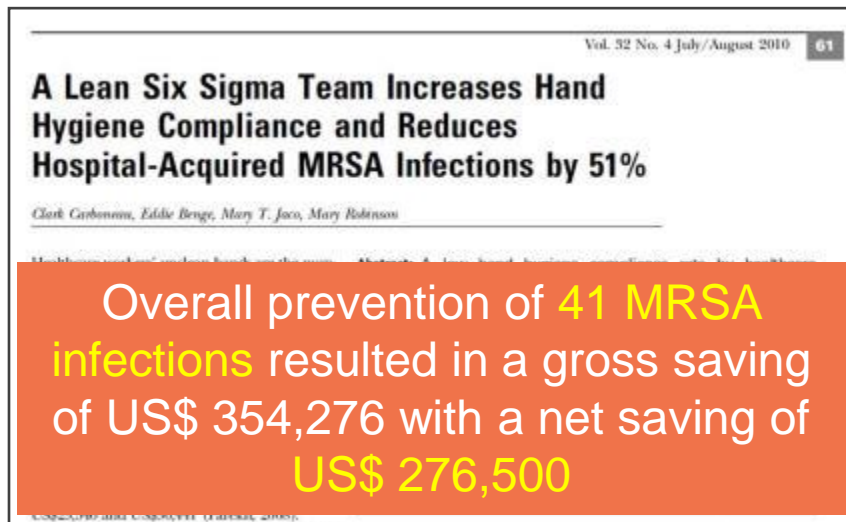
80%
Compliance

Between 2010 and 2015 Australia achieved and sustained 80% hand hygiene compliance in hospitals nationwide

Cost benefit analysis



Every **US\$1 spent** on hand hygiene promotion could result in a **US\$ 23.7 benefit**.
Reduction of **MRSA** and **extensively drug-resistant *Acinetobacter baumannii***



Mathematical model, a 200-bed hospital incurs US\$ 1,779,283 in annual MRSA infection-related expenses attributable to hand hygiene noncompliance; in this setting, **1% increase in hand hygiene compliance would result in annual savings of US\$ 39,650.**

Why IPC is so important for global health

- IPC occupies a unique position in the field of patient safety and quality of care, as it is universally relevant to every health worker and patient, at every health care interaction
- Without effective IPC it is impossible to achieve *quality* health care delivery and strong health systems

IPC contributes to achieving the following global health priorities:

- I. Sustainable development goals (SDGs) 3.1-3, 3.8, 3.d and 6



- II. AMR global and national action plans
- III. Preparedness and response to outbreaks
- IV. International Health Regulations
- V. Post-Ebola recovery plans
- VI. Quality universal health coverage
- VII. Patient and health worker safety
- VIII. WHO Global Strategy on integrated people-centred health services

Linkages



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Global Action Plans & National Action Plans

Global strategic objectives

Examples of key actions for national action plans

1. Improve awareness and understanding of AMR

- Risk communication
- Education

2. Strengthen knowledge through surveillance and research

- National AMR surveillance system
- Laboratory capacities
- Research and development

3. Reduce the incidence of infection through effective sanitation, hygiene and infection prevention measures

- IPC in health care (incl. liaison with WASH)
- Community level prevention (incl. liaison with WASH)
- Animal health

4. Optimize the use of antimicrobial medicines

- Access to qualified antimicrobial medicines
- Animal health

5. Ensure sustainable investment in countering antimicrobial resistance

- Measuring the burden of AMR
- Assessing investment needs
- Establishing procedures for participation

Carbapenem-resistant microorganisms: highest antibiotic resistant threat worldwide

**WHO Infection Prevention & Control Guidelines
on Best Practices and Procedures to Prevent and
Control the Spread of:**

**Carbapenem-resistant Enterobacteriaceae (CRE),
Acinetobacter baumannii (CRAB) and
Pseudomonas aeruginosa (CRPsA) in health care**

Draft
20th April 2017

CONFIDENTIAL

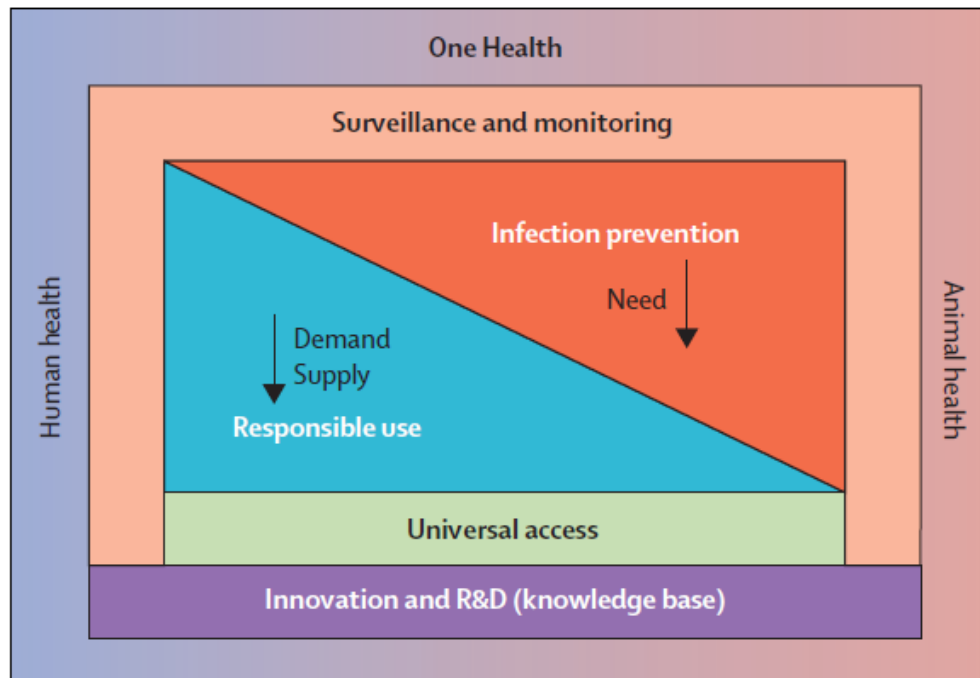


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Exploring the evidence base for national and regional policy interventions to combat resistance

Lancet 2016; 387: 285–95

Osman A Dar, Rumina Hasan, Jørgen Schlundt, Stephan Harbarth, Grazia Caleo, Fazal K Dar, Jasper Littmann, Mark Rweyemamu, Emmeline J Buckley, Mohammed Shahid, Richard Kock, Henry Lishi Li, Haydar Giha, Mishal Khan, Anthony D So, Khalid M Bindayna, Anthony Kessel, Hanne Bak Pedersen, Govin Permanand, Alimuddin Zumla, John-Arne Røttingen, David L Heymann



IPC interventions can:

- minimise the spread of pathogens, including R ones
- decrease the likelihood of infection in health-care settings
- reduce the overall need for antimicrobials

70th WHA 2017 - Sepsis report and resolution

SEVENTIETH WORLD HEALTH ASSEMBLY

WHA70.7

Agenda item 12.2

29 May 2017

Improving the prevention, diagnosis and clinical management of sepsis

The Seventieth World Health Assembly,

Having considered the report on improving the prevention, diagnosis and clinical management of sepsis;¹

Concerned that sepsis continues to cause approximately six million deaths worldwide every year, most of which are preventable;

Recognizing that sepsis as a syndromic response to infection is the final common pathway to death from most infectious diseases worldwide;

Considering that sepsis follows a unique and time-critical clinical course, which in the early stages is highly amenable to treatment through early diagnosis and timely and appropriate clinical management;

