

# **Impatto sanitario ed economico dell'antibiotico resistenza in Italia: soluzioni OMS**

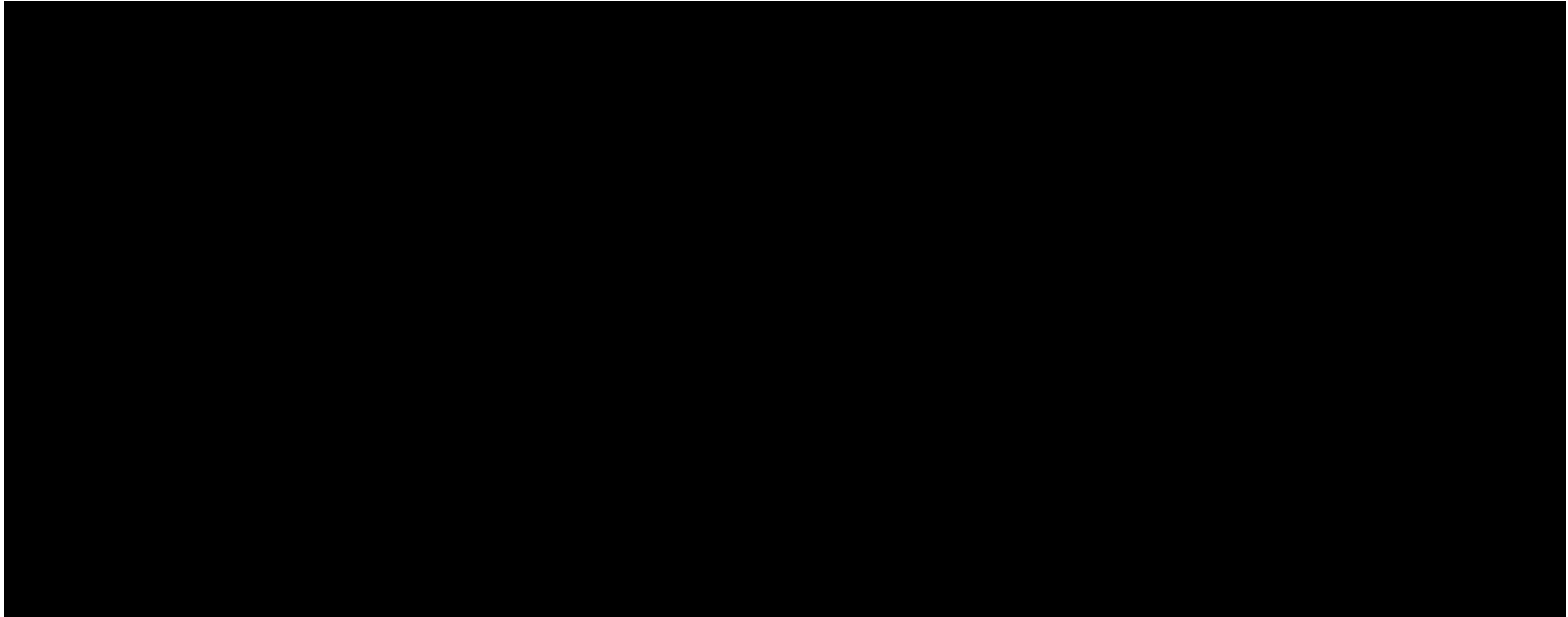
**Alessandro Cassini and Benedetta Allegranzi  
per la WHO IPC Global Unit**



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Organization**

# Antibiotico-resistenza in laboratorio

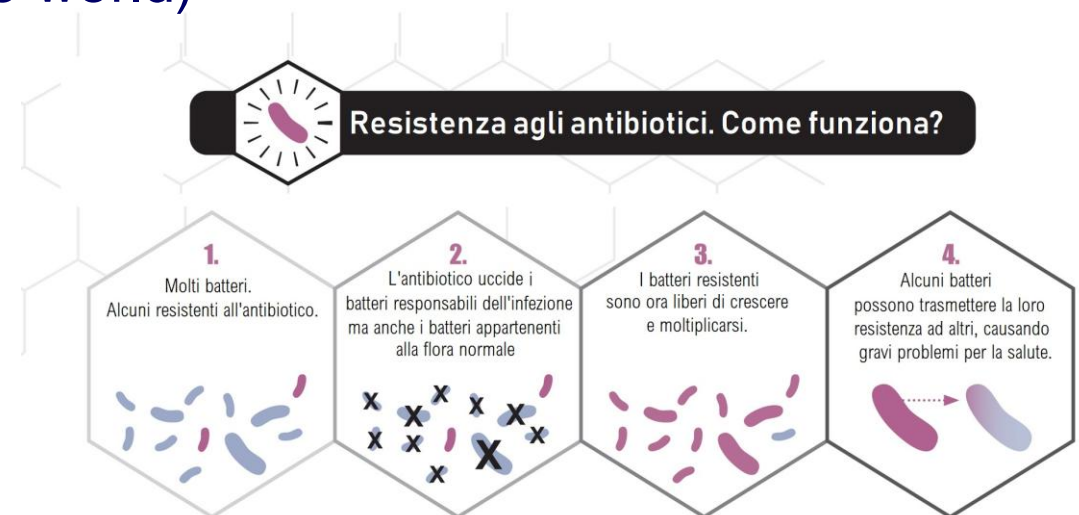
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# AMR non è una malattia, è un insuccesso terapeutico

- L'antibiotico-resistenza è
  - Multifattoriale (mutazione, geni acquisiti)
  - Multisetoriale (one health, one world)

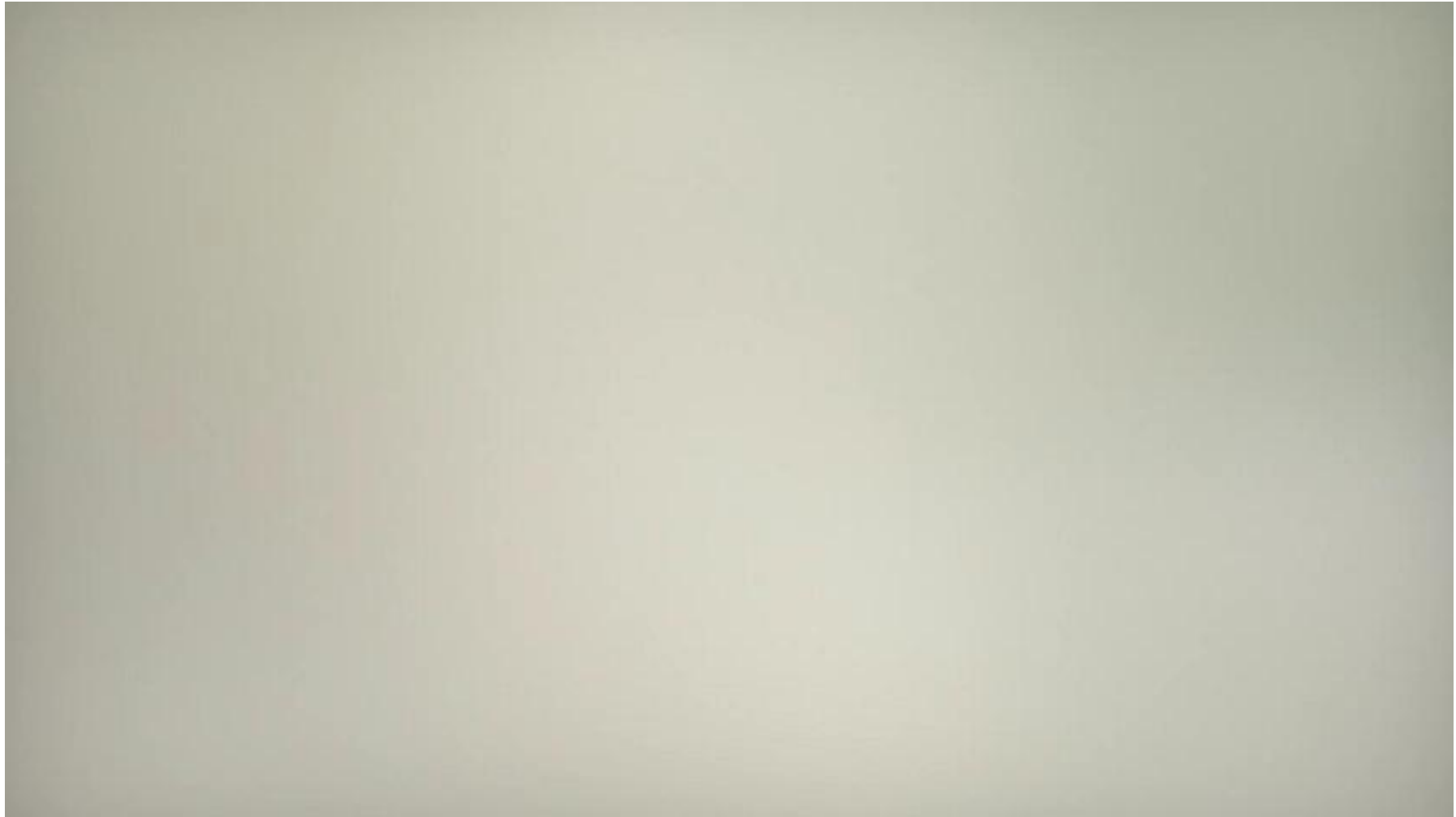
- Che varia a seconda del
  - Ospite
  - Organismo
  - Antibiotico
  - Tipo di infezione



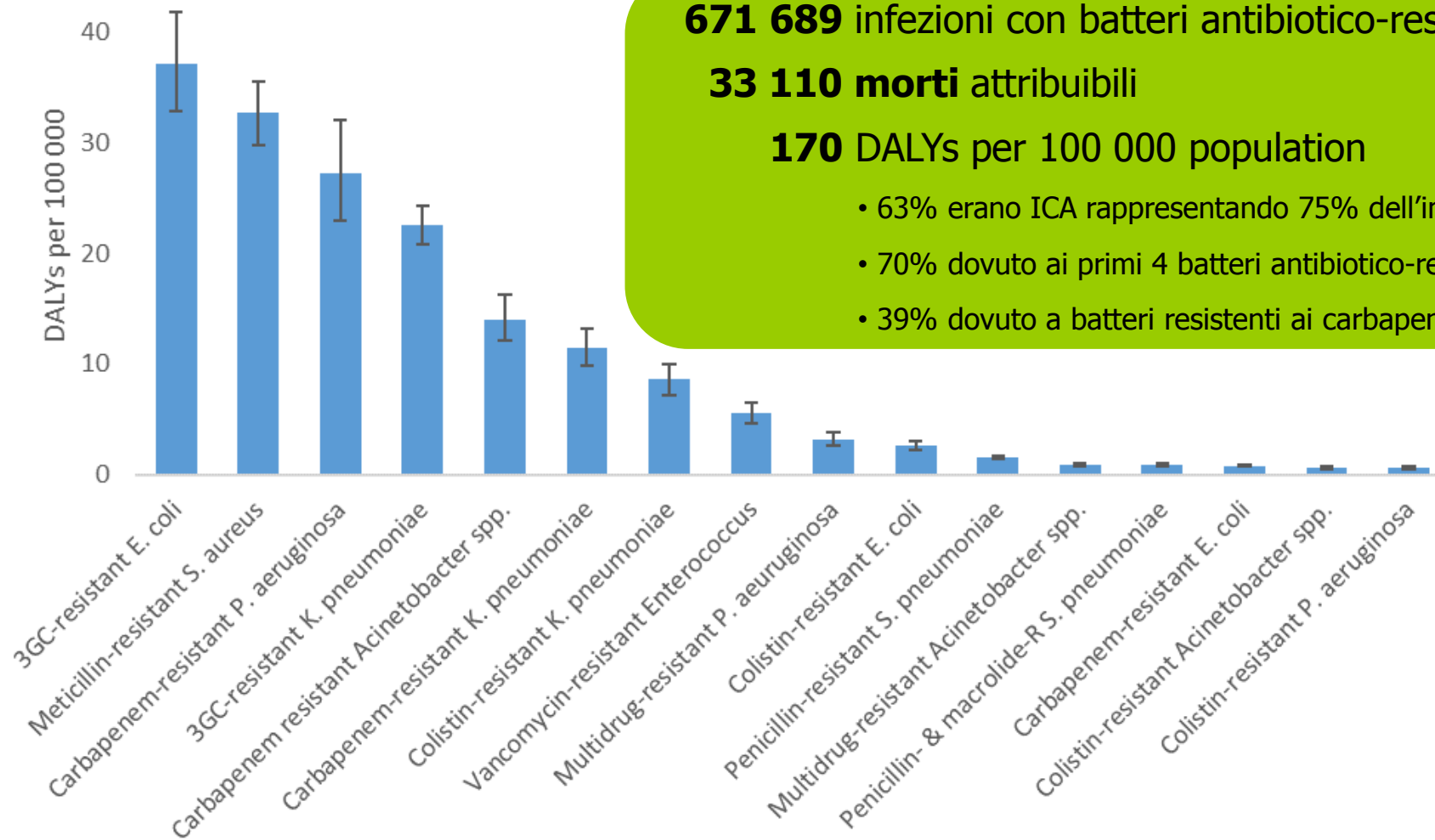
Fonte: tradotto da Melissa Brower, US CDC

Un grande numero di combinazioni!

