Linee guida globali per la prevenzione delle infezioni del sito chirurgico: alla ricerca di una strategia multimodale per un'implementazione facilmente applicabile.

World Health Organization

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Healthcare-associated infections – a threat to patient safety in Europe

World Health Organization

In 2016 and 2017, ECDC coordinated point prevalence surveys to collect data on healthcare-associated infections (HAIs) in hospitals and long-term care facilities in EU/EEA countries. Although some HAIs can be treated easily, others may more seriously affect a patient's health, increasing their stay in the hospital and hospital costs. HAIs in hospitals alone cause more deaths in Europe than any other infectious disease under surveillance at ECDC.

On any given day:

Hospitals

1 / 15
hospital patients have at least one HAI.

98 000
patients have at least one HAI.

Long-term care facilities

1 / 26
long-term care facilities residents have at least one HAI.

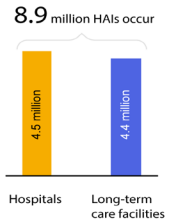
130 000
residents have at least one HAI.

Facts

A total of 8.9 million HAIs were estimated to occur each year in European hospitals and long-term care facilities combined.

HAIs in hospitals (for example pneumonia, surgical site infections and bloodstream infections, are usually more severe than HAIs in long-term care facilities (for example respiratory infections other than pneumonia, urinary tract infections and skin and soft issue infections).

More than half of certain HAIs are considered preventable.



Microbiological samples

HAIs are frequently treated without taking microbiological samples or samples remain negative.

Microorganisms

The responsible microorganism was identified in 53% of HAIs in hospitals and only in 19% of HAIs in long-term care facilities.

Resistance to antibiotics

1 in 3 bacteria associated with HAIs, both in hospitals and in long-term care facilities, was resistant to antibiotics.

Measures to prevent healthcare-associated infections:

Infection prevention and control, including hand hygiene as well as screening for carriage of/infection with multidrug-resistant bacteria and isolation of carriers/infected patients.

Training for all healthcare staff.

Surveillance of HAIs at local and national level.

Antimicrobial stewardship programmes.

Improved information for patients, residents and their relatives about what they can themselves do to prevent HAIs and to use antibiotics prudently.

Improved microbiological laboratory support in hospitals and especially in long-term care facilities.

ecdc EUROPEAN CENTRE FOR DISEASE PREVENTION AND CONTROL

EUROPEAN ANTIBIOTIC AWARENESS DAY
A EUROPEAN HEALTH INITIATIVE

ecdc.europa.eu
antibiotic.ecdc.europa.eu

#KeepAntibioticsWorking
#EAAD

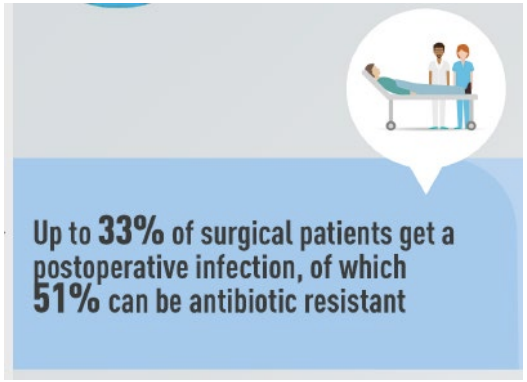
The problem of SSI and AMR in surgical services

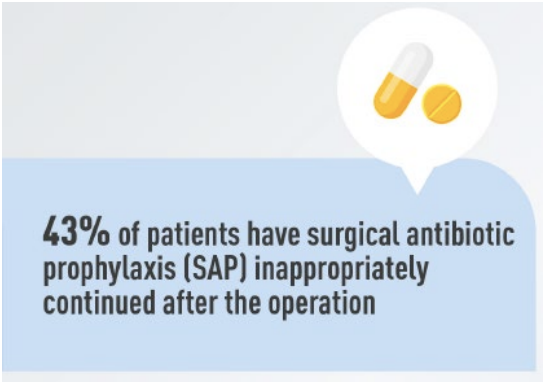
World Health Organization

- Up to 33% of surgical patients get a postoperative infection, of which 51% can be antibiotic resistant

- 43% of patients have surgical antibiotic prophylaxis (SAP) inappropriately continued after the operation

- Surgical site infections threaten the lives of millions of surgical patients each year and contribute to the spread of antibiotic resistance