Considering also that infections which may lead to sepsis can often be prevented through appropriate hand hygiene, access to vaccination programmes, improved sanitation and water quality and availability, and other infection prevention and control best practices; and that forms of septicaemia associated with nosocomial infections are severe, hard to control and have high fatality rates;

Recognizing that while sepsis itself cannot always be predicted, its ill effects in terms of mortality and long-term morbidity can be mitigated through early diagnosis and appropriate and timely clinical management;

Recognizing also the need to improve measures for the prevention of infections and control of the consequences of sepsis, due to inadequate infection prevention and control programmes, insufficient health education and recognition in respect of early sepsis, inadequate access to affordable, timely and appropriate treatment and care, and insufficient laboratory services, as well as the lack of integrated approaches to the prevention and clinical management of sepsis;

Noting that health care-associated infections represent a common pathway through which sepsis can place an increased burden on health care resources;



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TACKLING ANTIMICROBIAL RESISTANCE:

Supporting national measures to address infection prevention and control and water, sanitation and hygiene in health care settings

Antimicrobial resistance (AMR) presents a significant threat to human health. World leaders have agreed that tackling AMR will require addressing both health and agriculture concerns with a focus on prevention. Improving **infection prevention and control (IPC)** and **water, sanitation, and hygiene (WASH)** is one of the five objectives in the World Health Organization's (WHO) AMR Global Action Plan. Nowhere is reducing infection more important than in health care facilities. Joint, immediate action to address IPC and WASH is essential.

THE CURRENT SITUATION IN HEALTH CARE FACILITIES IN LOW- AND MIDDLE- INCOME COUNTRIES

WASH

38% of health care facilities do not have ANY water source

19% do not have improved toilets

35% do not have water and soap or alcohol-based hand rub for hand washing

Up to **90%** of health workers do not adhere to recommended hand hygiene practices

IPC

In Africa, up to **20%** of women get a wound infection after a caesarean section

Hospital-born babies in low-income settings are at a higher risk of being affected by neonatal sepsis, with infection rates **3** to **20** times higher than in high-income settings

On average **15%** of patients will acquire at least one infection in acute care hospitals

AMR

Prophylactic use of antibiotics is standard in over **80%** of maternity units in several countries

Patients with resistant *Staphylococcus Aureus* are **50%** more likely to die than those with a non-resistant infection

Each year hundreds of millions of cases of diarrhoea are treated with antibiotics. Universal access to WASH could reduce this by **60%**

THE CONSEQUENCES OF POOR WASH AND COMPROMISED IPC

Lack of WASH in health care facilities



Compromised IPC practices

- 1 Increased risk of health-care-associated infections (HAI)
- 2 Increased risk of spread of HAI
- 3 Increased burden of expensive, hard-to-treat and life-threatening resistant infections
- 4 Decrease in patient confidence in health care

Overreliance on preventive use of antibiotics

High health care costs and poor health outcomes

Increased use of antibiotics to treat preventable infections

Increased resistance

Addressing these challenges will require **accelerating joint efforts to improve WASH, IPC and AMR** in health care settings.

TAKING ACTION

Goals and objectives

Global Action Plan on AMR's objective three: Reduce the incidence of infection through effective sanitation, hygiene and infection prevention measures.

WASH and IPC efforts aim to support objective three through joint efforts to ensure every health facility, in every setting, has safely managed water, sanitation, hygiene and waste management facilities and implements effective, evidence-based IPC programs and practices to protect the lives of health workers, patients and all facilities users.

Priority joint AMR, IPC and WASH actions

GLOBAL

Joint advocacy

Raise awareness of the threat of AMR and the critical need to prioritise prevention, particularly in health care facilities, but also in the wider community through universal WASH access.

Ensure WASH in HCF and IPC are prioritised in all AMR global plans, accountability frameworks, policies, and financing mechanisms.

Support global and national leaders to advocate for WASH and IPC in HCF to reduce AMR.

Achieve universal access to and use of adequate toilets and safe drinking water supplies in communities to reduce unnecessary antibiotic use and hospital admissions.

NATIONAL

National action plans

Support the development and implementation of guidelines and National Action Plans for AMR which prioritise IPC¹ and WASH activities and support access to and rational antibiotic use.

Develop systems to strengthen disease surveillance, guidelines on antibiotics use, and laboratory capacity to better diagnose and track HCAIs.

Align prevention efforts with existing health plans and prevention activities, particularly quality universal health coverage and maternal, newborn and child health.

LOCAL

Health care facilities

Support the implementation of WASH standards and improvement and the IPC Core Components Guidelines.

Drive efforts to improve and sustain hand hygiene infrastructure and practices and efforts to support adequate, routine cleaning practices, sterilization and safe health care waste management.

Improve the evidence-base of locally relevant interventions to reduce HAI, improve WASH and IPC and support rational use of antibiotics.

¹ New WHO Guidelines on Core Components of IPC and implementation tools.

Key WHO tools and guidance to support WASH, IPC and AMR progress

- WHO Essential Environmental Standards in Health Care
- Hand hygiene and AMR policy briefing note
- WHO Hand Hygiene guidelines and Implementation tools
- Water and Sanitation for Health Facility Improvement Tool
- New WHO Guidelines on Core Components of IPC and implementation tools
- JMP Core Indicators for WASH in HCF
- WHO Sanitation Safety Planning Manual

Can be found at:

<http://www.who.int/ipcc/index> and http://www.who.int/water_sanitation_health/facilities/en/

ACTION in WASH and IPC

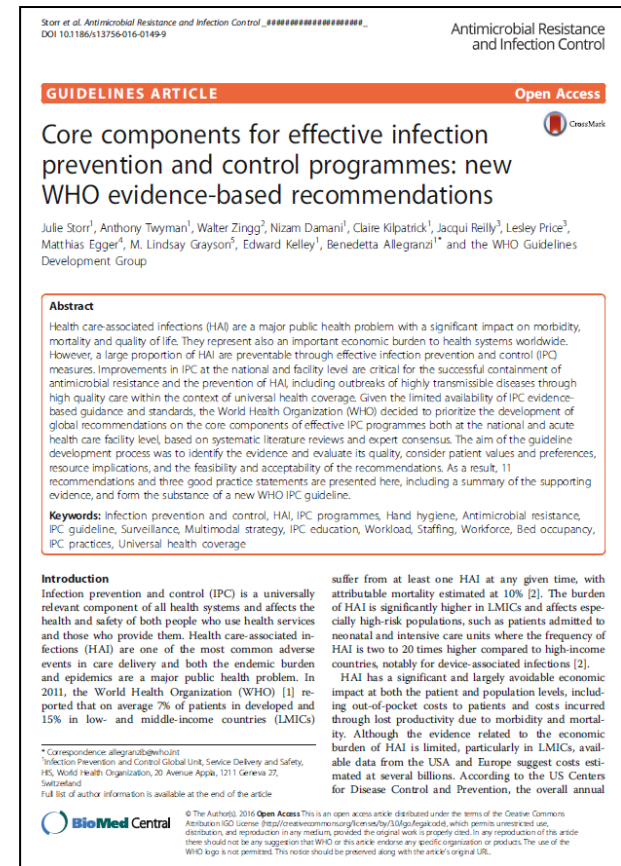
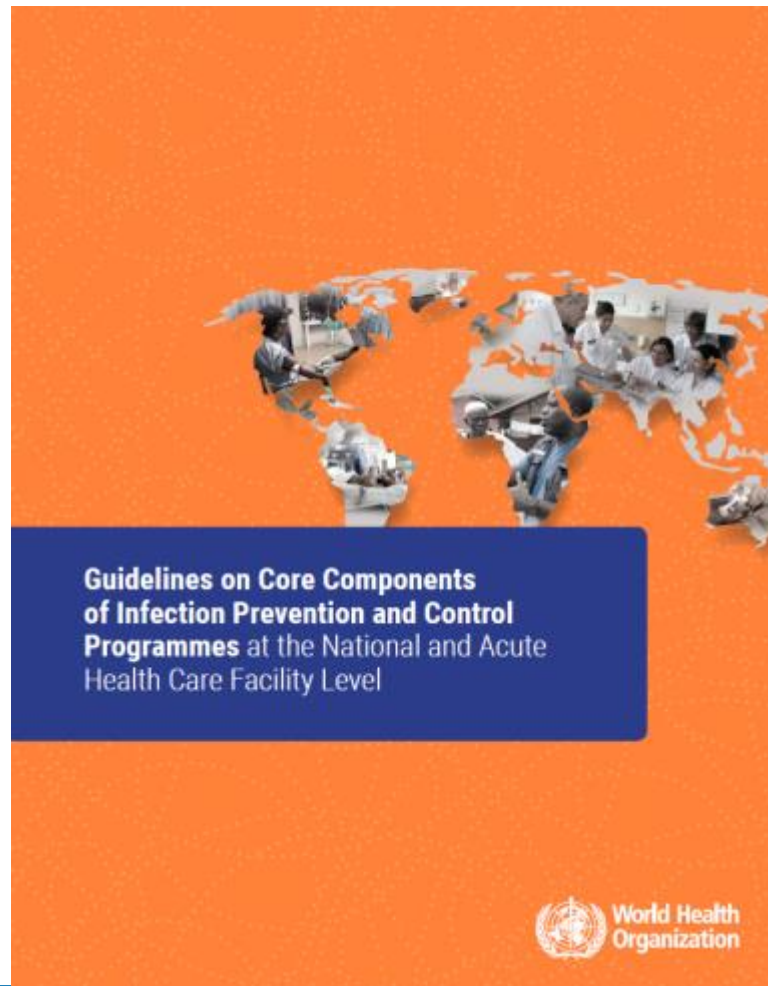