# Come si diffonde l'antibiotic-resistenza



# Impatto delle infezioni con batteri antibiotico-resistenti, UE/SEE, 2015



**671 689** infezioni con batteri antibiotico-resistenti

**33 110** morti attribuibili

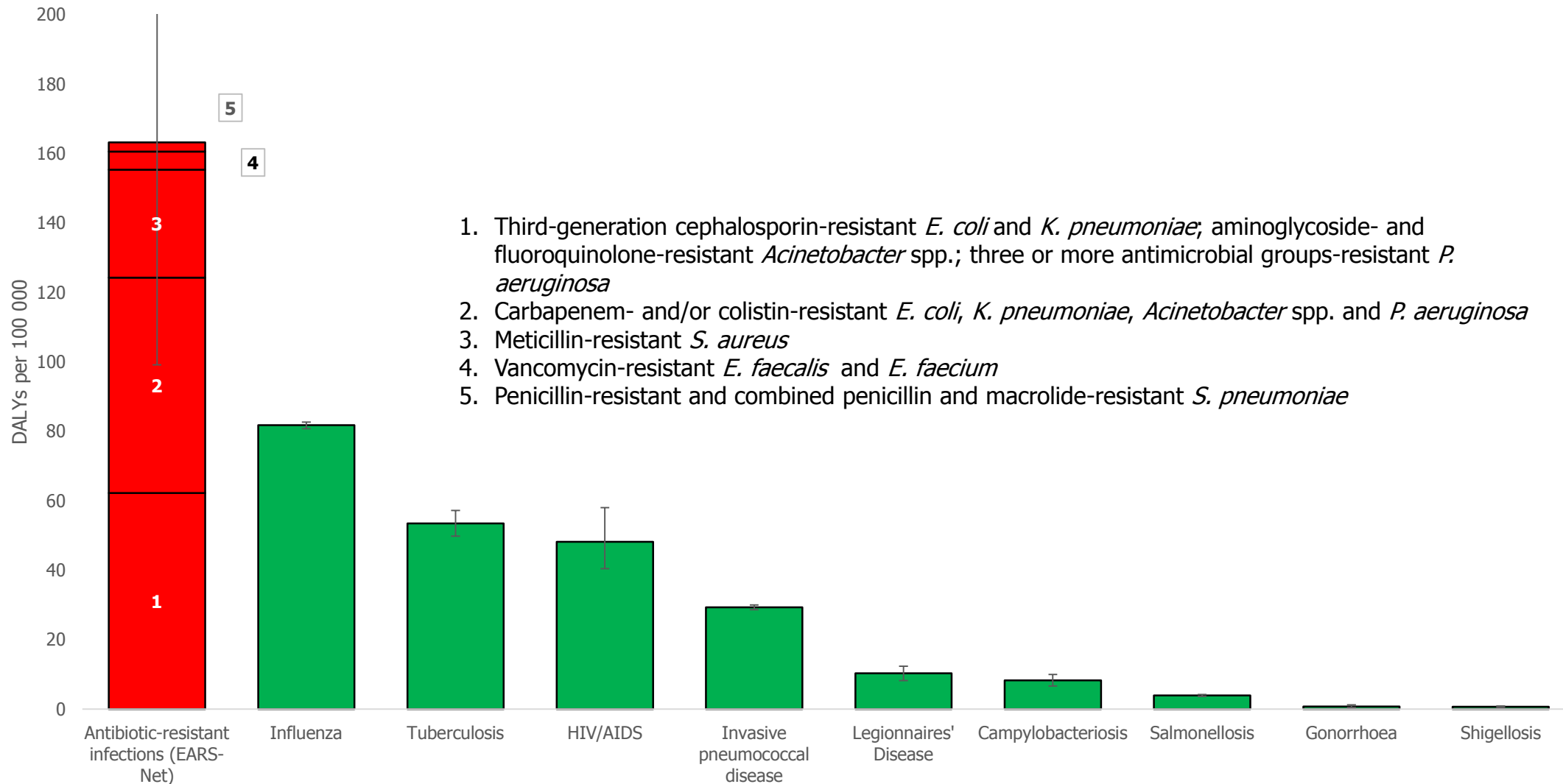
**170** DALYs per 100 000 population

- 63% erano ICA rappresentando 75% dell'impatto totale in DALYs
- 70% dovuto ai primi 4 batteri antibiotico-resistenti
- 39% dovuto a batteri resistenti ai carbapenemi e/o colistina

Cassini A., et al. (2019). The Lancet Infectious Diseases 19(1): 56-66.



# L'impatto è paragonabile a quello cumulativo dell'influenza, tubercolosi e HIV/AIDS

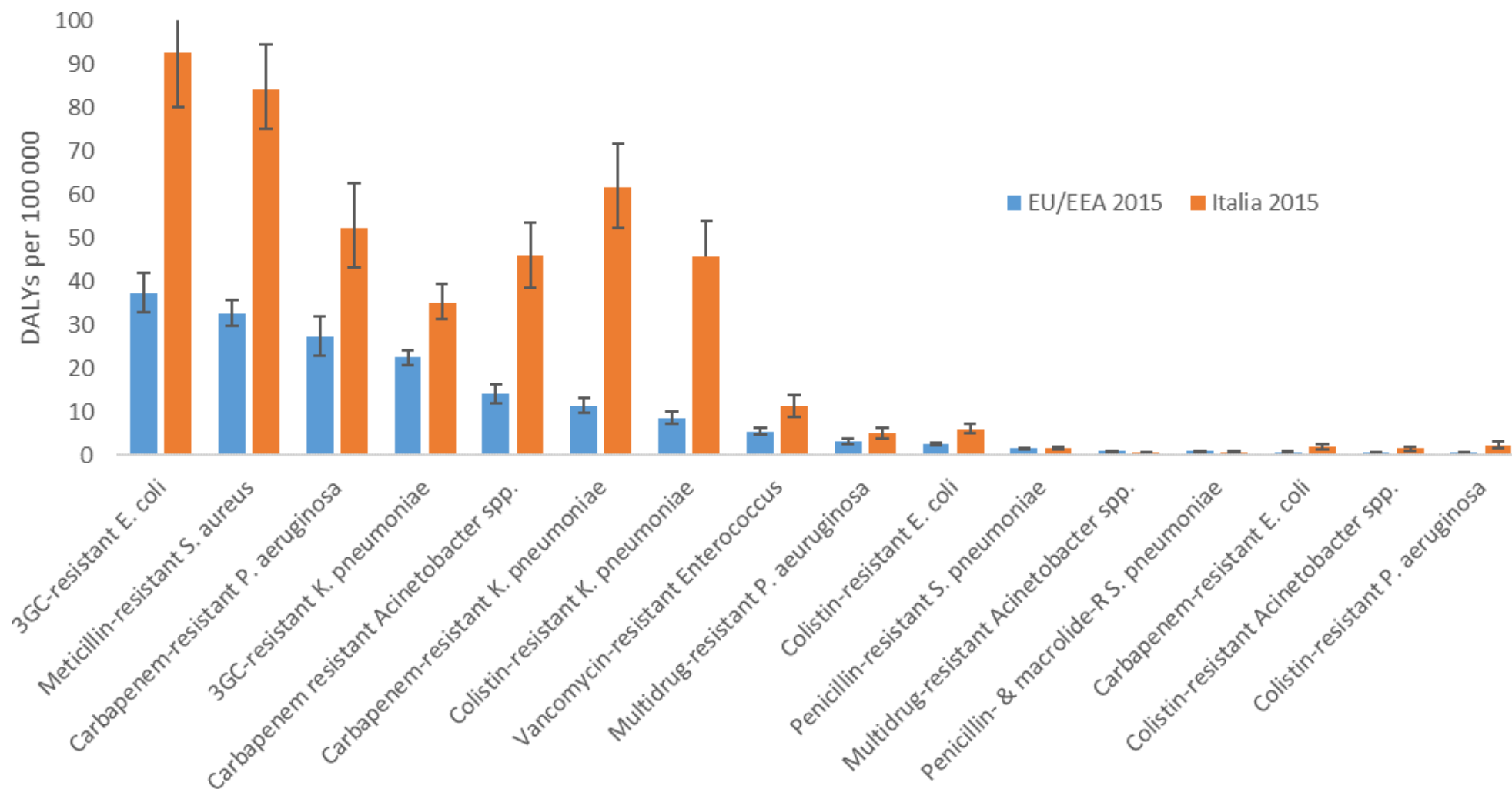


Adattato da: Cassini A., et al. (2019). The Lancet Infectious Diseases 19(1): 56-66.  
Cassini A, et al. Eurosurveillance 2018;23(16):pii=17-00454



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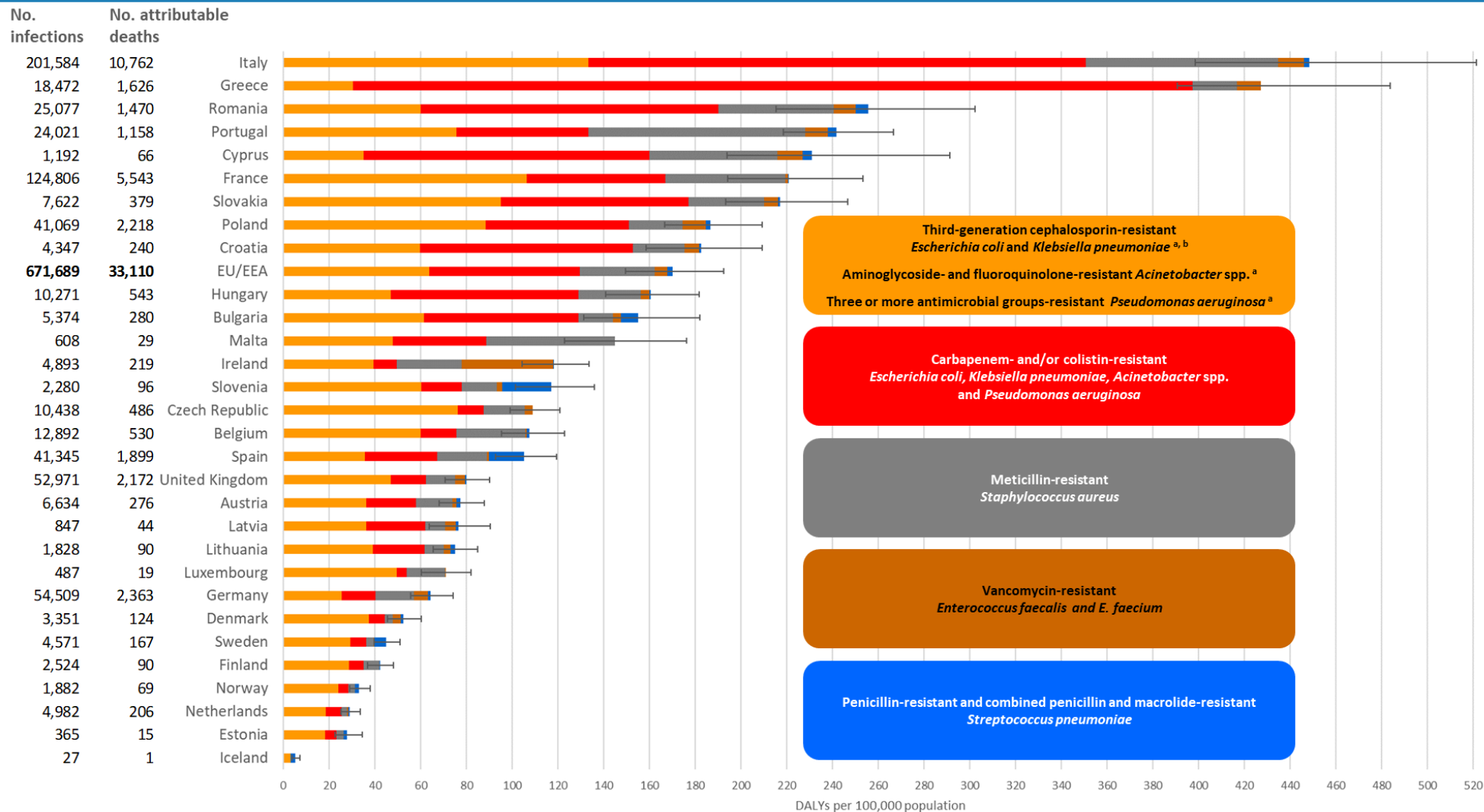
# Paragone impatto UE/SEE e Italia



Cassini A., et al. (2019). The Lancet Infectious Diseases 19(1): 56-66.



# Impatto delle infezioni con batteri antibiotico-resistenti, per paese, 2015, standardizzato per gruppo d'età



Cassini A., et al. (2019). The Lancet Infectious Diseases 19(1): 56-66.



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# Aumento dei decessi attribuibili ad AMR – 2007-2015 paesi UE

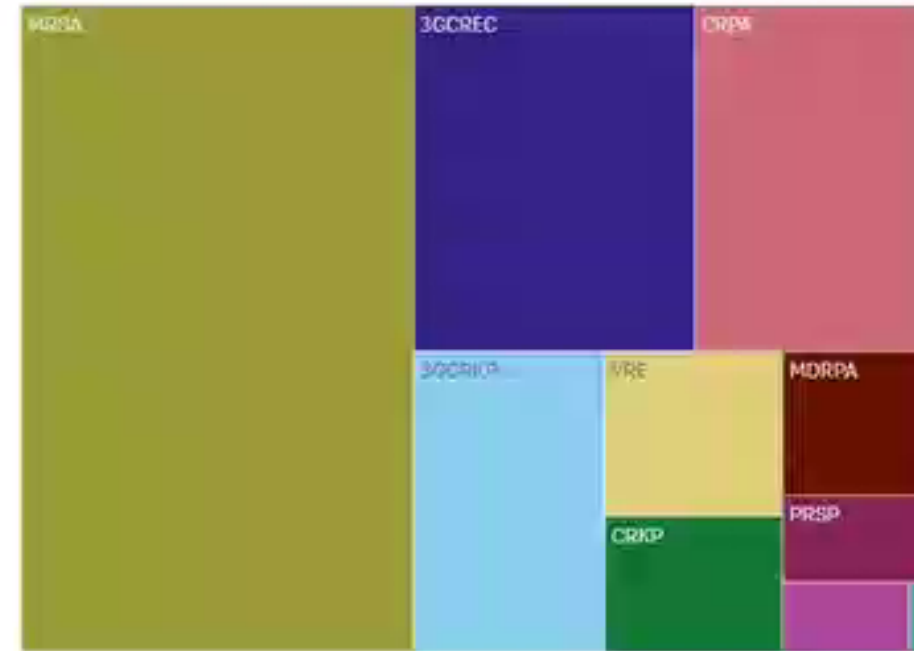
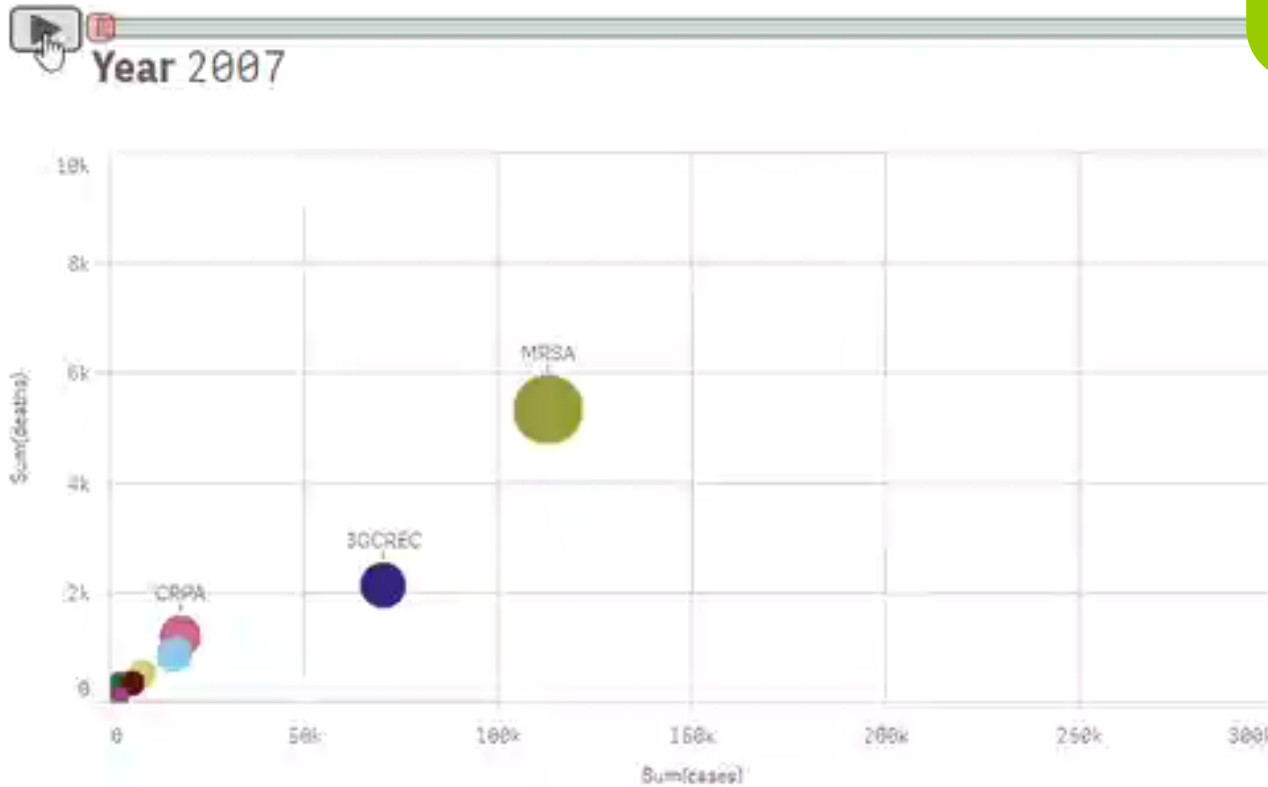
2007 to 2015:

Number of deaths more than doubled

Number of deaths due to:

carbapenem-resistant *K. pneumoniae* increased six-fold

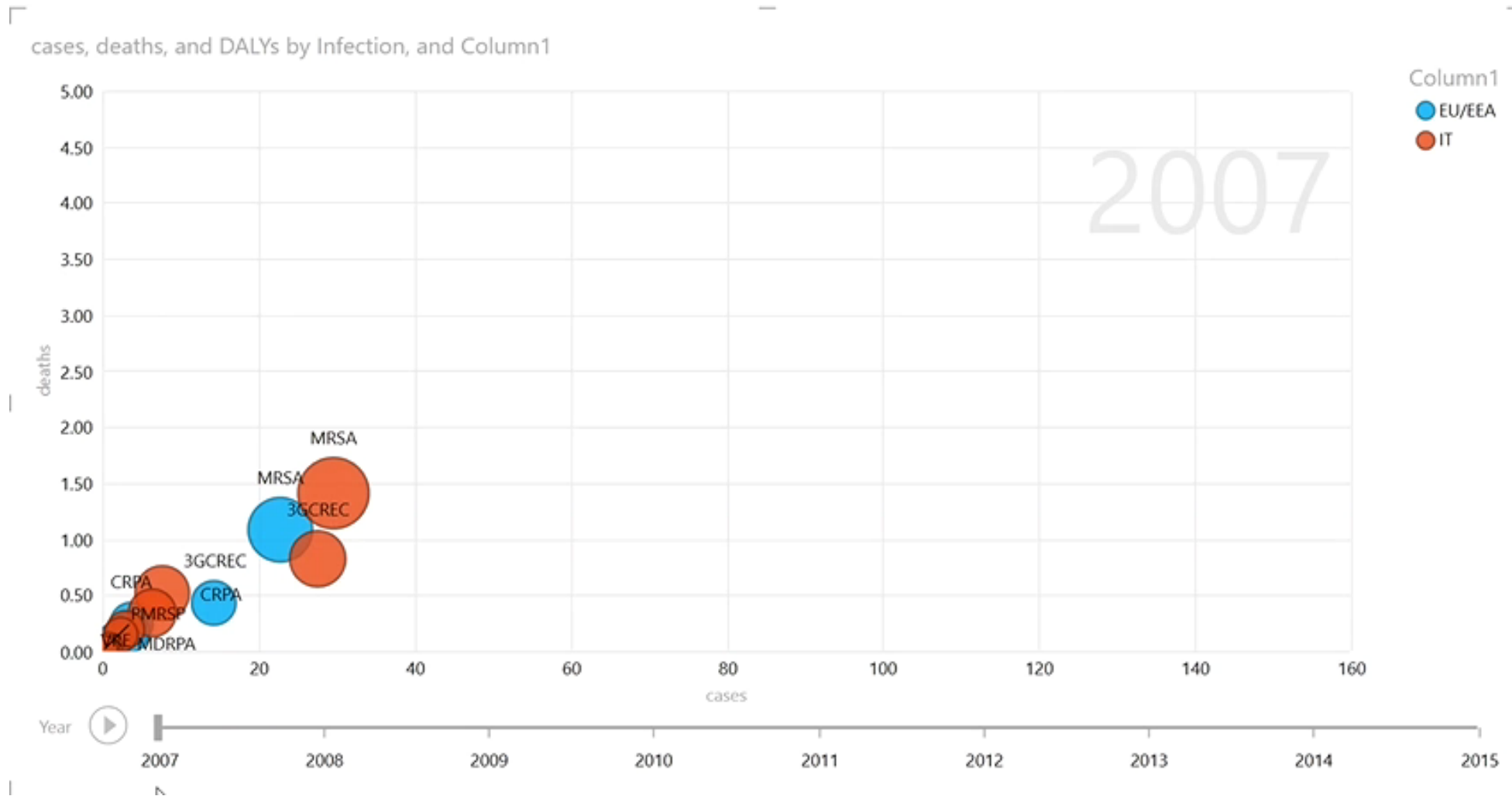
third-generation cephalosporin-resistant *E. coli* increased four-fold



Adattato da Cassini A., et al. (2019). The Lancet Infectious Diseases 19(1): 56-66.



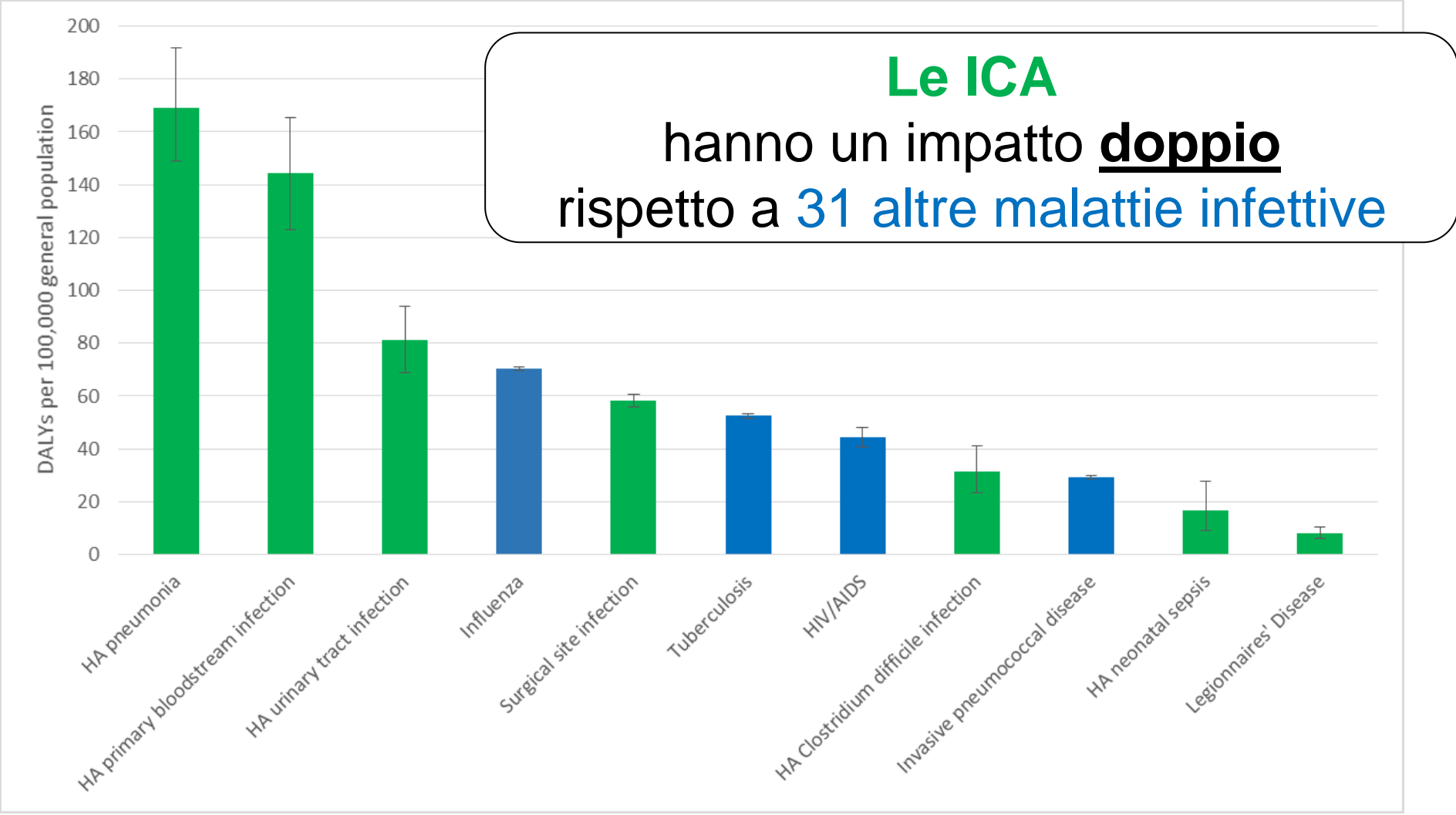
# Impatto delle infezioni con batteri antibiotico-resistenti, UE/SEE e Italia, 2007-2015



Adattato da Cassini A., et al. (2019). The Lancet Infectious Diseases 19(1): 56-66.



# Paragonando l'impatto delle ICA e quello di altre infezioni

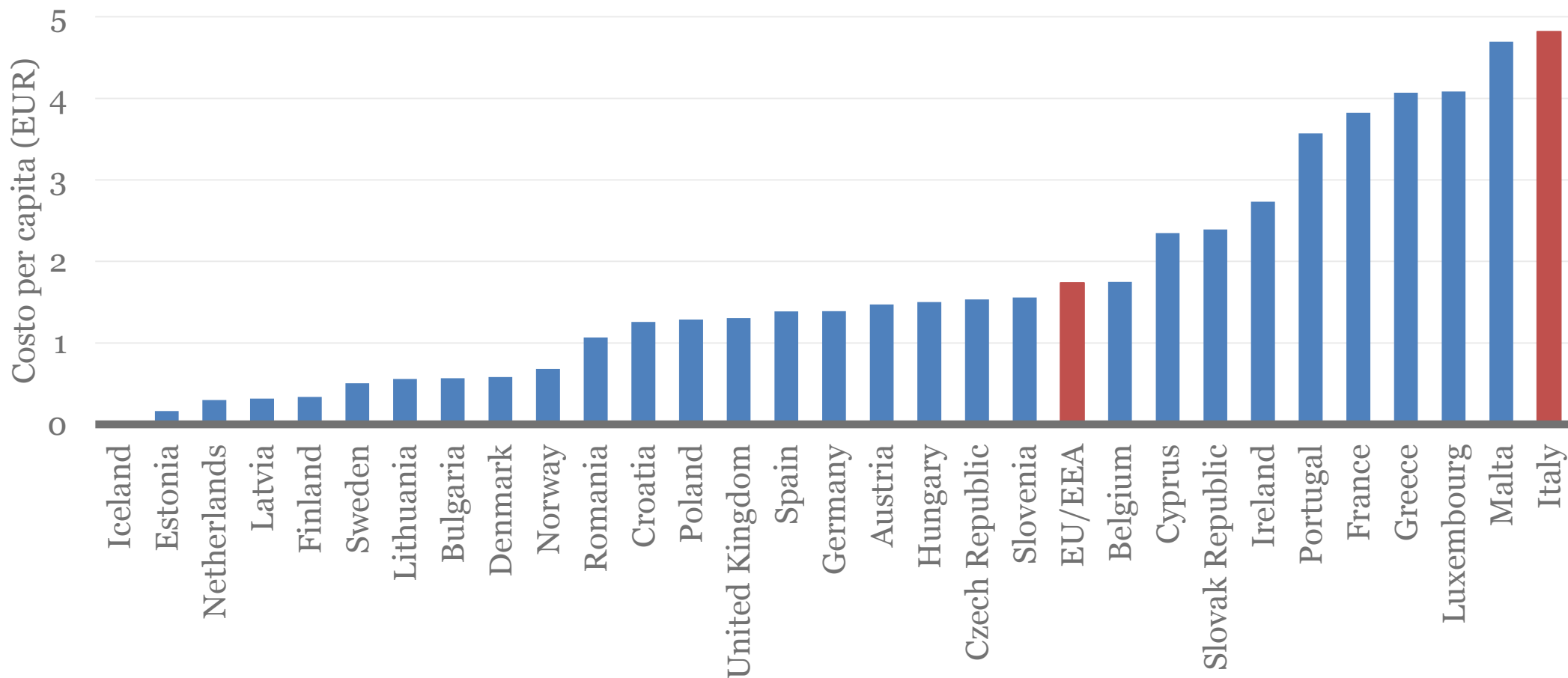


Adattato da: Cassini A, et al. PLoS Med 2016;13(10):e1002150  
Cassini A, et al. Eurosurveillance 2018;23(16):pii=17-00454