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

Care without harm…

Why IPC is so important for patient outcomes

World Health Organization

>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

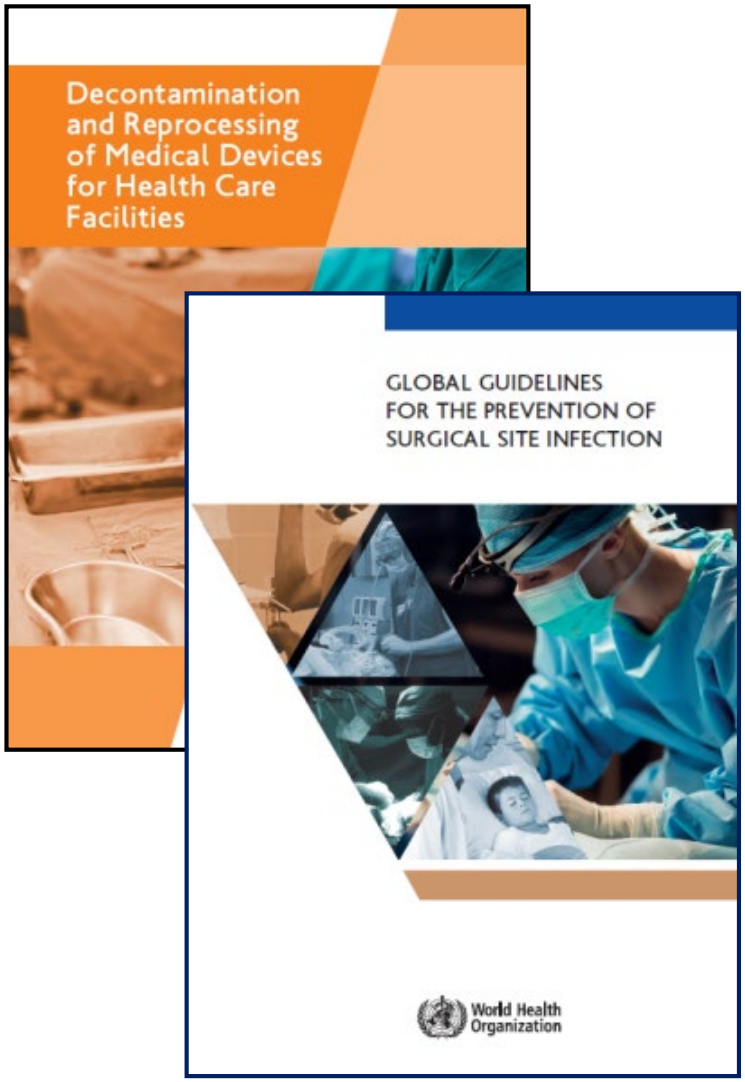
44% Reduction — A safety culture and prevention programme reduced SSI risk in African hospitals by 44%

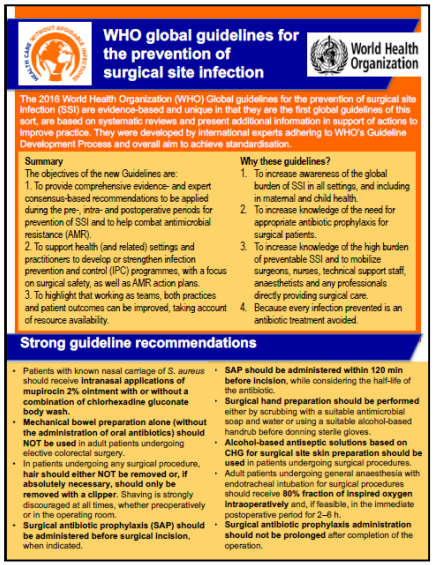
80% Compliance — Between 2010 and 2015 Australia achieved and sustained 80% hand hygiene compliance in hospitals nationwide

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

WHO global guidelines for SSI prevention

World Health Organization





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

Allegranzi B at al. Lancet Infect Dis, 2016

Here we are...!!