And therefore help reduce antimicrobial resistance.



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New WHO Guidelines on Core Components of IPC Programmes at the National and Acute Health Care Facility Level



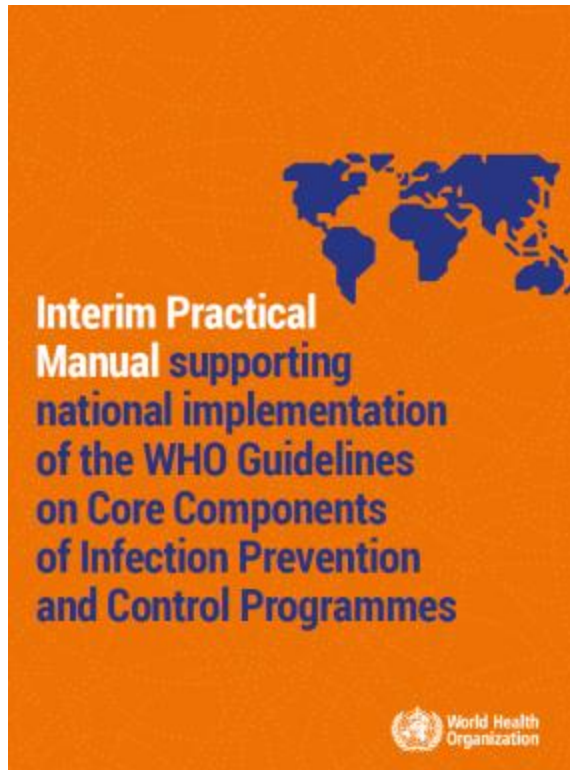
<http://www.who.int/infection-prevention/publications/core-components/en/>

Launched during WAAW, on 15 November 2016



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Implementation resources for the WHO IPC Core Components Guidelines



Core component	Recommendation	Checks to support implementation	Reference
1. IPC programmes	Establish action, task, and IPC programme for the purpose of preventing, controlling, and eradicating infection through IPC practices.	<ul style="list-style-type: none"> Programme objectives, functions, and activities clearly outlined Technical base of trained infection preventionists in place Dedicated IPC budget allocated Evidence that IPC programme is linked with other relevant programmes and professional organisations 	PRACTICE Manual (Chapter 1)
2. Evidence-based guidelines	Develop evidence-based national IPC guidelines and related implementation strategies.	<ul style="list-style-type: none"> Standard IPC guidelines (COP) developed or adopted from international standards Necessary infrastructure and supplies to enable guideline implementation in place being addressed Measures to support and mandate health care worker education and training on the guidelines (under 3) development 	PRACTICE Manual (Chapter 2)
3. Education & training	Support education and training of health workers.	<ul style="list-style-type: none"> Curriculum target audience, learning objectives, competencies, and training strategy developed The graduate and postgraduate IPC certificate (under 1) development New employee orientation and in-service continuous training on IPC (under 1) development 	PRACTICE Manual (Chapter 3)
4. Surveillance	Establish risk surveillance programmes and activities that include monitoring for timely feedback and can be used for benchmarking purposes.	<ul style="list-style-type: none"> Support and engagement by governments and authorities for IPC surveillance secured Human and financial resources secured Monitoring and laboratory capacity (under 1) development Surveillance strategy developed <ul style="list-style-type: none"> Clear objectives Standardised case definitions Methods Process for data analysis, reporting, and evaluation of data quality Specific training for data collectors established 	PRACTICE Manual (Chapter 4)

Practical Guide
IPC Core Components
field implementation
in low-resource settings
Facility Level

National & facility-level assessment tools



INFECTION PREVENTION AND CONTROL ASSESSMENT FRAMEWORK AT THE FACILITY LEVEL DRAFT 2017



1. DRAFT - WHO IPC Self-Assessment Framework 2017 Health care facility level

Core component 1: IPC programme

Question	Answer	Score
1. Do you have an IPC programme? <i>Choose one answer</i>	No	0
	Yes, without clearly defined responsibilities	5
	Yes, with clearly defined responsibilities and functions and annual work plan	10
2. Is your IPC programme supported by an IPC Team comprising trained IPC professionals? <i>Choose one answer</i>	No	0
	Not a team, but a nominated IPC focal person	5
	Yes	10
3. Is there a full-time infection preventionist or equivalent (FTE) (nurse or doctor, working 100% in IPC) available? <i>Choose one answer</i>	No infection preventionist available	0
	Yes, one FTE per > 250 beds	5
	Yes, one FTE per ≤ 250 beds	10
4. Does your IPC team include both doctors and nurses?	No	0
	Yes	10
5. Does your IPC team/focal person have dedicated time for IPC activities?	No	0
	Yes	10
6. Do you have an Infection Control Committee or an equivalent actively supporting the IPC team?	No	0
	Yes	10
7. In addition to the IPC team which, if any, of the following professional groups are represented?		

Core components for infection prevention and control programmes
National level assessment tool*

For instruction on how to use this assessment tool, refer to the updated instructions for the national infection prevention and control assessment tool & (IPCAT).

Country: _____

Details of person responsible for the questionnaire:
Name: _____
Telephone number: _____
E-mail: _____

Details of person completing the questionnaire (leave blank if self-assessment):
Name: _____
Telephone number: _____
E-mail: _____

Details of assessment: Guideline IPC: _____
Assessment mode: (Choose from dropdown list) _____
Self-assessment interview: _____

*This tool is based on the 2015 WHO Guidelines on core components for infection prevention and control programmes at the national and health-care facility level (<http://www.who.int/infection-prevention/publications/core-components-guidelines>).