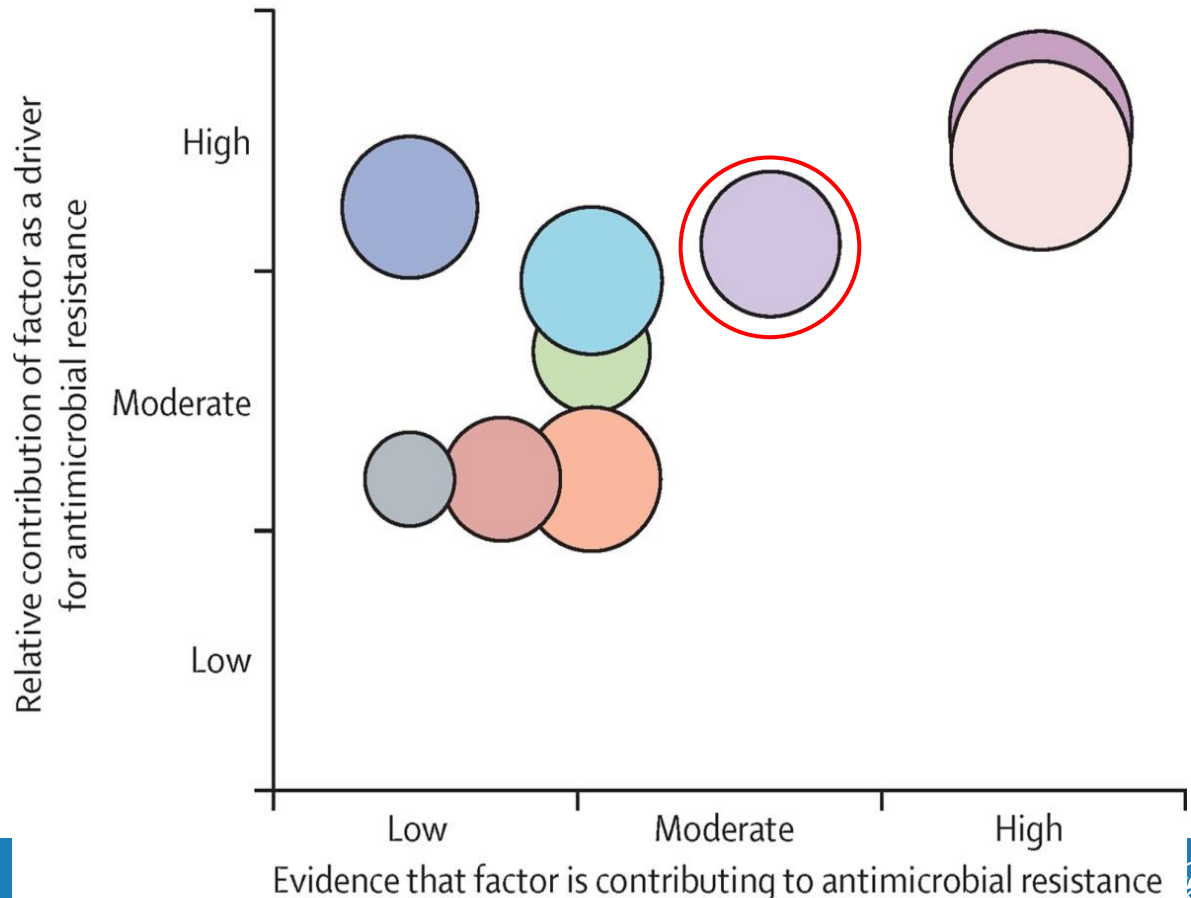


# L'antibiotico resistenza costa 1.1 miliardi di Euro/anno ai sistemi sanitari europei con altissimi costi in Italia

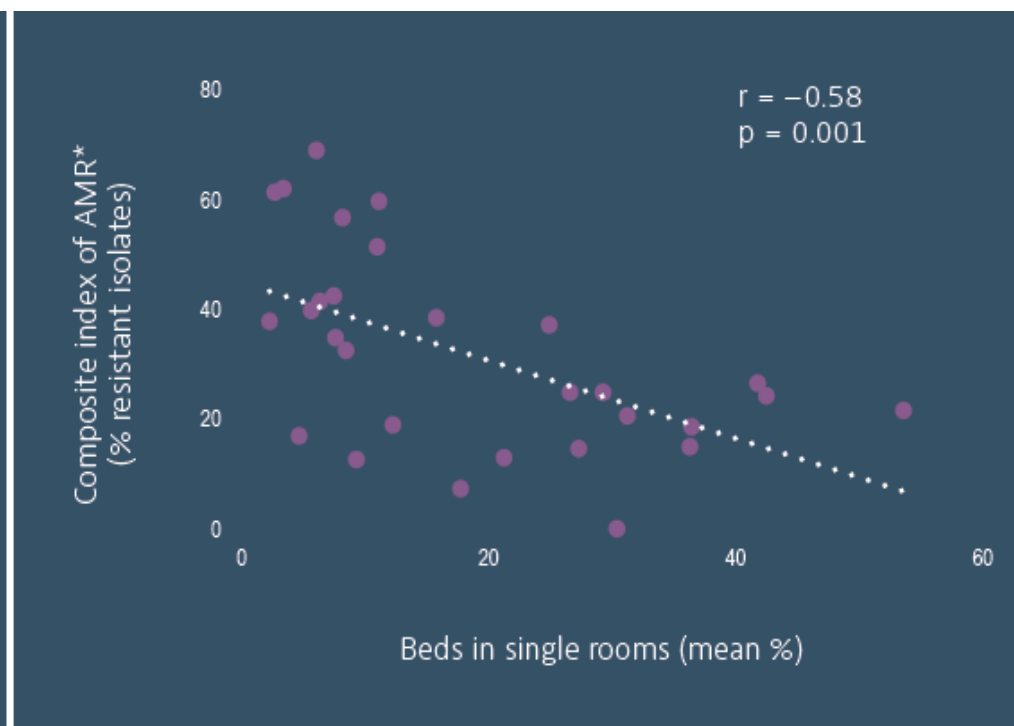


# Fattori che contribuiscono all'AMR

- Human antimicrobial misuse or overuse
- Animal antimicrobial misuse or overuse
- Environmental contamination
- Health-care transmission
- Suboptimal rapid diagnostics
- Suboptimal vaccination
- Suboptimal dosing, including from substandard and falsified drugs
- Travel
- Mass drug administration for human health



# Correlazioni tra prevenzione e controllo delle ICA e AMR



**Source:** OECD & ECDC (2019): Antimicrobial Resistance, Tackling the Burden in the European Union. Briefing note for EU/EEA countries.



# Politiche per contrastare l'antibiotico resistenza

## Ambiente ospedaliero

## Comunità



### Promuovere l'igiene delle mani

Presso il personale operante nei servizi sanitari



### Prescrizione ritardata

Per diminuire il consumo di antibiotici nel caso di infezioni virali

### Pacchetto di interventi



### Migliore igiene dell'ambiente

Per minimizzare la trasmissione delle infezioni ambientali e da presidi medico chirurgici



### Campagne informative

Per diffondere la consapevolezza dei rischi associati alla inappropriatezza prescrittiva



### Programmi di stewardship

Per promuovere un uso prudente degli antibiotici e porre fine a decenni di prescrizione inappropriata

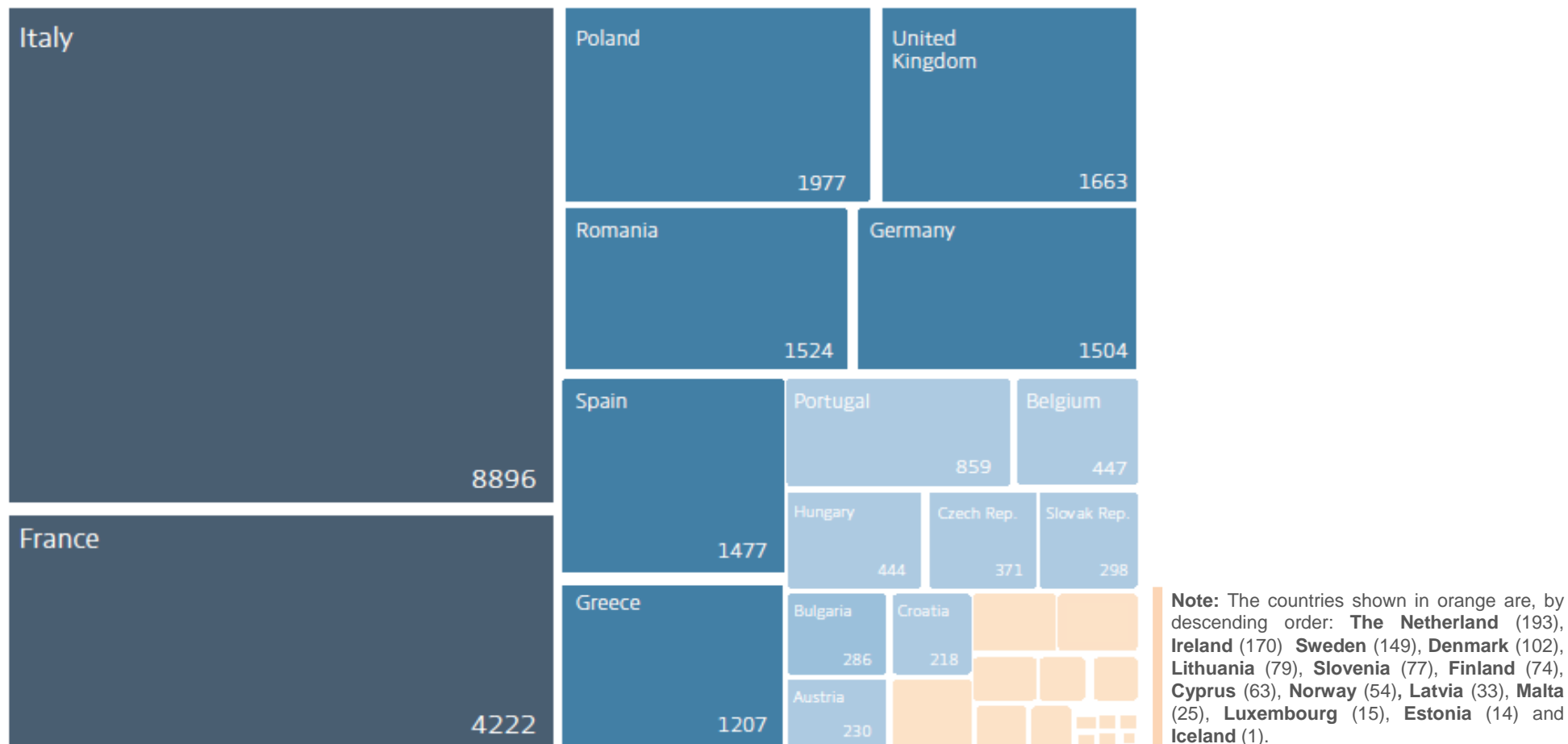


### Uso dei test diagnostici rapidi

Per aiutare i medici di famiglia a determinare se un'infezione necessita di un trattamento antibiotico o meno



# Il 'pacchetto' di interventi potrebbe evitare la morte di quasi 9000 persone/anno in Italia e 27000 in Europa

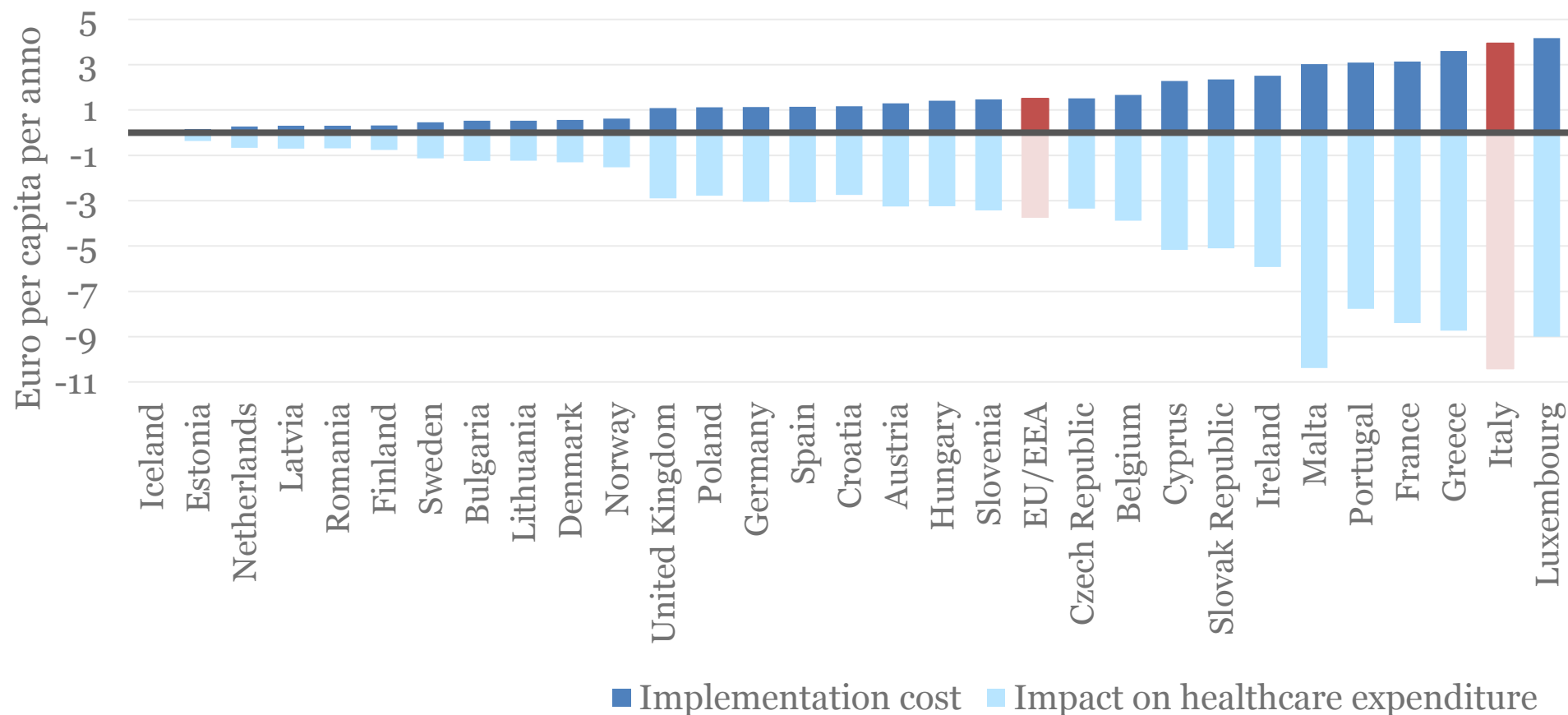






...e far risparmiare circa 1.4 miliardi di Euro per anno al budget dei sistemi sanitari Europei di cui 600 ml in Italia

Valutazione economica del 'pacchetto' di interventi:  
un investimento di pochi Euro produce significativi risparmi nella spesa sanitaria



■ Implementation cost ■ Impact on healthcare expenditure

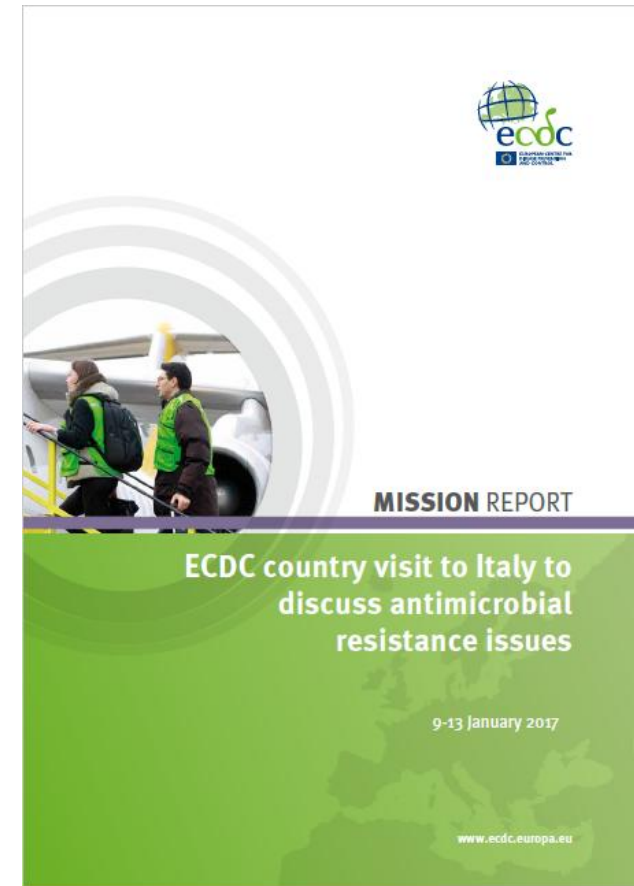
Nota: \* includendo l'effetto sulle infezioni non resistenti

Source: OECD. Stemming the Superbug Tide: just a few dollars more. 2018. [oe.cd/amr-2018](https://www.oecd.org/amr-2018)

Ringraziamenti a Michele Cecchini, Responsabile Salute Pubblica, OCSE

# Conclusioni della visita ECDC in Italia nel 2017

- Poca percezione dell'attuale situazione dell'antibiotico-resistenza da parte della maggior parte degli interessati e una tendenza di molti di essi a evitare di prendere in carico il problema;
- Mancanza di sostegno istituzionale a livello nazionale, regionale e locale;
- Mancanza di leadership professionale ad ogni livello;
- Mancanza di responsabilità ad ogni livello;
- Mancanza di coordinamento delle attività tra e all'interno di tutti i livelli.