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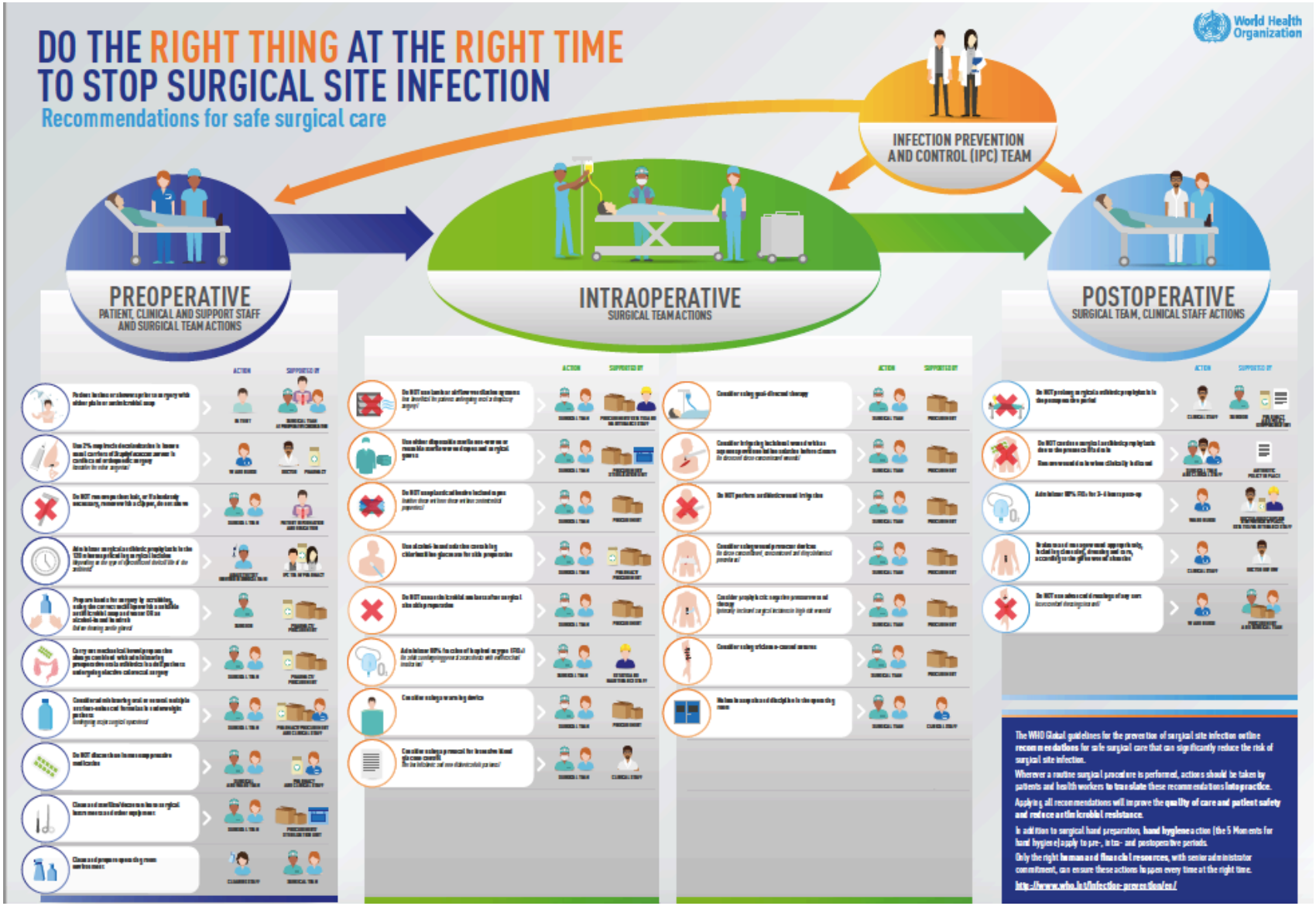
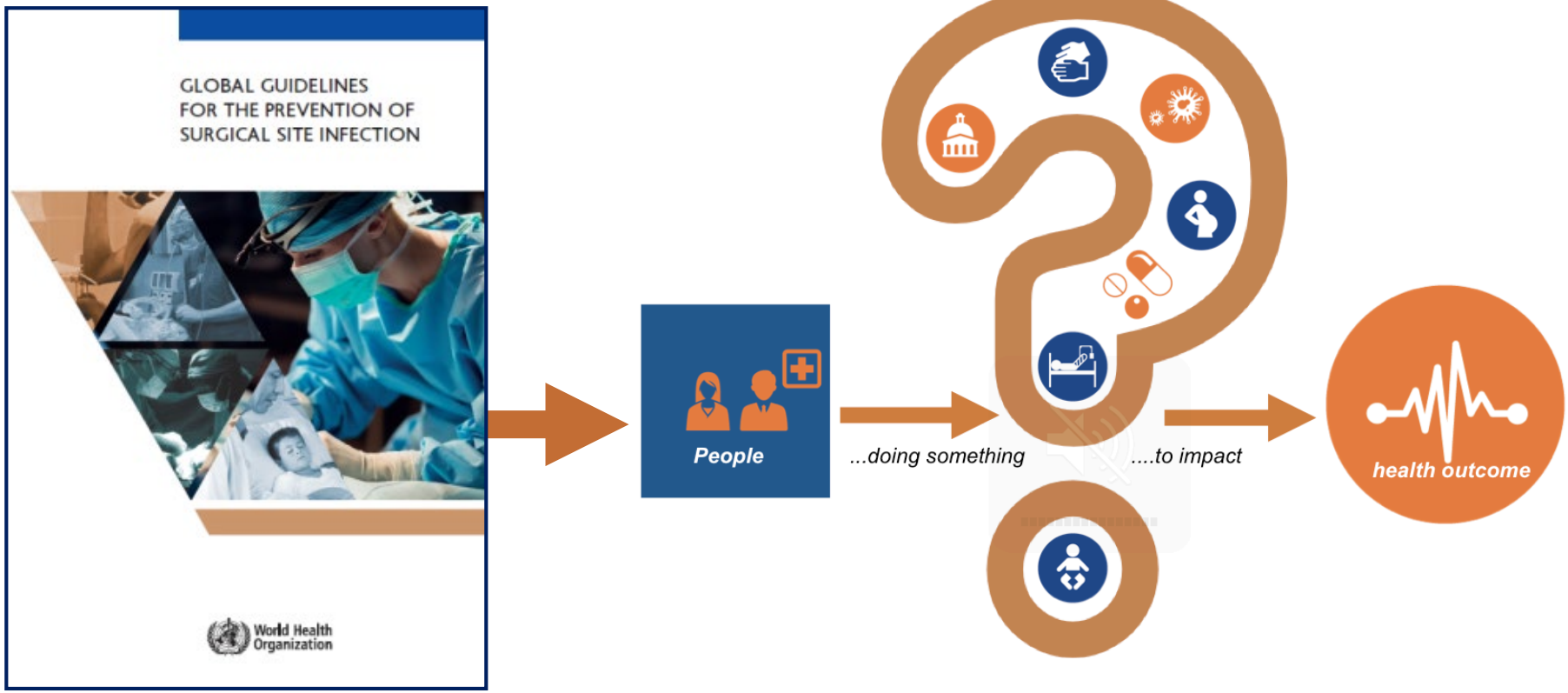
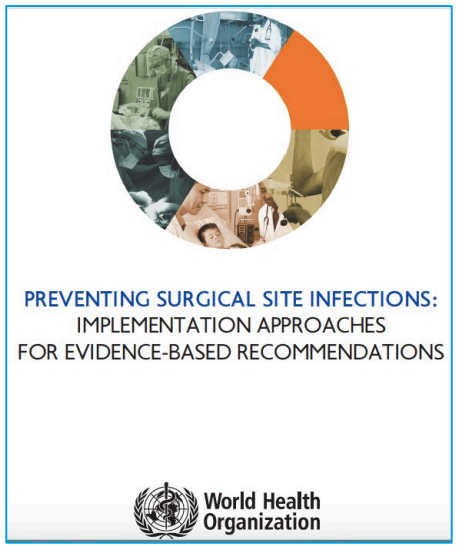