The tool supports steps two and three of the five implementation steps (Guideline assessment and evaluation) contained within the Interim practical manual supporting national implementation of the WHO guidelines on core components of infection prevention and control programmes (<http://www.who.int/infection-prevention/publications/interim-practical-manual-guidelines-pdftool>).

2. IPC guidelines' (Interim practical manual, pages 23-30)

Item	Score (Y or N)	Comments
2.1 Development, dissemination and implementation of national technical guidelines	100%	
2.1.1 The IPC programme has a national or sub-national guidelines for planning and monitoring IPC	Y	2.1.1.1 The IPC programme has a national or sub-national guidelines for planning and monitoring IPC
2.1.2 The guidelines are for infection control, covering all health care facilities and settings	Y	2.1.2.1 The guidelines are for infection control, covering all health care facilities and settings
2.1.3 The guidelines are evidence-based and cover the current and future needs	Y	2.1.3.1 The guidelines are evidence-based and cover the current and future needs
2.1.4 The development of guidelines covers the use of evidence-based scientific knowledge and international standards	Y	2.1.4.1 The development of guidelines covers the use of evidence-based scientific knowledge and international standards
2.1.5 The IPC programme has the necessary resources to develop national guidelines	Y	2.1.5.1 The IPC programme has the necessary resources to develop national guidelines
2.1.6 The IPC programme actively addresses guideline development and implementation in practice (national, regional, and local)	Y	2.1.6.1 The IPC programme actively addresses guideline development and implementation in practice (national, regional, and local)
2.1.7 National technical guidelines are approved by the relevant authority (national, regional, or local)	Y	2.1.7.1 National technical guidelines are approved by the relevant authority (national, regional, or local)
2.1.8 The IPC programme develops national implementation strategies and monitors implementation progress	Y	2.1.8.1 The IPC programme develops national implementation strategies and monitors implementation progress
2.1.9 The IPC programme has the capacity to ensure that the national guidelines are implemented in practice	Y	2.1.9.1 The IPC programme has the capacity to ensure that the national guidelines are implemented in practice
2.2 Education and training of relevant health-care workers on IPC guidelines	100%	
2.2.1 The IPC programme reports and develops a programme of health-care worker education and training on guidelines in implementation in practice	Y	2.2.1.1 The IPC programme reports and develops a programme of health-care worker education and training on guidelines in implementation in practice
2.2.2 The IPC programme reports and develops a programme of health-care worker education and training on guidelines in implementation in practice	Y	2.2.2.1 The IPC programme reports and develops a programme of health-care worker education and training on guidelines in implementation in practice
2.2.3 The IPC programme reports and develops a programme of health-care worker education and training on guidelines in implementation in practice	Y	2.2.3.1 The IPC programme reports and develops a programme of health-care worker education and training on guidelines in implementation in practice
2.3 Monitoring of guideline effectiveness	100%	
2.3.1 Analysis of data and evidence (including and including in practice) of adherence with guideline recommendations, for example, at least annually	Y	2.3.1.1 Analysis of data and evidence (including and including in practice) of adherence with guideline recommendations, for example, at least annually
2.4 Minimum set of national guidelines	100%	
2.4.1 National guidelines are based on evidence (including and including in practice) of adherence with guideline recommendations, for example, at least annually	Y	2.4.1.1 National guidelines are based on evidence (including and including in practice) of adherence with guideline recommendations, for example, at least annually
2.4.2 National guidelines have been developed based on evidence (including and including in practice) of adherence with guideline recommendations, for example, at least annually	Y	2.4.2.1 National guidelines have been developed based on evidence (including and including in practice) of adherence with guideline recommendations, for example, at least annually
2.4.3 National guidelines have been developed based on evidence (including and including in practice) of adherence with guideline recommendations, for example, at least annually	Y	2.4.3.1 National guidelines have been developed based on evidence (including and including in practice) of adherence with guideline recommendations, for example, at least annually
2.4.4 National guidelines have been developed based on evidence (including and including in practice) of adherence with guideline recommendations, for example, at least annually	Y	2.4.4.1 National guidelines have been developed based on evidence (including and including in practice) of adherence with guideline recommendations, for example, at least annually



World Health
Organization

WHO global guidelines for SSI prevention

Decontamination and Reprocessing of Medical Devices for Health Care Facilities

GLOBAL GUIDELINES FOR THE PREVENTION OF SURGICAL SITE INFECTION

Surgical site infections 1 New WHO recommendations for surgical site infection prevention: an evidence-based global perspective

Surgical site infections 2 New WHO recommendations on intraoperative and postoperative measures for surgical site infection prevention: an evidence-based global perspective

New WHO SSI prevention implementation strategy and toolkit

WHO global guidelines for the prevention of surgical site infection



The 2016 World Health Organization (WHO) Global guidelines for the prevention of surgical site infection (SSI) are evidence-based and unique in that they are the first global guidelines of this sort, are based on systematic reviews and present additional information in support of actions to improve practice. They were developed by international experts adhering to WHO's Guideline Development Process and overall aim to achieve standardization.

Summary

The objectives of the new Guidelines are:

1. To provide comprehensive evidence- and expert consensus-based recommendations to be applied during the pre-, intra- and postoperative periods for prevention of SSI and to help combat antimicrobial resistance (AMR).
2. To support health (and related) settings and practitioners to develop or strengthen infection prevention and control (IPC) programmes, with a focus on surgical safety, as well as AMR action plans.
3. To highlight that working as teams, both practices and patient outcomes can be improved, taking account of resource availability.

Why these guidelines?

1. To increase awareness of the global burden of SSI in all settings, and including in maternal and child health.
2. To increase knowledge of the need for appropriate antibiotic prophylaxis for surgical patients.
3. To increase knowledge of the high burden of preventable SSI and to mobilize surgeons, nurses, technical support staff, anaesthetists and any professionals directly providing surgical care.
4. Because every infection prevented is an antibiotic treatment avoided.

Strong guideline recommendations

- Patients with known nasal carriage of *S. aureus* should receive intranasal applications of mupirocin 2% ointment with or without a combination of chlorhexidine gluconate body wash.
- Mechanical bowel preparation alone (without the administration of oral antibiotics) should NOT be used in adult patients undergoing elective colorectal surgery.
- In patients undergoing any surgical procedure, hair should either NOT be removed or, if absolutely necessary, should only be removed with a clipper. Shaving is strongly discouraged at all times, whether preoperatively or in the operating room.
- Surgical antibiotic prophylaxis (SAP) should be administered before surgical incision, when indicated.
- SAP should be administered within 120 min before incision, while considering the half-life of the antibiotic.
- Surgical hand preparation should be performed either by scrubbing with a suitable antiseptic soap and water or using a suitable alcohol-based handrub before donning sterile gloves.
- Alcohol-based antiseptic solutions based on CHG for surgical site skin preparation should be used in patients undergoing surgical procedures.
- Adult patients undergoing general anaesthesia with endotracheal intubation for surgical procedures should receive 80% fraction of inspired oxygen intraoperatively and, if feasible, in the immediate postoperative period for 2-6 h.
- Surgical antibiotic prophylaxis administration should not be prolonged after completion of the operation.