# La risposta: PNCAR



PROGRAMMA	TARGET	PRINCIPALI OBIETTIVI	
		A BREVE TERMINE (2017-2018)	A LUNGO TERMINE (2019-2020)
SORVEGLIANZA AMR	Umano	Sistema nazionale di sorveglianza dell'AMR con la partecipazione di tutte le Regioni	Consolidare le sorveglianze "dedicate" (es. CPE), valutare la sorveglianza per nuovi cloni emergenti e tendere verso un modello di sorveglianza esaustivo e non più sentinella
	Veterinario	Rafforzare la performance del sistema di sorveglianza e monitoraggio dell'AMR	Sorvegliare nuovi cloni antibiotico-resistenti
SORVEGLIANZA DELLE INFEZIONI CORRELATE ALL'ASSISTENZA (ICA)	Umano	Sviluppare un piano nazionale di sorveglianza delle ICA	Applicare il piano nazionale di sorveglianza delle ICA in tutte le Regioni
SORVEGLIANZA DEL CONSUMO DEGLI ANTIBIOTICI	Umano	Ottimizzare il monitoraggio del consumo degli antibiotici prescritti a livello nazionale	Promuovere lo sviluppo di sistemi regionali per il monitoraggio dell'appropriatezza prescrittiva
	Veterinario	Rendere la prescrizione veterinaria elettronica obbligatoria su tutto il territorio nazionale. Promuovere lo sviluppo di modelli di classificazione delle aziende sulla base della valutazione del rischio di sviluppo di AMR e consumo di antibiotici (miglioramento dei controlli ufficiali)	Misurare i dati di prescrizione e di consumo degli antibiotici e non soltanto quelli di vendita
RESIDUI DI ANTIBIOTICI	Veterinario	Aggiornamento annuale del piano di monitoraggio dei residui in animali e alimenti di origine animale, con rivalutazione periodica delle ricerche	Aggiornamento annuale del piano di monitoraggio dei residui in animali e alimenti di origine animale, con rivalutazione periodica delle ricerche
PREVENZIONE DELLE INFEZIONI CORRELATE ALL'ASSISTENZA (ICA)	Umano	Armonizzare le strategie per la prevenzione e il controllo delle ICA, integrandole con quelle per l'uso appropriato di antibiotici	Migliorare e adeguare costantemente alle evidenze scientifiche le misure di prevenzione e controllo delle ICA
PREVENZIONE DELLE MALATTIE INFETTIVE E DELLE ZONOSI	Veterinario	Sviluppare programmi di buone pratiche nella corretta gestione degli allevamenti e strategie di prevenzione della malattie infettive	Ridurre il rischio infettivo nelle aziende zootecniche
USO CORRETTO E PRUDENTE DEGLI ANTIBIOTICI	Umano	Armonizzare le strategie sull'uso appropriato di antibiotici, integrandole con quelle di controllo delle ICA. Rendere specifici e sostenibili i programmi di antimicrobial stewardship. Migliorare conoscenze e consapevolezza negli operatori sanitari e nei cittadini	Migliorare e aggiornare costantemente le indicazioni nazionali sull'uso appropriato di antibiotici. Promuovere interventi utili a ridurre il fenomeno dell'utilizzo di antibiotici "avanzati" a domicilio
	Veterinario	Predisporre Linee guida per l'uso prudente di antibiotici in animali produttori di alimenti da compagnia	Rafforzare la cooperazione con Industria farmaceutica, Associazioni e Organizzazioni sull'uso prudente
COMUNICAZIONE	Umano	Promuovere programmi di comunicazione per aumentare la consapevolezza del fenomeno AMR e le buone pratiche di uso degli antibiotici	Coinvolgere nelle iniziative tutti gli operatori sanitari, le società scientifiche, le associazioni: dai cittadini agli operatori sanitari
FORMAZIONE	Umano e Veterinario	Promuovere la formazione degli operatori sanitari nei diversi ambiti, secondo il principio One Health	Educare e promuovere lo scambio di buone pratiche di formazione sull'uso corretto e prudente degli antibiotici
RICERCA E SVILUPPO		Identificare il tema AMR e delle ICA come area prioritaria nell'ambito della ricerca	Promuovere il trasferimento dei risultati della ricerca

# Prevenire le ICA è possibile

**>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

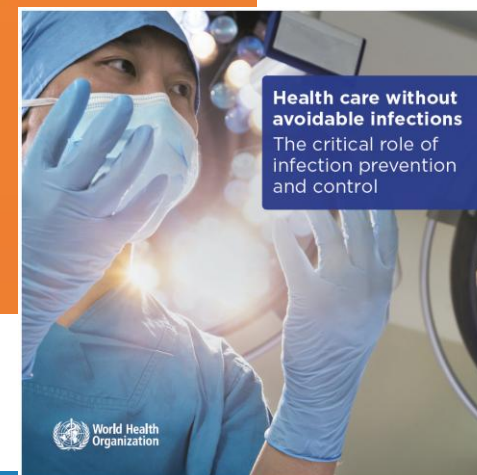
MRSA declined by 56% over a four-year period in England in line with a national target

**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



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



## Leadership, connecting, coordinating

*One WHO team, Global IPC Network, HQ IPC Hub, POPS, Sepsis Coordination Group*

## Guidelines & implementation strategies

*7 guidelines, > 100 tools, scientific papers*

## Campaigns & advocacy

*Save Lives: Clean Your Hands Campaign, Injection Safety national campaigns, WAAW*

## Capacity building

*Country Support Framework, direct support to 11 countries, regional capacity*

## Measuring & learning

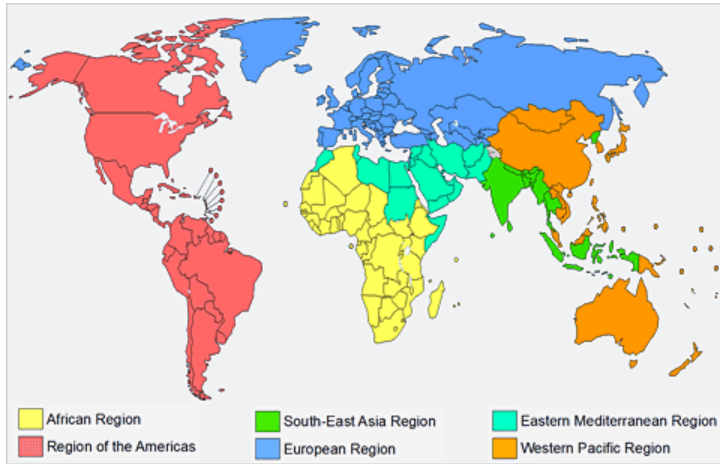
*IPC & HH indicators across national & facility tools, global surveys, national assessments*

# WHO IPC Global Unit Functions



**Health care without avoidable infections**  
The critical role of infection prevention and control

# 1. Leadership, connecting, coordinating



Private Organizations for Patient Safety Hand Hygiene



Private Organizations for Patient Safety Injection Safety

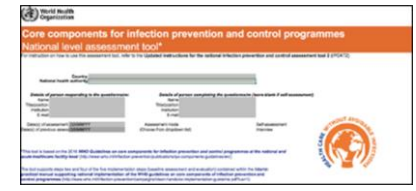
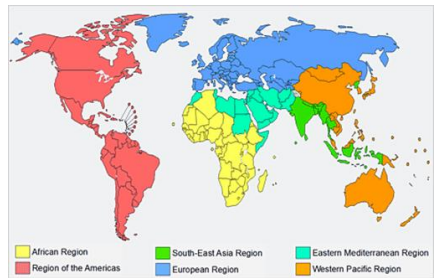
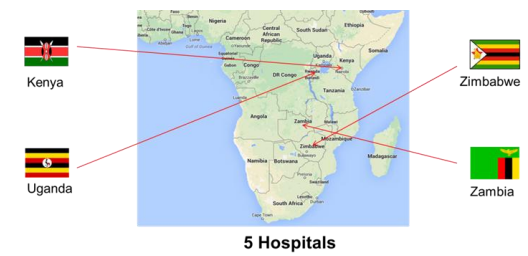
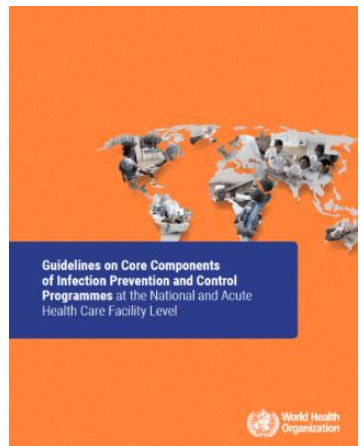
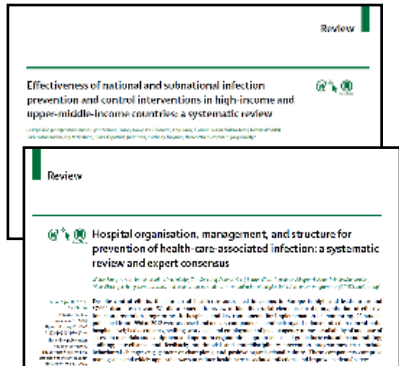
Global infection prevention and control priorities 2018–22: a call for action [www.thelancet.com/lancetgh](http://www.thelancet.com/lancetgh) Vol 5 December 2017



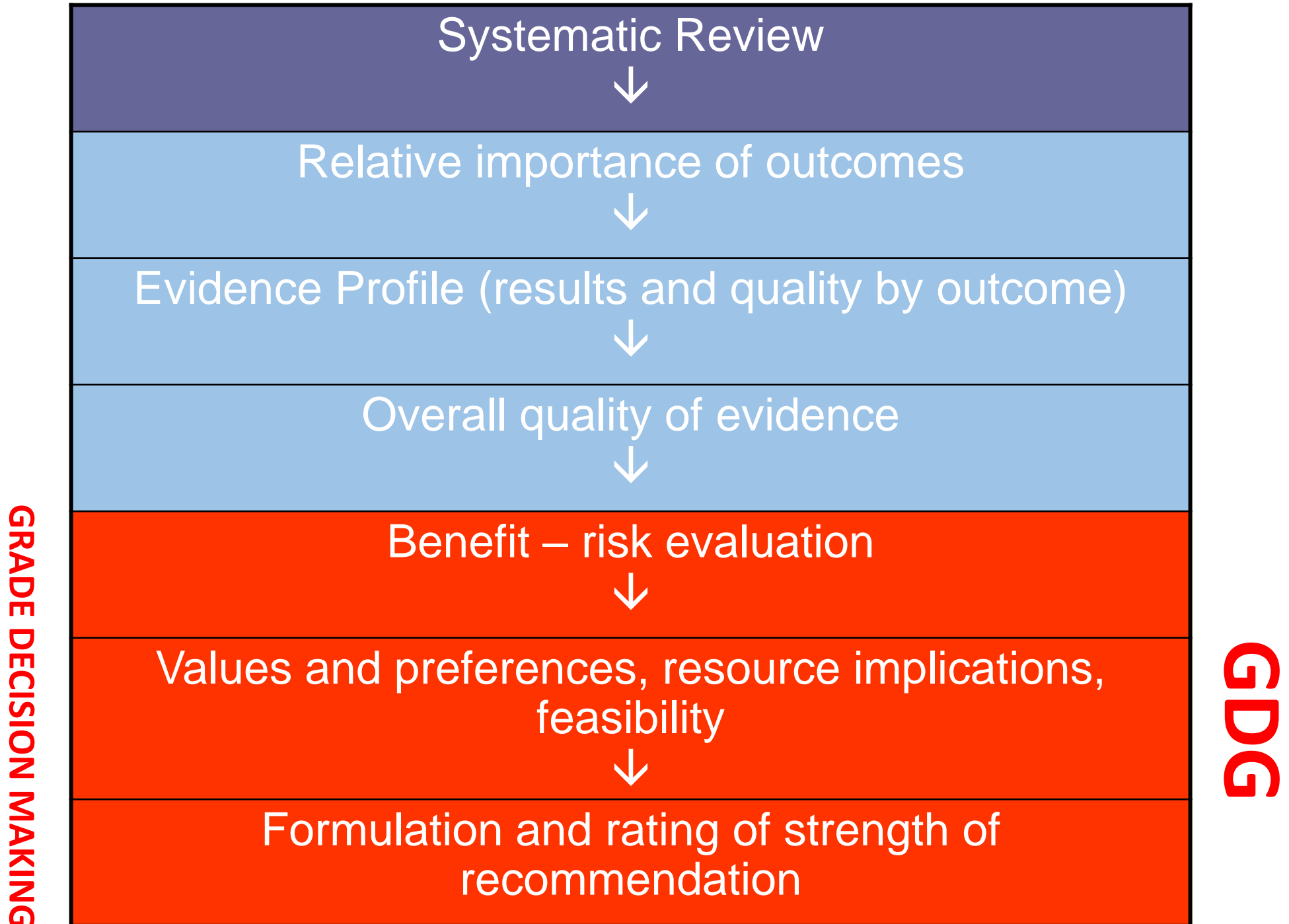
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# 2. Guidelines & implementation

2015-2018: 6 guidelines, about 60 implementation tools, 10 scientific papers



# WHO's process for developing Guidelines





# WHO IPC global guidelines




World Health Organization | Patient Safety  
A World Alliance for Safer Health Care

WHO Guidelines on Hand Hygiene in Health Care

First Global Patient Safety Challenge  
Clean Care is Safer Care



World Health Organization



INTERIM GUIDANCE

**Interim Infection Prevention and Control Guidance for Care of Patients with Suspected or Confirmed Filovirus Haemorrhagic Fever in Health-Care Settings, with Focus on Ebola**

December 2014


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WHO/HS/IG/2014.4/Rev.1


## GLOBAL GUIDELINES FOR THE PREVENTION OF SURGICAL SITE INFECTION




## Decontamination and Reprocessing of Medical Devices for Health Care Facilities



**Guidelines on Core Components of Infection Prevention and Control Programmes at the National and Acute Health Care Facility Level**

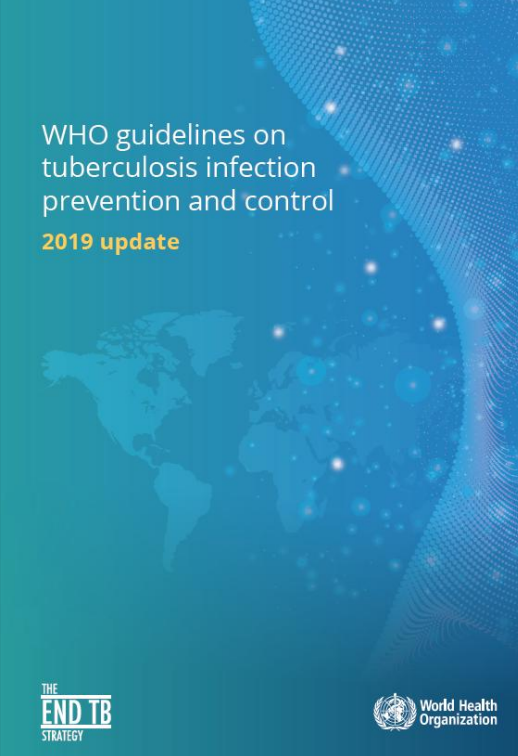


**WHO guideline on the use of safety-engineered syringes for intramuscular, intradermal and subcutaneous injections in health care settings**




WHO guidelines on tuberculosis infection prevention and control


**2019 update**



THE END TB STRATEGY



**Global guidelines for the prevention and control of carbapenem-resistant Enterobacteriaceae, Acinetobacter baumannii and Pseudomonas aeruginosa in health care facilities**