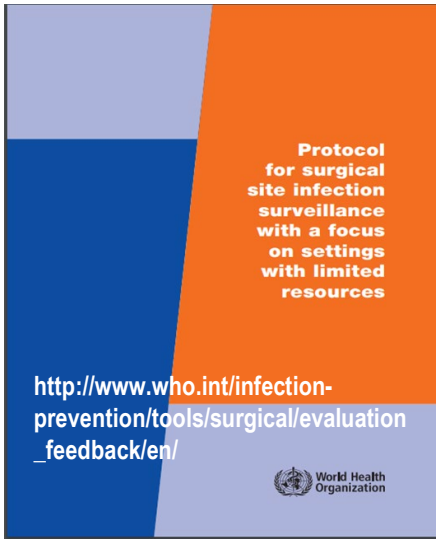
Translating guidelines into action



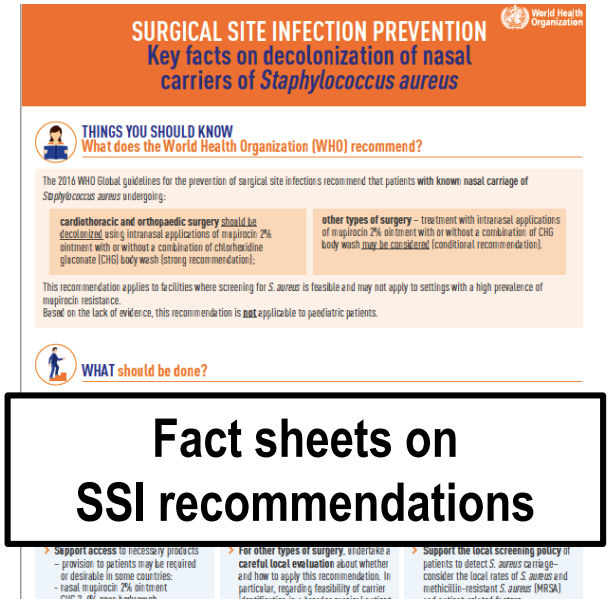
WHO SSI Prevention Implementation Package