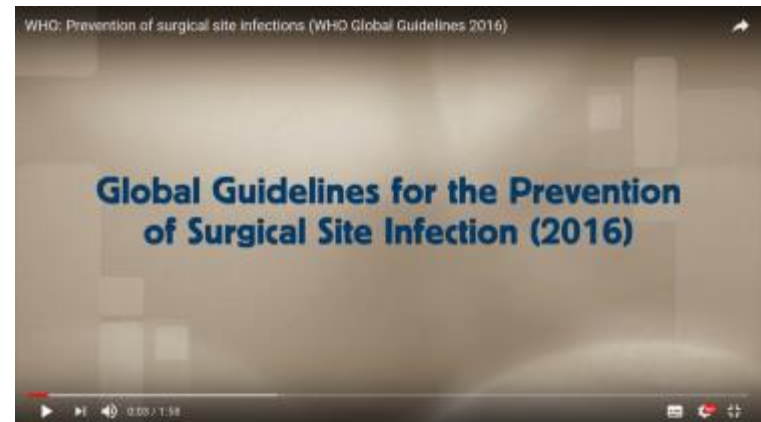
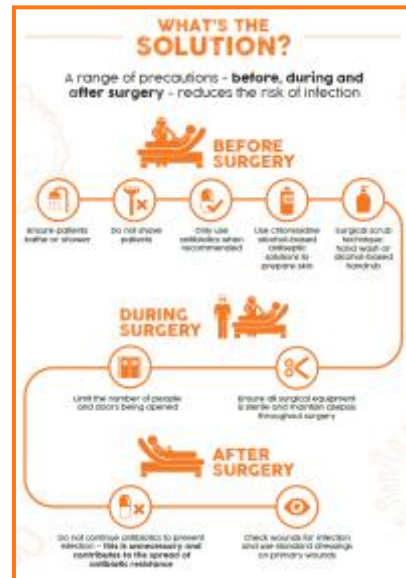


<http://who.int/infection-prevention/publications/ssi-guidelines/en/>

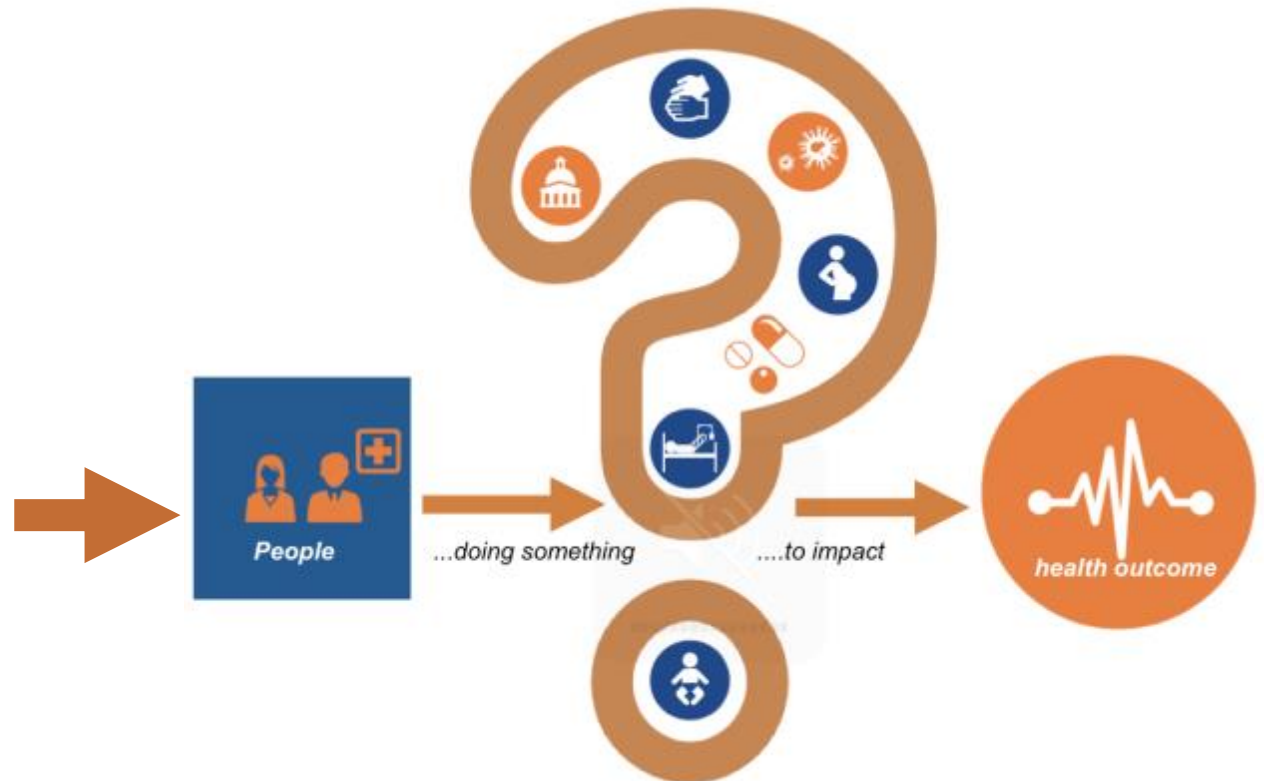
Launched on 3 November 2016

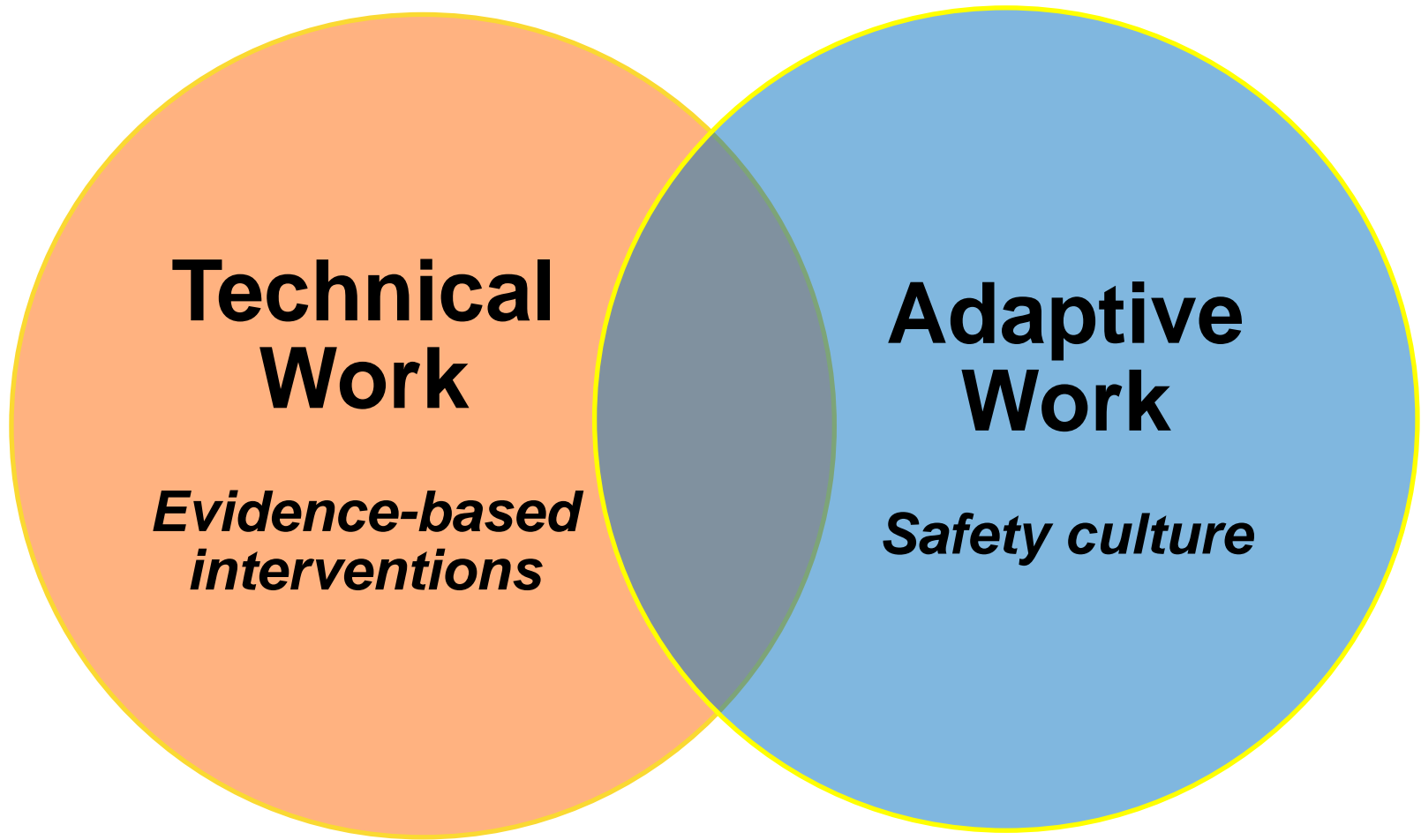


World Health Organization



Translating guidelines to action





WHO Multimodal Hand Hygiene Implementation Strategy

System change

Alcohol-based handrubs at point of care
and access to safe continuous water supply, soap and towels