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

# Core components of infection prevention and control programmes at the national and acute health care facility level



**Core Component 1  
IPC Programme**



**Core Component 2  
IPC Guidelines**



**Core Component 3  
IPC Training/Education**



**Core Component 4  
HAI Surveillance**



**Core Component 5  
Multimodal Strategies**



**Core Component 6  
Monitoring, audit &  
feedback**



**Core Component 7  
Workload, staffing  
& bed occupancy**



**Core Component 8  
Built environment,  
materials &  
equipment for IPC**



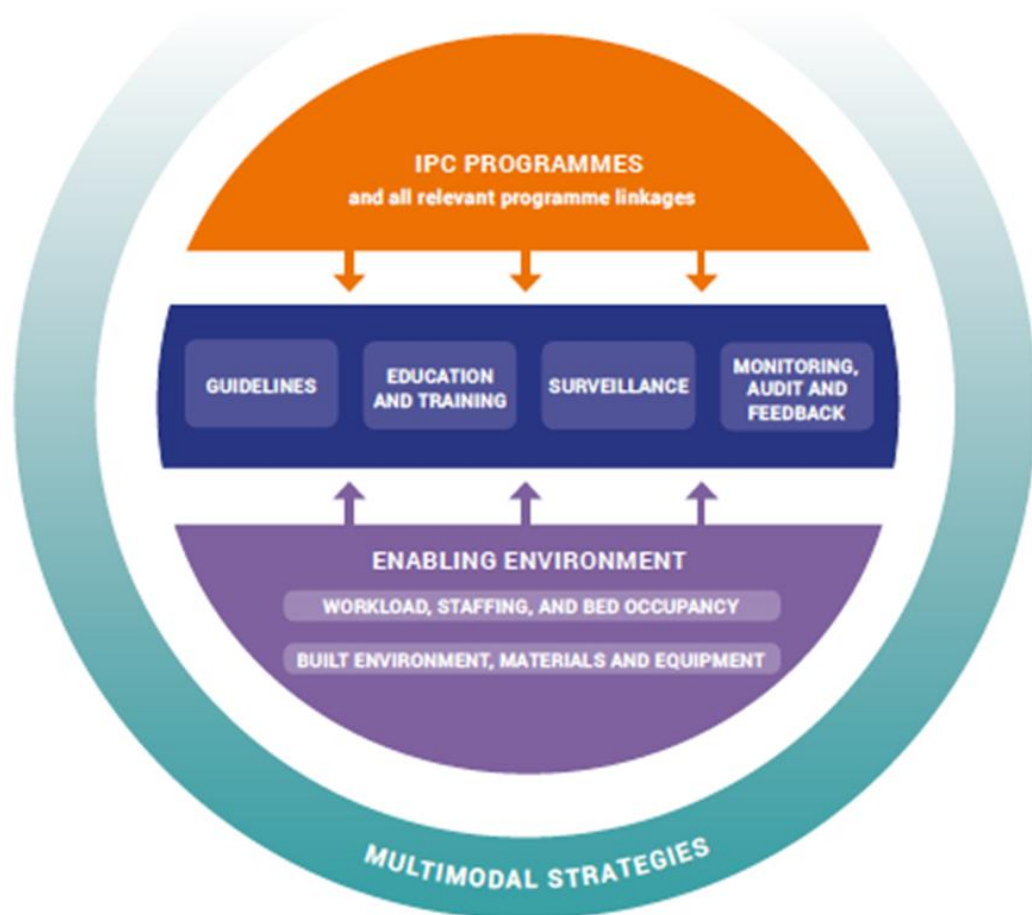
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# WHO core components for effective IPC programmes

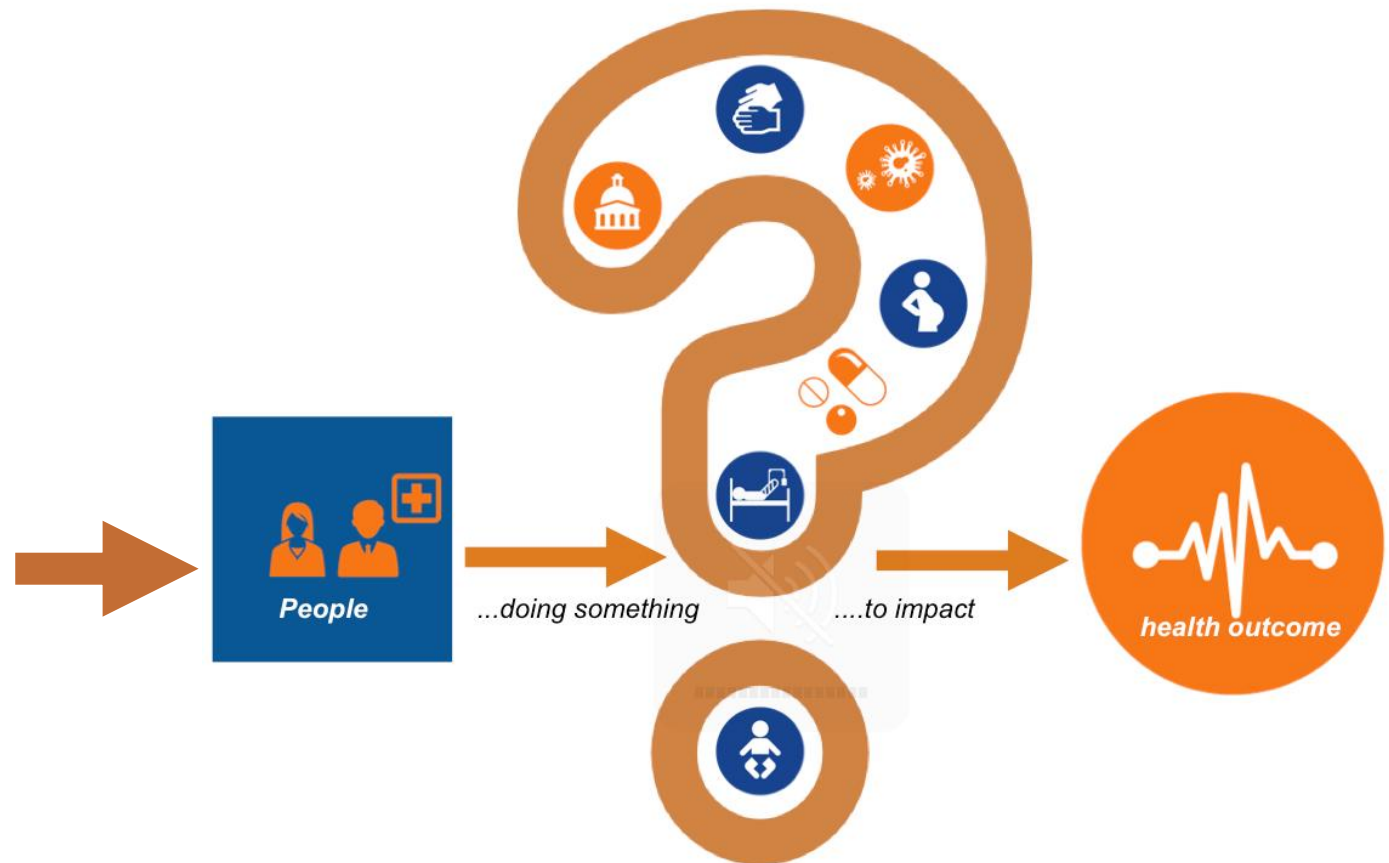
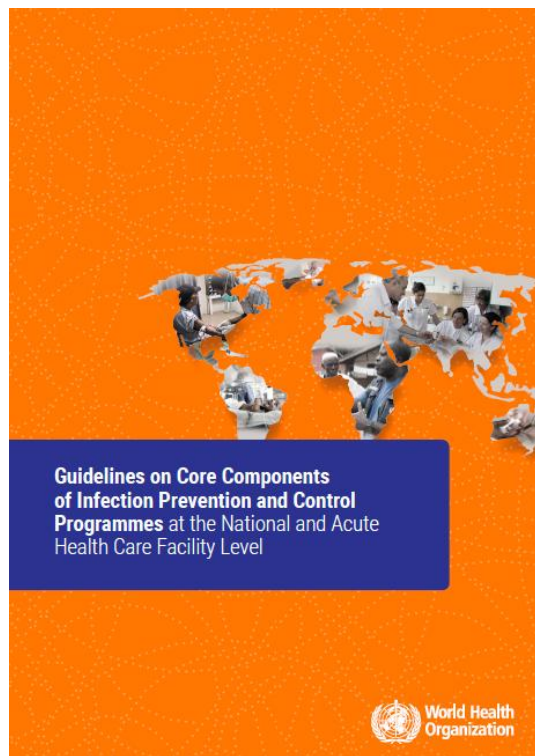
- 8 Core components
  - 8 Facility level
  - 6 National level
- 11 evidence\*-based recommendations
- 3 good practice statements

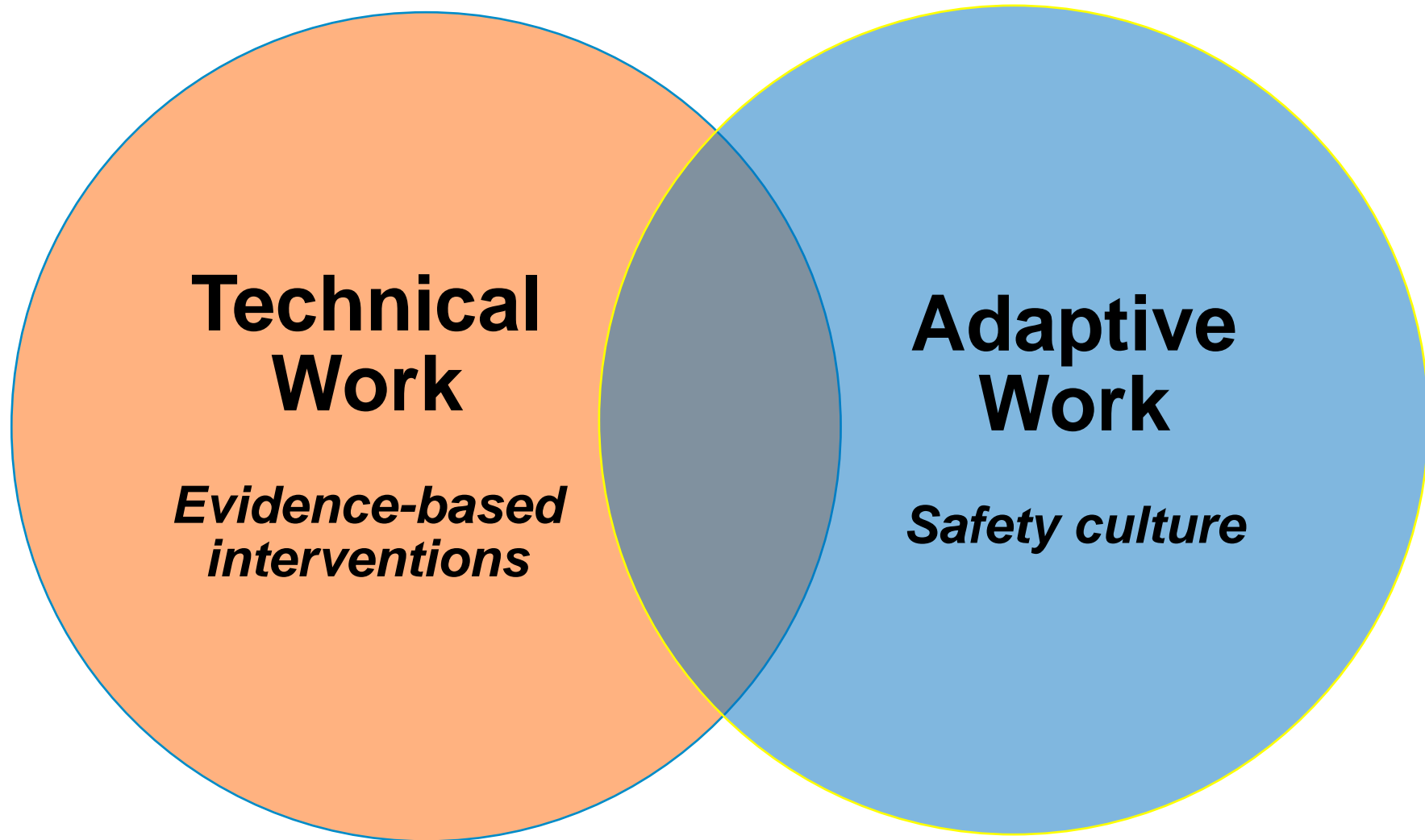
- \* Evidence from LMICs:
- 7 high-quality studies
  - 22 lower quality



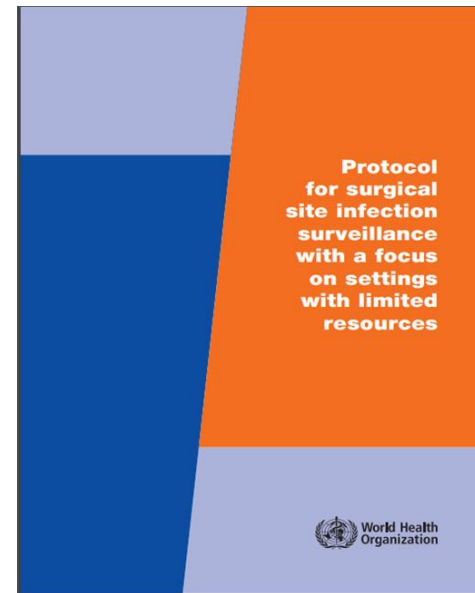
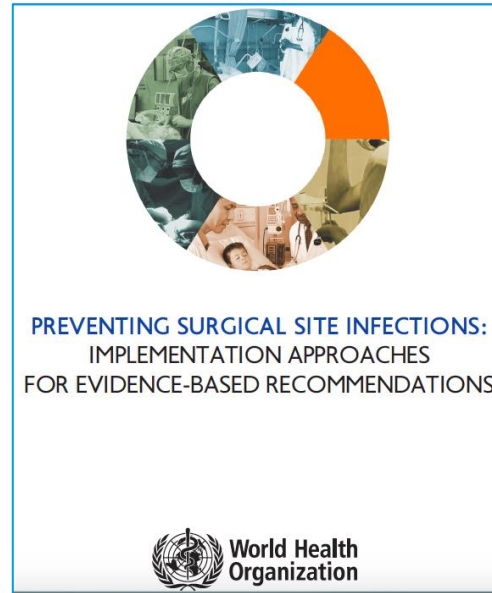
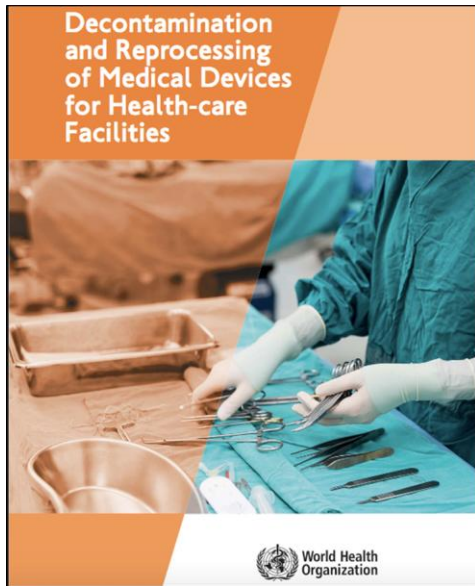
R= recommendation; GPS: good practice statement

# Translating guidelines to action





# Recently launched WHO SSI Prevention Implementation Package



## SURGICAL SITE INFECTION PREVENTION

### Key facts on decolonization of nasal carriers of *Staphylococcus aureus*

**THINGS YOU SHOULD KNOW**  
What does the World Health Organization (WHO) recommend?

The 2016 WHO Global guidelines for the prevention of surgical site infections recommend that patients with known nasal carriage of *Staphylococcus aureus* undergo:

- cardiothoracic and orthopaedic surgery should be decolonized** using intranasal applications of mupirocin 2% ointment with or without a combination of chlorhexidine gluconate (CHG) body wash (strong recommendation);
- other types of surgery** – treatment with intranasal applications of mupirocin 2% ointment with or without a combination of CHG body wash **may be considered** (conditional recommendation).

This recommendation applies to facilities where screening for *S. aureus* is feasible and may not apply to settings with a high prevalence of mupirocin resistance. Based on the lack of evidence, this recommendation is **not** applicable to paediatric patients.

**WHAT should be done?**



### HANDLE ANTIBIOTICS WITH CARE IN SURGERY

Misuse of antibiotics puts all surgical patients at risk

**REDUCE** the risk of surgical site infections (SSI) by improving SAP and infection prevention and control practices

**IMPROVE** quality of care and patient safety and reduce antibiotic resistance (AMR) through SSI reduction

Up to 33% of surgical patients get a postoperative infection, of which 51% can be antibiotic-resistant. Up to 15% of women around the world get an infection after a caesarean section. 43% of patients have surgical antibiotic prophylaxis (SAP) inappropriately continued after the operation.

**WHAT SHOULD HEALTH WORKERS DO TO PREVENT AMR IN SURGERY?**

- Give intravenous SAP – when recommended, depending on the type of operation – within 120 minutes preceding surgical incision.
- For effective SAP, adequate antibiotic tissue concentrations should be present at the time of surgical incision and throughout the procedure. Thus, antibiotics with a short half-life should be administered closer to incision time.

**WHO SHOULD BE INVOLVED IN ENSURING APPROPRIATE ANTIBIOTIC USE IN SURGERY?**

Implementation of antibiotic use in surgical services should be part of the antimicrobial stewardship programme.

**WHAT SHOULD YOU NOT DO?**

- Avoid prolonging SAP postoperatively.
- Avoid antibiotic wound irrigation.
- Avoid continuing antibiotic prophylaxis because there is a fever or suspected SSI or other infection.
- Avoid giving antibiotic treatment unless there is a fever or suspected SSI or other infection.

These recommendations are based on evidence from studies in adult patients, but they are considered valid also for paediatric patients.

www.who.int/infection-prevention/publications/ssi-handbook

## Advanced Infection Prevention and Control (IPC) Training

### Prevention of surgical site infection (SSI)

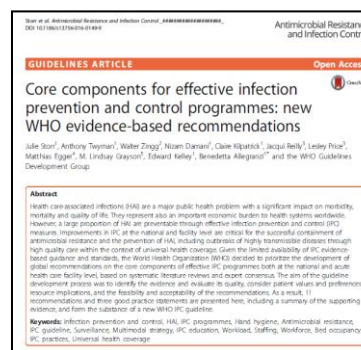
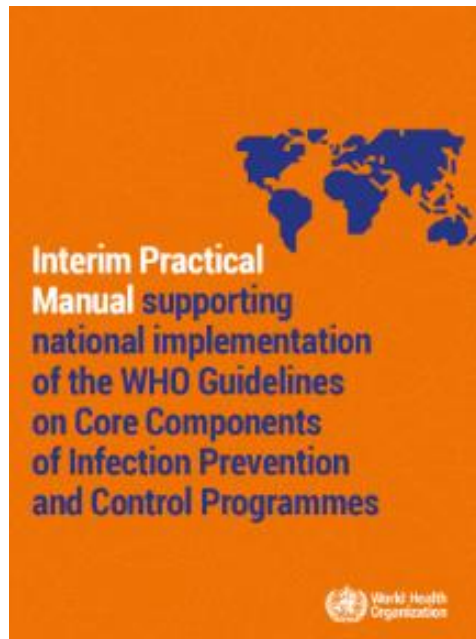
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## Fact sheets on SSI recommendations

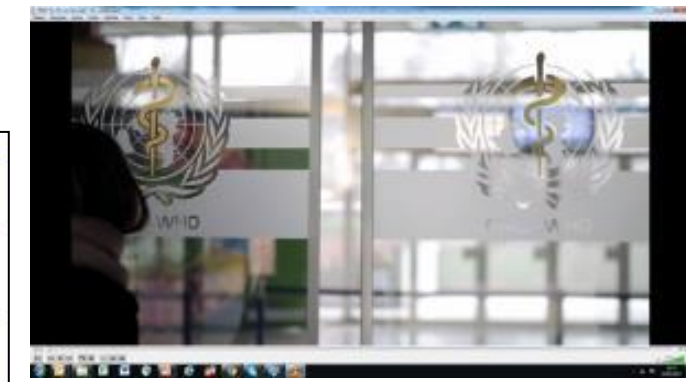
- Support access to necessary products – provision to patients may be required or desirable in some countries:
  - nasal mupirocin 2% ointment
  - CHG 2-4% soap body wash.
- For other types of surgery, consider a careful local evaluation about whether and how to apply this recommendation. In particular, regarding feasibility of carrier identification in a broader surgical patient population, priority of this intervention.
- Support the local screening policy of patients to detect *S. aureus* carriage – consider the local rates of *S. aureus* (MRSA) and patient-related factors.
  - Specifically look for previous *S. aureus*

<http://www.who.int/infection-prevention/tools/surgical/en/>

# Implementation resources for the WHO IPC Core Components Guidelines



Component	Recommendation	Checklist to support implementation	Reference
1. IPC programmes	Establish national, subnational and local IPC programmes for the purpose of preventing IAI and controlling AMR through IPC good practices.	<ul style="list-style-type: none"> <li>Programme objectives, functions, and activities clearly outlined</li> <li>Technical team of trained infection preventionists in place</li> <li>Dedicated IPC budget allocated</li> <li>Evidence that IPC programme is linked with other relevant programmes and professional organisations</li> </ul>	FACTORY Manual Chapter 1
2. Evidence-based guidelines	Develop evidence-based national IPC guidelines and related implementation strategies.	<ul style="list-style-type: none"> <li>Essential IPC guidelines developed or adapted from international standards</li> <li>Regulatory infrastructure and supplies to enable guideline implementation in place/being established</li> <li>Measures to support and monitor health care worker education and training on the guidelines (under 1 development)</li> </ul>	FACTORY Manual Chapter 2
3. Education & training	Support education and training of health care workers.	<ul style="list-style-type: none"> <li>Curriculum targets audience, learning objectives, competencies, and teaching strategy developed</li> <li>Pre-graduate and post-graduate IPC curricula (under 1) development</li> <li>New employee orientation and in-service continuous training on IPC (under 1) development</li> </ul>	FACTORY Manual Chapter 3
4. Surveillance	Establish risk surveillance programmes and networks that include surveillance for the likely health-care and community settings for surveillance purposes.	<ul style="list-style-type: none"> <li>Support and engagement by governments and authorities for IPC surveillance required</li> <li>Human and financial resources secured</li> <li>Minimum and laboratory capacity (under 1) development</li> <li>Surveillance systems developed                             <ul style="list-style-type: none"> <li>Clear objectives</li> <li>Standardised case definitions</li> <li>Methods</li> </ul> </li> <li>Process for data analysis, reporting, and evaluation of data quality</li> <li>Specific training for data collectors established</li> </ul>	FACTORY Manual Chapter 4



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

# 3. Campaigns & advocacy



#HandHygiene #Sepsis

## IT'S IN YOUR HANDS

### PREVENT SEPSIS IN HEALTH CARE

World Health Organization

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**SAVE LIVES  
CLEAN YOUR HANDS**

### THE ROLE OF INFECTION PREVENTION AND CONTROL IN PREVENTING ANTIBIOTIC RESISTANCE IN HEALTH CARE

**On average, 1 in every 10 patients is affected by health care-associated infections (HAIs).**

- Antibiotic-resistant HAIs can double or more, the likelihood of death.
- Over 50% of surgical site infections can be resistant to antibiotics.

Effective infection prevention and control (IPC) and water, sanitation and hygiene (WASH) stops the spread of antibiotic-resistant organisms

IPC and WASH in health care protects patients and health workers from avoidable infections

The building blocks of IPC and WASH in health care facilities are:

- effective hygiene practices, including hand hygiene
- core components of IPC programmes
- a clean, well-functioning environment and equipment

This leads to:

- less spread of antibiotic-resistant organisms
- a reduced need for antibiotics

Every infection prevented is an antibiotic treatment avoided

- Play your role in controlling antibiotic resistance!
- Ensure IPC programmes are in place and champion IPC practices

IPC saves millions of lives every year

**HANDLE ANTIBIOTICS WITH CARE**

World Health Organization

**GET THE POINT**

**MAKE SMART INJECTION CHOICES**



<https://www.youtube.com/watch?v=nw9TMfqc3cE>

<https://youtu.be/G2PUBbeHyVs>



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Organization



Clean care for all - It's in your hands! WHO global hand hygiene campaign day - 5 May 2019



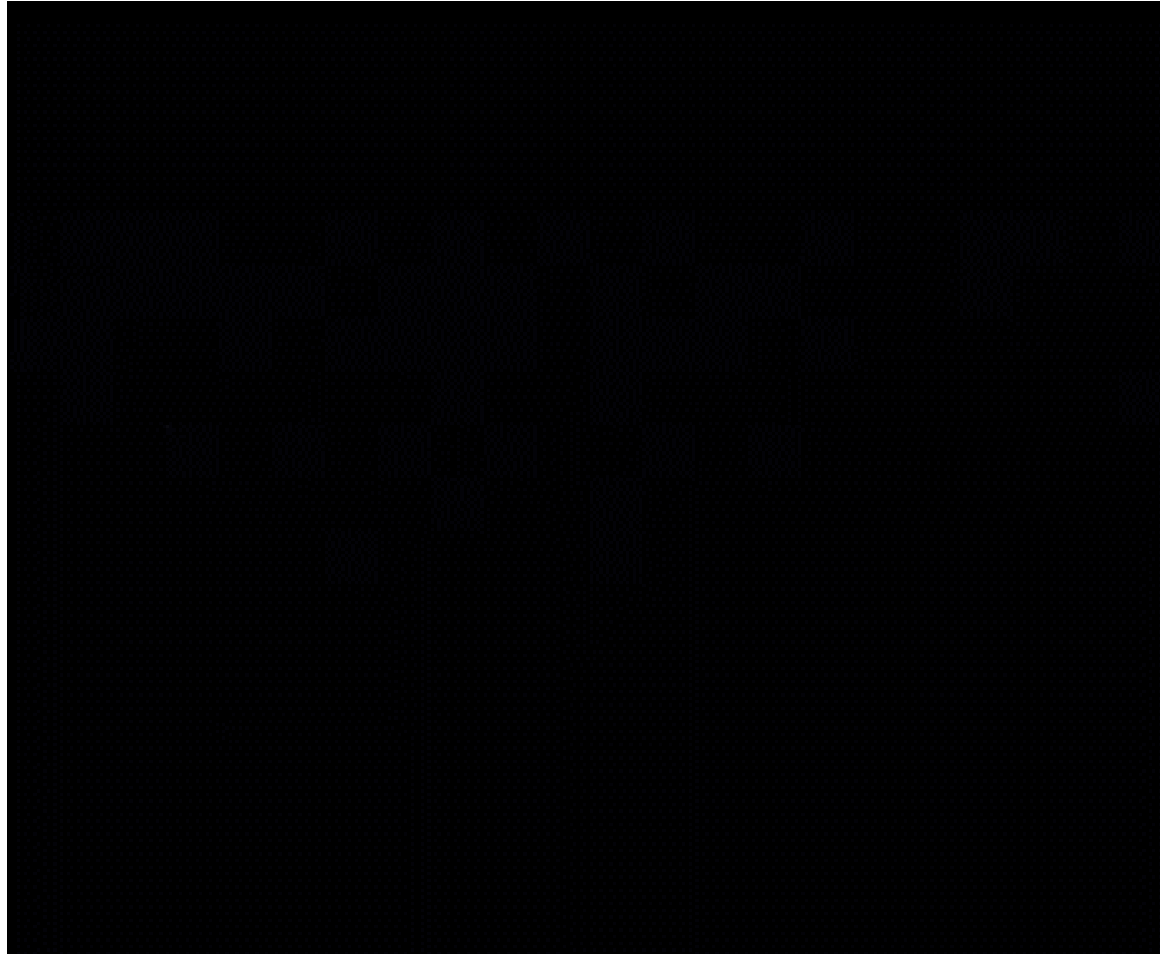
# Una campagna di comunicazione che ha funzionato – (Francia)



<https://www.youtube.com/watch?v=6JdRuhZnZpw>



# Una che ha funzionato meno (Spagna)



<https://www.msssi.gob.es/campannas/campanas06/Antibioticos.htm>



# Adeguarsi alla storia e cultura: Polonia



<https://www.youtube.com/watch?v=9M6oXpaTM7s>

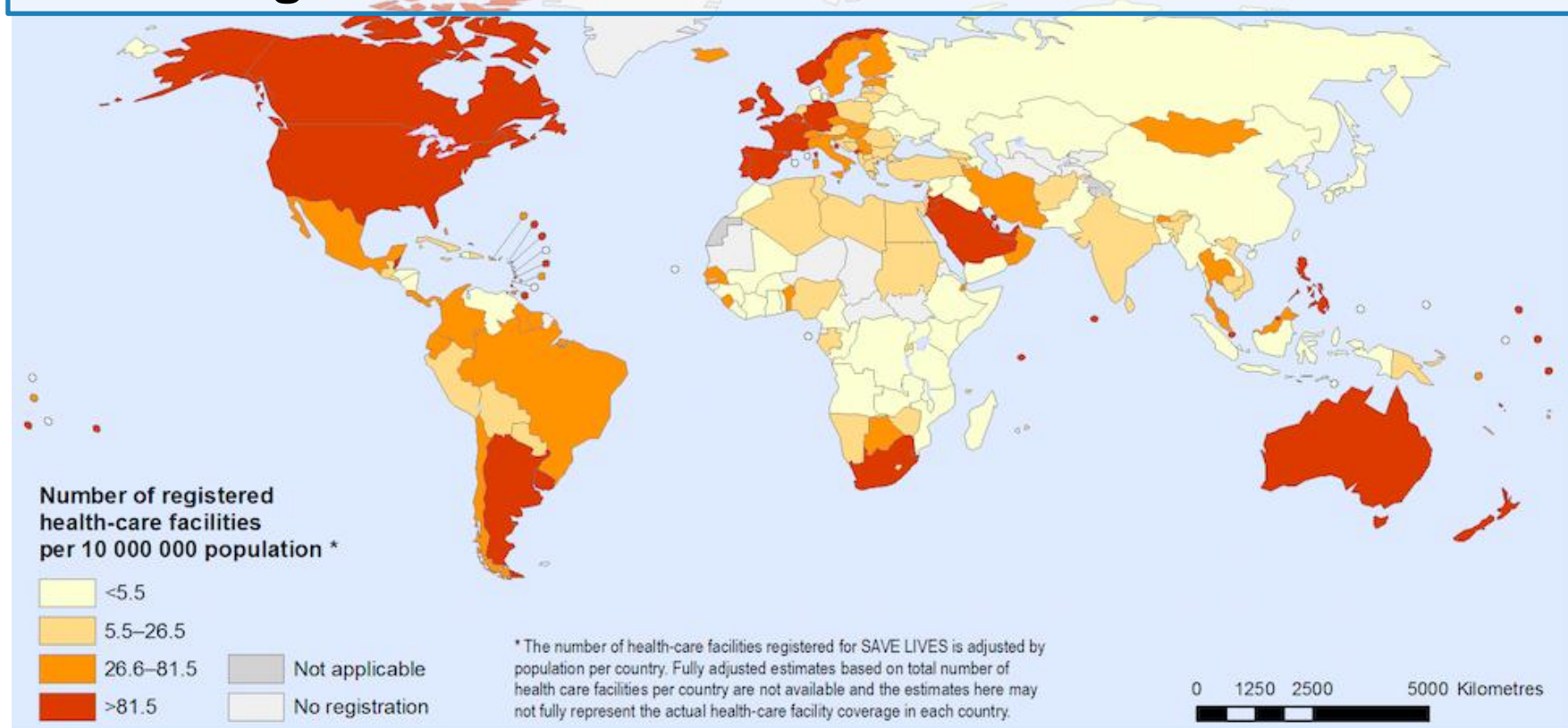


# SAVE LIVES: Clean Your Hands: an ongoing worldwide campaign



Countries with health-care facilities registered for  
SAVE LIVES: Clean Your Hands global campaign