+

Training and education of staff

Translated version of WHO guidelines, guide to implementation,
manual for observer and educational tools

3 National education session

+

Observation of hand hygiene and feedback to staff

Hand hygiene practices, knowledge, and
perception assessment and monitoring

+

Reminders in the workplace, information and advocacy

Translation and adaptation of the pilot implementation tools

+

Establishment of a safety climate

Support from Ministry, Region and senior management of the facility
computer; internet access; data collection; staffing.

Baseline evaluation phase

Intervention phase

Follow up evaluation phase

WHO hand hygiene strategy impact

Articles Allegranzi B et al, Lancet ID 2013

Global implementation of WHO's multimodal strategy for improvement of hand hygiene: a quasi-experimental study

Benedetto Allegranzi, Angèle Gayet-Ageron, Nazam Damani, Loochi Rengnath, Mary Louise McQuinn, Maria Luisa Mouton, Zouf Memish, Orlando Llorca, Hervé Ruchet, Julie Storr, Liam Donohue, Didier Pittet

Summary

Background Health-care-associated infections are a major threat to patient safety worldwide. Transmission is mainly via the hands of health-care workers, but compliance with recommendations is usually low and effective improvement strategies are needed. We assessed the effect of WHO's strategy for improvement of hand hygiene in five countries.

Methods We did a quasi-experimental study between December, 2006, and December, 2008, at six pilot sites (55 departments in 43 hospitals) in Costa Rica, Italy, Mali, Pakistan, and Saudi Arabia. A step-wise approach in four 3–6 month phases was used to implement WHO's strategy and we assessed the hand-hygiene compliance of health-care workers and their knowledge, by questionnaire, of microbial transmission and hand-hygiene principles. We expressed compliance as the proportion of predefined opportunities met by hand-hygiene actions (ie, handwashing or hand rubbing). We assessed long-term sustainability of core strategy activities in April, 2010.

Findings We noted 21884 hand-hygiene opportunities during 1423 sessions before the intervention and 23746 opportunities during 1784 sessions after. Overall compliance increased from 51.0% before the intervention (95% CI 45.1–56.9) to 67.2% after (61.8–72.2). Compliance was independently associated with gross national income per head, with a greater effect of the intervention in low-income and middle-income countries (odds ratio [OR] 4.67, 95% CI 3.16–6.89; $p < 0.0001$) than in high-income countries (2.19, 2.03–2.37; $p < 0.0001$). Implementation

- Significant increase of health-care workers hand hygiene compliance **across all professional categories in all sites** (OR 2.15, 1.99–2.32; HH compliance from 51.0% to 67.2%).
- Greater effect in low-income and middle-income countries (OR 4.67, 95% CI 3.16–6.89; $p < 0.0001$)

Luangasanatip N et al, BMJ 2015

Comparative efficacy of interventions to promote hand hygiene in hospital: systematic review and network meta-analysis

Nantasi Luangasanatip,^{1,2} Maliwan Hongswan,¹ Direk Limthawatsakul,^{1,3} Yoel Lubell,^{1,4} Andie S Lee,^{5,6} Stephan Harbarth,³ Nicholas P J Day,^{1,4} Nicholas Graves,^{7,8} Ben S Cooper^{1,4}

ABSTRACT

OBJECTIVE

To evaluate the relative efficacy of the World Health Organization 2005 campaign (WHO-5) and other interventions to promote hand hygiene among healthcare workers in hospital settings and to summarise associated information on use of resources.

DESIGN

Systematic review and network meta-analysis.

DATA SOURCES

Medline, Embase, CINAHL, NHS Economic Evaluation Database, NHS Centre for Reviews and Dissemination, Cochrane Library, and the EPOC register (December 2009 to February 2014); studies selected by the same search terms in previous systematic reviews (1980–2009).

REVIEW METHODS

Included studies were randomised controlled trials, non-randomised trials, controlled before-after trials, and interrupted time series studies implementing an intervention to improve compliance with hand hygiene among healthcare workers in hospital settings and measuring compliance or appropriate proxies that met predefined quality inclusion criteria. When studies had not used appropriate analytical methods, primary data were re-analysed. Random effects and network meta-analyses were performed on studies reporting directly observed compliance

RESULTS

Of 3639 studies retrieved, 41 met the inclusion criteria (six randomised controlled trials, 32 interrupted time series, one non-randomised trial, and two controlled before-after studies). Meta-analysis of two randomised controlled trials showed the addition of goal setting to WHO-5 was associated with improved compliance (pooled odds ratio 1.35, 95% confidence interval 1.04 to 1.74; $P = 0.01$). Of 22 pairwise comparisons from interrupted time series, 18 showed stepwise increases in compliance with hand hygiene, and all but four showed a trend for increasing compliance after the intervention. Network meta-analysis indicated considerable uncertainty in the relative effectiveness of interventions, but nonetheless provided evidence that WHO-5 is effective and that compliance can be further improved by adding interventions including goal setting, reward and incentives, and accountability. Nineteen studies reported clinical outcomes; data from these were consistent with clinically important reductions in rates of infection resulting from improved hand hygiene for some but not all important hospital pathogens. Reported costs of interventions ranged from \$235 to \$4669 (£146–£3035; €264–€4229) per 1000 bed days.

CONCLUSION

Promotion of hand hygiene with WHO-5 is effective at increasing compliance in healthcare workers. Addition of goal setting, reward incentives, and accountability strategies can lead to further improvements. Registering

Meta-analysis from 22 studies confirmed that the **WHO hand hygiene strategy is effective at increasing health care workers compliance** and results of 19 studies showed **reduction of health care associated infections**

Determinants of success and sustainability of the WHO multimodal hand hygiene promotion campaign, Italy, 2007–2008 and 2014

ML Moro ¹, F Morsillo ¹, S Nascetti ², M Parenti ³, B Allegranzi ⁴, MG Pompa ⁵, D Pittet ⁶

Citation style for this article:
Moro ML, Morsillo F, Nascetti S, Parenti M, Allegranzi B, Pompa MG, Pittet D. Determinants of success and sustainability of the WHO multimodal hand hygiene promotion campaign, Italy, 2007–2008 and 2014. Euro Surveill. 2017;22(23):pii=30546. DOI: <http://dx.doi.org/10.2807/1560-7917.ES.2017.22.23.30546>

- 175 hospitals from 14 of 20 Italian regions
- Hand hygiene compliance increase **from 40% to 63%**, across all professional categories, types of hand hygiene indications, types of wards and types of H

Survey results of hospitals participating in implementation level, Italy, 2014 (n = 48 ho