As of 1 May 2019, **22,144 facilities** in **182 countries** –  
covering over 13 million staff and over 5.1 million beds



# 4. Capacity building: IPC country support 2017-18



## Support and technical expertise for:

- National IPC programme strengthening
- IPC integration in the AMR NAPs
- Facility assessments & IPC Core components implementation
- IPC training
- National guidelines development
- HAI surveillance
- Injection Safety
- Integration with WASH /quality policy/AMR NAPs/WHE work

## Active support to countries

- Liberia
- Mauritania
- Senegal
- Togo
- Armenia
- Georgia
- Haiti
- India
- Thailand
- Egypt
- Pakistan
- **Country groups (workshops):  
AFR, EUR, WPR, LAM, SEAR**

**IPC Advanced Training Package**

# WHO IPC Training Package

- Leadership and IPC program management
- Prevention of urinary tract infections
- Prevention of catheter-associated bloodstream infections
- Prevention of respiratory tract infections
- **Prevention of surgical site infections**
- Reprocessing of medical devices
- Outbreak management in healthcare settings
- IPC to control antibiotic resistance
- HAI surveillance
- **Injection safety**

- **Slides deck**
- **Trainer's manual**
- **Student's handbook**
- **Videos**
- **E-learning module**



# 5. Measuring & learning

## National & facility-level assessment tools



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

**World Health Organization**

**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 2 (iPCAT2)**

Country: \_\_\_\_\_

National health authority: \_\_\_\_\_

**Details of person responding to the questionnaire:**  
 Name: \_\_\_\_\_  
 Title/position: \_\_\_\_\_  
 Institution: \_\_\_\_\_  
 E-mail: \_\_\_\_\_

**Details of person completing the questionnaire (leave blank if self-assessment):**  
 Name: \_\_\_\_\_  
 Title/position: \_\_\_\_\_  
 Institution: \_\_\_\_\_  
 E-mail: \_\_\_\_\_

Date(s) of assessment: DDMMYY \_\_\_\_\_  
 Date(s) of previous assessment: DDMMYY \_\_\_\_\_

Assessment mode: \_\_\_\_\_  
 (Choose from dropdown list)

Self-assessment interview

**NEVER CARE WITHOUT AVOIDABLE INFECTIONS**

\*This tool is based on the 2016 WHO Guidelines on core components for infection prevention and control programmes at the national and acute healthcare facility level (<http://www.who.int/infection-prevention/publications/IPC-components-guidelines/>)

The tool supports steps two and four of the five implementation steps (baseline 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/campaigns/clean-hands/cc-implementation-guideline.pdf?ua=1>)

Question	Answer	Score
<b>1. Do you have an IPC programme?</b> Choose one answer	<input type="checkbox"/> No <input type="checkbox"/> Yes, without clearly defined objectives <input type="checkbox"/> Yes, with clearly defined objectives and annual activity plan	0 5 10
<b>2. Is the IPC programme supported by an IPC team comprising of IPC professionals?</b> Choose one answer	<input type="checkbox"/> No <input type="checkbox"/> Not a team, only an IPC focal person <input type="checkbox"/> Yes	0 5 10
<b>3. Does the IPC team have at least one full-time IPC professional or equivalent (nurse or doctor working 100% in IPC) available?</b> Choose one answer	<input type="checkbox"/> No IPC professional available <input type="checkbox"/> No, only a part-time IPC professional available <input type="checkbox"/> Yes, one per > 250 beds <input type="checkbox"/> Yes, one per ≤ 250 beds	0 2.5 5 10
<b>4. Does the IPC team or focal person have dedicated time for IPC activities?</b>	<input type="checkbox"/> No <input type="checkbox"/> Yes	0 10
<b>5. Does the IPC team include both doctors and nurses?</b>	<input type="checkbox"/> No <input type="checkbox"/> Yes	0 10

A	B	C	D	E	F	G	H	I	J	K	L	M
<b>2 IPC guidelines* (Interim practical manual, pages 23-30)</b>										<b>100%</b>		
<b>2.1 Development, dissemination and implementation of national technical guidelines</b>										<b>100%</b>		
2.1.1 The IPC programme has a mandate to produce guidelines for preventing and controlling IPC										Y		National IPC programme plan, UPCA & national IPC programme plan
2.1.2 The guidelines are for national coverage, including all acute health care facilities (both public and private)										Y		National IPC programme plan
2.1.3 The guidelines are reviewed at least every five years and updated to reflect the current evidence base										Y		The guidelines & interim
2.1.4 The development of guidelines involves the use of evidence-based scientific knowledge and international standards										Y		The guidelines & interim
2.1.5 The IPC programme has the necessary expertise to develop national guidelines										Y		Review, training materials or equivalent
2.1.6 The IPC programme actively addresses guideline adaptation and standardisation of effective preventive practices (standard operating procedures) and their implementation to reflect local conditions										Y		The guidelines & interim & national IPC plan
2.1.7 Guideline development involves early engagement of key stakeholders, including involvement of programmes closely linked to IPC (see section 1.3)										Y		The guidelines & interim & national IPC plan
2.1.8 The IPC programme develops national implementation strategies using available national implementation support packages										Y		The guidelines & interim & national IPC plan
2.1.9 The IPC programme has the capacity to ensure that the infrastructure and supply-related requirements to enable facility-level guideline implementation are in place being addressed										Y		Interim & national IPC programme plan
<b>2.2 Education and training of relevant healthcare workers on IPC guidelines</b>										<b>100%</b>		
2.2.1 The IPC programme supports and mandates a programme of health worker education and training on guideline recommendations across all facilities										Y		National IPC programme plan & interim
2.2.2 The IPC programme supports and mandates a programme of health worker education and training on guideline recommendations at the pregraduate level										Y		National IPC programme plan & interim
2.2.3 The IPC programme supports and mandates a programme of health worker education and training on guideline recommendations at the postgraduate level										Y		National IPC programme plan & interim
<b>2.3 Monitoring of guideline adherence</b>										<b>100%</b>		
2.3.1 A national system and schedule of monitoring and evaluation is in place to check on adherence with guideline recommendations, for example, at least annually										Y		The guidelines & interim
<b>2.4 Minimum set of national guidelines</b>										<b>100%</b>		
2.4.1 National guidelines are based on four priorities: frequency of practices and practices associated with the populations most at risk of HAI										Y		The guidelines & interim
2.4.2 Basic/essential guidelines have been developed based on international standards**										Y		The guidelines & interim
2.4.3 Specific guidelines to prevent the most prevalent HAIs (catheter-associated urinary tract infection, central line-associated bloodstream infection, surgical site infection, ventilator-associated infection) have been developed, depending on the context and complexity of care required										Y		The guidelines & interim

**World Health Organization** | **Patient Safety** | **SAVE LIVES**  
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**Observation Form**

Facility: \_\_\_\_\_ Period Number: \_\_\_\_\_ Session Number: \_\_\_\_\_  
 Date: (dd/mm/yyyy) / / \_\_\_\_\_ Observer: \_\_\_\_\_  
 Ward: \_\_\_\_\_ Max End time: \_\_\_\_\_ Page N°: \_\_\_\_\_  
 Department: \_\_\_\_\_ Session duration: \_\_\_\_\_ City: \_\_\_\_\_  
 Country: \_\_\_\_\_

Prof. cat. Code N°	Prof. cat. Code N°	Prof. cat. Code N°	Prof. cat. Code N°	Prof. cat. Code N°	Prof. cat. Code N°
1	2	3	4	5	6
Obs.	Obs.	Obs.	Obs.	Obs.	Obs.
Inf.	Inf.	Inf.	Inf.	Inf.	Inf.
Act.	Act.	Act.	Act.	Act.	Act.
Obs.	Obs.	Obs.	Obs.	Obs.	Obs.
Inf.	Inf.	Inf.	Inf.	Inf.	Inf.
Act.	Act.	Act.	Act.	Act.	Act.
Obs.	Obs.	Obs.	Obs.	Obs.	Obs.
Inf.	Inf.	Inf.	Inf.	Inf.	Inf.
Act.	Act.	Act.	Act.	Act.	Act.
Obs.	Obs.	Obs.	Obs.	Obs.	Obs.
Inf.	Inf.	Inf.	Inf.	Inf.	Inf.
Act.	Act.	Act.	Act.	Act.	Act.

\* To be completed by the data manager  
 \*\* Optional: to be drafted & approved, according to the local needs and regulations

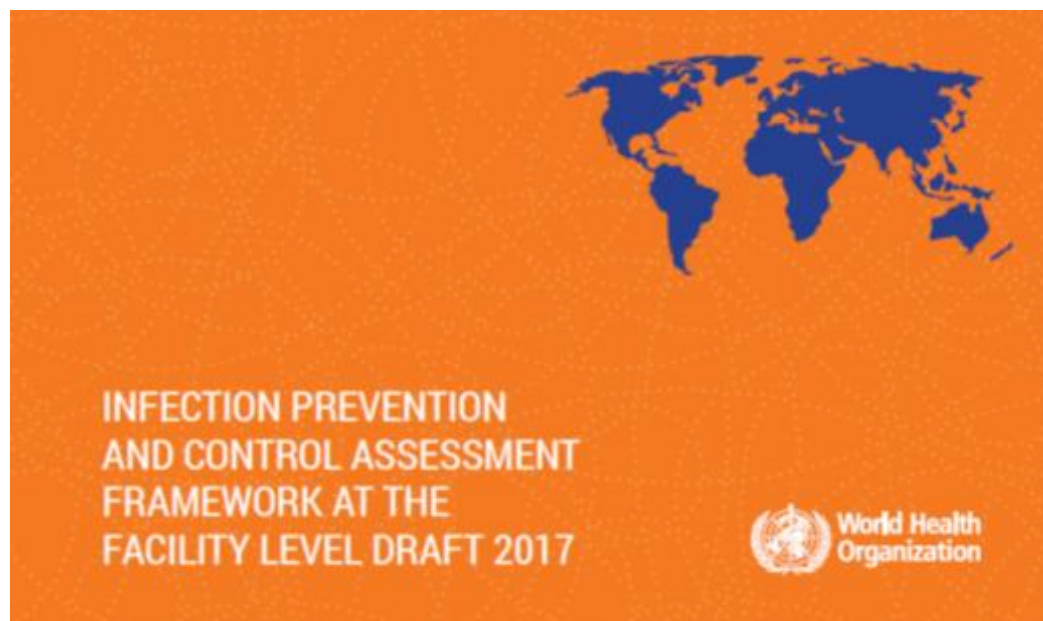
- Hand hygiene as a national indicator
- Global IPC and hand hygiene facility surveys
- Global survey of national IPC programmes

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**Hand Hygiene Self-Assessment Framework**

Introduction and user instructions





### Core component 1: Infection Prevention and Control (IPC) programme

Question	Answer	Score
1. Do you have an IPC programme? <sup>3</sup> Choose one answer	<input type="checkbox"/> No	0
	<input type="checkbox"/> Yes, without clearly defined objectives	5
	<input type="checkbox"/> Yes, with clearly defined objectives <b>and</b> annual activity plan	10
2. Is the IPC programme supported by an IPC team comprising of IPC professionals? <sup>2</sup> Choose one answer	<input type="checkbox"/> No	0
	<input type="checkbox"/> Not a team, <i>only</i> an IPC focal person	5
	<input type="checkbox"/> Yes	10
3. Does the IPC team have at least one full-time IPC professional or equivalent (nurse or doctor working 100% in IPC) available? Choose one answer	<input type="checkbox"/> No IPC professional available	0
	<input type="checkbox"/> No, <i>only</i> a part-time IPC professional available	2.5
	<input type="checkbox"/> Yes, one per > 250 beds	5
	<input type="checkbox"/> Yes, one per ≤ 250 beds	10
4. Does the IPC team or focal person have dedicated time for IPC activities?	<input type="checkbox"/> No	0
	<input type="checkbox"/> Yes	10
5. Does the IPC team include both doctors and nurses?	<input type="checkbox"/> No	0
	<input type="checkbox"/> Yes	10
6. Do you have an IPC committee <sup>5</sup> actively supporting the IPC team?	<input type="checkbox"/> No	0
	<input type="checkbox"/> Yes	10

### Box 8. IPCAF scoring interpretation

Score	Interpretation
0-200	<b>Inadequate</b> IPC core components' implementation is deficient. Significant improvement is required.
201-400	<b>Basic</b> Some aspects of the IPC core components are in place, but not sufficiently implemented. Further improvement is required.
401-600	<b>Intermediate</b> Most aspects of IPC core components are appropriately implemented. Continue to improve the scope and quality of implementation and focus on the development of long-term plans to sustain and further promote the existing IPC programme.
601-800	<b>Advanced</b> The IPC core components are fully implemented according to the WHO recommendations and appropriate to the needs of your facility.

<http://www.who.int/infection-prevention/tools/core-components/en/>  
[www.who-ipc-survey.org](http://www.who-ipc-survey.org)

# WHO 2019 Global Survey on Infection Prevention and Control and Hand Hygiene

## Facility-level assessments in a spirit of improvement



16 January – 16 July

All health care facilities and countries are invited to participate!

Find instructions here <https://www.who.int/infection-prevention/campaigns/ipc-global-survey-2019/en/>

Submit here: [www.who-ipc-survey.org](http://www.who-ipc-survey.org)

**“It always seems impossible,  
until it’s done”**

**“We can change the world  
and make it a better place.  
It is in your hands  
to make a difference.”**

**”**

**~ Nelson Rolihlahla Mandela**



**World Health  
Organization**