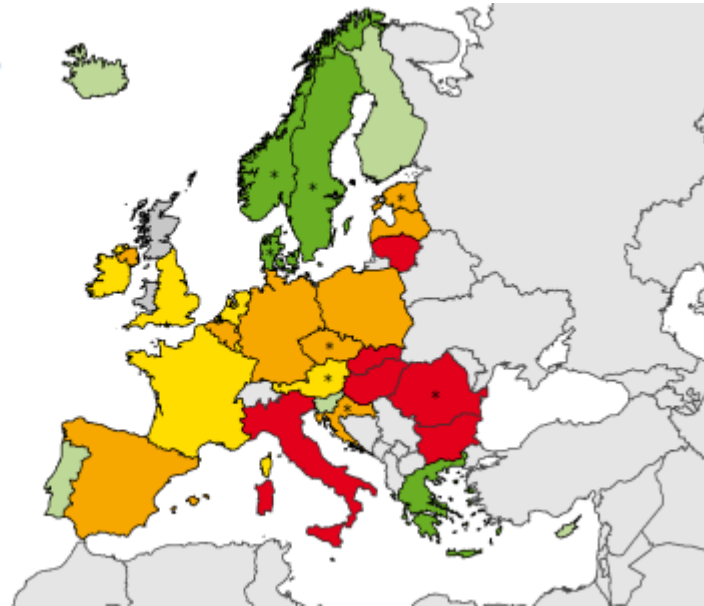
2007–2008 campaign
Hand hygiene compliance (observed/expected)
at baseline
at follow-up

Alcohol hand rub consumption (L/1000 patient days)

- <10
- 10–19.9
- 20–29.9
- 30–39.9
- ≥40
- No data
- Not included

Non-visible countries

- Liechtenstein
- Luxembourg
- Malta



ate/basic 36)
Interquartile range
0.28 ^a
0.28

Patient safety culture approach

Comprehensive Unit-based Safety Program (CUSP)

1. Educate staff on science of safety
2. Identify defects
3. Assign executive to adopt unit
4. Learn from one defect per quarter
5. Implement teamwork tools

Berenholtz SM et al, CCM 2004

Pronovost P et al, NEJM 2006

Pronovost P et al, BMJ 2010

Pronovost P et al, AJMQ 2015

Translating Evidence Into Practice (TRiP)

1. Summarize the evidence in a checklist.
 - Clean your hands, clean skin with alcohol-based chlorhexidine, avoid femoral site, use barrier precautions, ask daily if you need the catheter
1. Identify local barriers to implementation
2. Measure performance
3. Ensure all patients get the evidence
 - Engage
 - Educate
 - Execute
 - Evaluate

4 Es**Executive
Leaders****Team
Leaders****Staff****Engage****How does this make the world a better place?****Educate****What do we need to do better?****Execute****How can we do it with our resources and culture?****Evaluate****How do we know we made a difference?***Health Services Research 2006***World Health
Organization**

Multimodal implementation approaches

The Five Components of the WHO multimodal hand hygiene improvement strategy

1a. System change –
alcohol-based handrub at point of care

+

1b. System change – access to safe,
continuous water supply, soap and towels

+

2. Training

+

3. Auditing and feedback

+

4. Reminders in the workplace

+

5. Incentives

4 Es

Executive
Leaders

Team
Leaders

Staff

Engage

How do we

a better place?

Educate

What do we need to do?

How can we

culture?

Evaluate

Have we made a difference?

Comprehensive Unit-based Safety Program (CUSP)

(CUSP)

1.

safety

Design an executive to the unit

4.

Learn from one defect per quarter

5.

Implement teamwork tools

Same concepts, different terms

Safety climate across them

Patient at the center

Multimodal strategy for IPC interventions

In other words, the WHO multimodal improvement strategy addresses these **five areas**:

2. Teach it (training & education)



Who needs to be trained? What type of training should be used to ensure that the intervention will be implemented in line with evidence-based policies and how frequently?

Does the facility have trainers, training aids, and the necessary equipment?

Practical example: when implementing injection safety interventions, timely training of those responsible for administering safe injections, including carers and community workers, are important considerations, as well as adequate disposal methods.

4. Sell it (reminders & communications)



How are you promoting an intervention to ensure that there are cues to action at the point of care and messages are reinforced to health workers and patients?

Do you have capacity/funding to develop promotional messages and materials?

Practical example: when implementing interventions to reduce catheter-associated bloodstream infection, the use of visual cues to action, promotional/reinforcing messages, and planning for periodic campaigns are important considerations.

1. Build it (system change)



What infrastructures, equipment, supplies and other resources (including human) are required to implement the intervention?

Does the physical environment influence health worker behaviour? How can ergonomics and human factors approaches facilitate adoption of the intervention?

Are certain types of health workers needed to implement the intervention?

Practical example: when implementing hand hygiene interventions, ease of access to handrubs at the point of care and the availability of WASH infrastructures (including water and soap) are important considerations. Are these available, affordable and easily accessible in the workplace? If not, action is needed.

3. Check it (monitoring & feedback)



How can you identify the gaps in IPC practices or other indicators in your setting to allow you to prioritize your intervention?

How can you be sure that the intervention is being implemented correctly and safely, including at the bedside? For example, are there methods in place to observe or track practices?

How and when will feedback be given to the target audience and managers? How can patients also be informed?

Practical example: when implementing surgical site infection interventions, the use of key tools are important considerations, such as surveillance data collection forms and the WHO checklist (adapted to local conditions).

5. Live it (culture change)



Is there demonstrable support for the intervention at every level of the health system? For example, do senior managers provide funding for equipment and other resources? Are they willing to be champions and role models for IPC improvement?

Are teams involved in co-developing or adapting the intervention? Are they empowered and do they feel ownership and the need for accountability?

Practical example: when implementing hand hygiene interventions, the way that a health facility approaches this as part of safety and quality improvement and the value placed on hand hygiene improvement as part of the clinical workflow are important considerations.

Interim Practical
Manual supporting
national implementation
of the WHO Guidelines
on Core Components
of Infection Prevention
and Control Programmes



World Health
Organization

Importance of multidisciplinary leadership & ownership in IPC interventions



World Health
Organization

2017 World Antibiotic Awareness Week

**World Health Organization**



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World Antibiotic Awareness Week

Save the date: World Antibiotic Awareness Week 2017

This year, World Antibiotic Awareness Week will be held from 13 to 19 November. WHO is encouraging all Member States, health partners and students, and the public to join this campaign and help raise awareness of antibiotic resistance.

[For more information, click here](#)



<http://www.who.int/campaigns/world-antibiotic-awareness-week/en>



Help WHO highlight the role of IPC to combat AMR and participate in the World Antibiotic Awareness Week!

**Learn more about WHO's IPC work at:
<http://www.who.int/infection-prevention/en/>**

Quality Systems and Resilience

An introduction to the work of WHO's QSR unit

Background to QSR

- In October 2015, the Universal Health Coverage and Quality (QHC) unit was established by WHO in acknowledgement of the need to develop critical linkages between UHC and quality.
- The unit was created to support countries in placing quality of care at the centre of moves towards UHC, alongside related work on resilient health services.
- It is apparent – both at global and national levels – that quality is now seen as a necessary part of UHC. Building on this foundational effort, a renewed focus on specific areas of technical work is now being taken forward through the Quality Systems and Resilience (QSR) unit.
- QSR supports health service delivery by focusing on stimulating change to enhance quality and resilience alongside focused attention on essential public health functions (EPHF) and community engagement (CE).



Quality systems

The unit supports country-based efforts to develop national quality policy and strategy; coordinates global learning on quality UHC; and facilitates cross-cutting work on quality across the Organization. The unit leads work on twinning partnerships for improvement as a way of catalysing change. Partnerships are also in place with flagship quality improvement efforts. Attention to the linguistic needs related to quality improvement is also emphasized by the unit.



Resilience

Through a focus on country-based experience and technical cooperation, the unit is strengthening and developing the convergence between surveillance, preparedness, disaster risk management and quality health services. This convergence work is designed to support Member States in their efforts to develop greater health service resilience, within the context of stronger health systems.



Essential public health functions and Community engagement

Running across the unit are two cross-cutting areas. The unit supports WHO's broader work on developing shared understanding on essential public health functions for application by Member States. Ensuring communities are engaged in the health services they receive is central to the work of the unit, with a strong focus on the development of systematic and sustainable engagement frameworks and a coordinated community engagement network.

WHO's Department of Service Delivery and Safety

The QSR unit is part of WHO's Department of Service Delivery and Safety (SDS), which supports policy-makers to set priorities, to plan and organize health services that are efficient and responsive to the needs and preferences of people and communities, throughout their life. It also supports health providers working at the frontline to deliver safe and effective care through the development and promotion of global norms and standards. SDS is home to the WHO Framework on integrated people-centred health services (IPCHS) and supports the adoption of strategies from the Framework to ensure that everyone, everywhere, has access to the quality health services they need, when and where they need them. Integrated people-centred health services and universal health coverage (UHC) are global priorities for WHO. For health care to be truly universal, it requires a shift from health systems designed around diseases and health institutions to health systems designed for people. The QSR unit supports Member States in a range of technical areas to enable the transformational change required by our evolving health systems.

What we do - Ten broad areas of work related to quality systems and resilience

- National Quality Policy and Strategy
- Global Learning Laboratory for quality UHC
- WHO Taskforce on quality in UHC
- Twinning partnerships for improvement
- Linguistic partnerships for improvement
- ASSIST partnerships for improvement
- Health security-health systems convergence
- Health service resilience for countries under protracted emergency & disasters
- Essential public health functions
- Community engagement

A more detailed introduction to our work areas is presented overleaf.

For more information <http://www.who.int/servicedeliverysafety/areas/qhc/en/>



Our work at a glance



National Quality Policy and Strategy

NQPS supports the development of national policies and strategies on quality of care, focusing on technical support to countries, the development of a handbook and compendium of tools as well as engagement with wider global efforts. The work has been informed by a review of existing quality policies and strategies and engagement with ministries of health and global experts, and will be continually refined, based on country experiences of developing and implementing their own quality policies and strategies.



Global Learning Laboratory for quality UHC

The Global Learning Laboratory (GLL) links the experiences, expertise, passion and wisdom of people across the world, representing multiple disciplines, on important issues relating to quality in the context of UHC. WHO recognizes the importance of connecting people to facilitate accelerated learning; the GLL is designed to support that need. A web-based platform enables members to share experiences, knowledge and ideas and disseminate lessons learned across the world. Members of the GLL: challenge each other and spark innovative ideas for action.



WHO Taskforce on quality in UHC

The establishment of a WHO taskforce on the quality of health service delivery in the context of UHC, provides a mechanism to act as a collaborative platform for WHO units, departments and clusters at WHO headquarters to address how to strengthen support on quality to Member States as they move their health systems toward UHC with a focus on coordination, collaboration and knowledge sharing.



Twinning partnerships for improvement

These concentrate on the value of institution-to-institution partnerships in catalysing health service improvement. The approach focuses on fostering strong bi-directional partnerships between health institutions; improving health services by implementing effective interventions based on needs from the frontline; and spreading improvement within the national health system and beyond.



Linguistic partnerships for improvement

Linguistic partnerships are a mechanism to establish linkages between health professionals working in public health from groups or regions speaking different languages. The purpose is to value and promote cultural and linguistic diversity and improve mutual sharing and understanding between groups/regions speaking different languages on issues related to improving quality of care.



ASSIST partnerships for improvement

The USAID Applying Science to Strengthen and Improve Systems Project (ASSIST) is focused on improving the quality and outcomes of health care and other services by applying the science of improvement. Partnership work between WHO and ASSIST allows co-developed solutions and learning from in-country implementation to spread to other Member States.



Health security-health systems linkages and resilient health services in emergencies and disasters

Health security and systems convergence promotes sustainability, efficiency and effectiveness of a country's preparedness efforts, and helps avoid the creation of a vertical health security silo. The work covers an extensive array of technical domains. The focus is on developing conceptual clarity on convergence alongside operational guidance on "the how" – for example response and recovery during acute and protracted emergencies aligned with national health systems; supporting countries on the convergence of health security and health systems and synthesizing emerging learning for wider application; and providing local and country level advocacy for the integrated health system strengthening approach.



Essential public health functions

Aims to strengthen cross-WHO efforts and put public health alongside clinical services and individual health at the heart of the UHC agenda. The focus is on development and dissemination of technical guidance; advocating for EPHF globally and nationally, alongside global efforts; and stimulating learning efforts on EPHF in the context of health systems strengthening and the SDGs.



Community engagement for quality, integrated and resilient services

Coordinates a diverse network of researchers, disciplinary experts, practitioners and partners to strengthen community engagement. The focus is on developing a community engagement framework tailored for the intersection between health services and communities; generating evidence by applying the framework and measuring changes; and formulating policy options by engaging key stakeholders on a minimum investment package for health systems.

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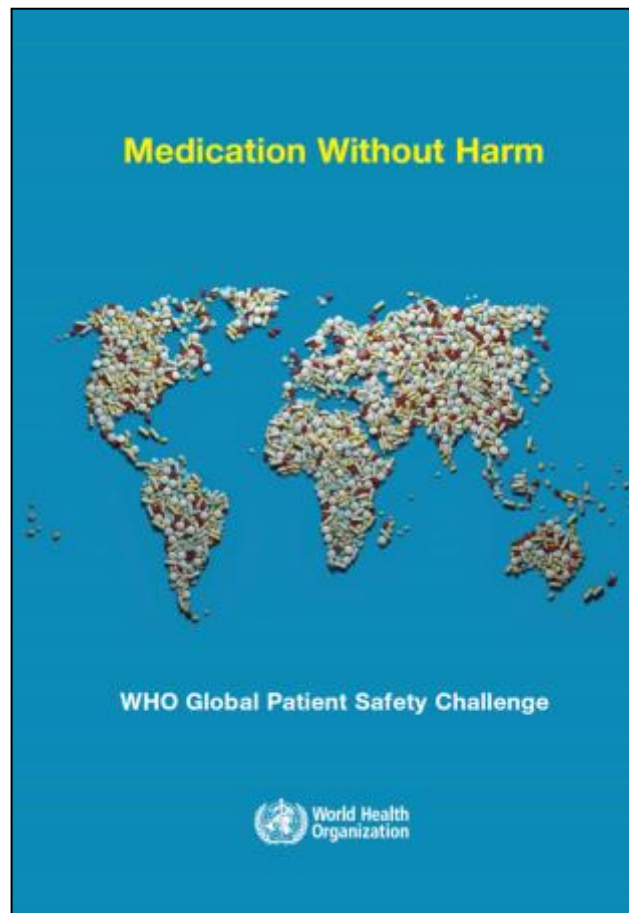


Medication Without Harm



The Third Global Patient Safety Challenge

Advocacy Materials and Global Campaign



<http://www.who.int/patientsafety>

GRAZIE!!!

WHO Infection Prevention and Control Global Unit



Learn more at: <http://www.who.int/infection-prevention/en/>



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