World Health Organization





WHO Adaptive Tools to Support SSI Prevention Implementation



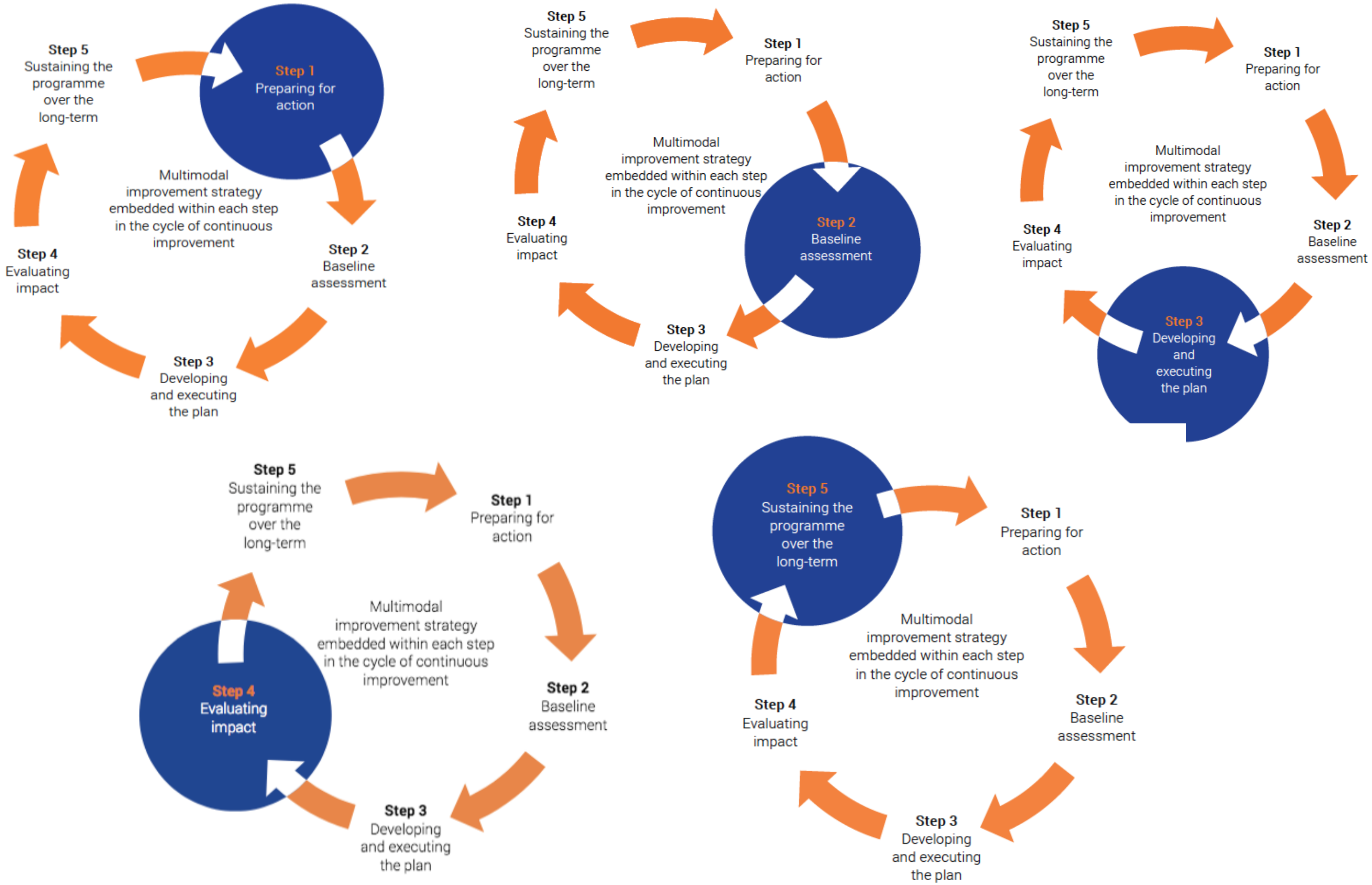
Fact sheets on SSI recommendations

IMPLEMENTATION PLATFORM

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

Helping health facilities prepare for implementation

World Health Organization



Summary of a multimodal improvement strategy

World Health Organization

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

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.

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.

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).

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.

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.

Multidisciplinary team

Source: http://www.who.int/infection-prevention/tools/core-components/cc-implementation-guideline.pdf?ua=1

Reminders and communication

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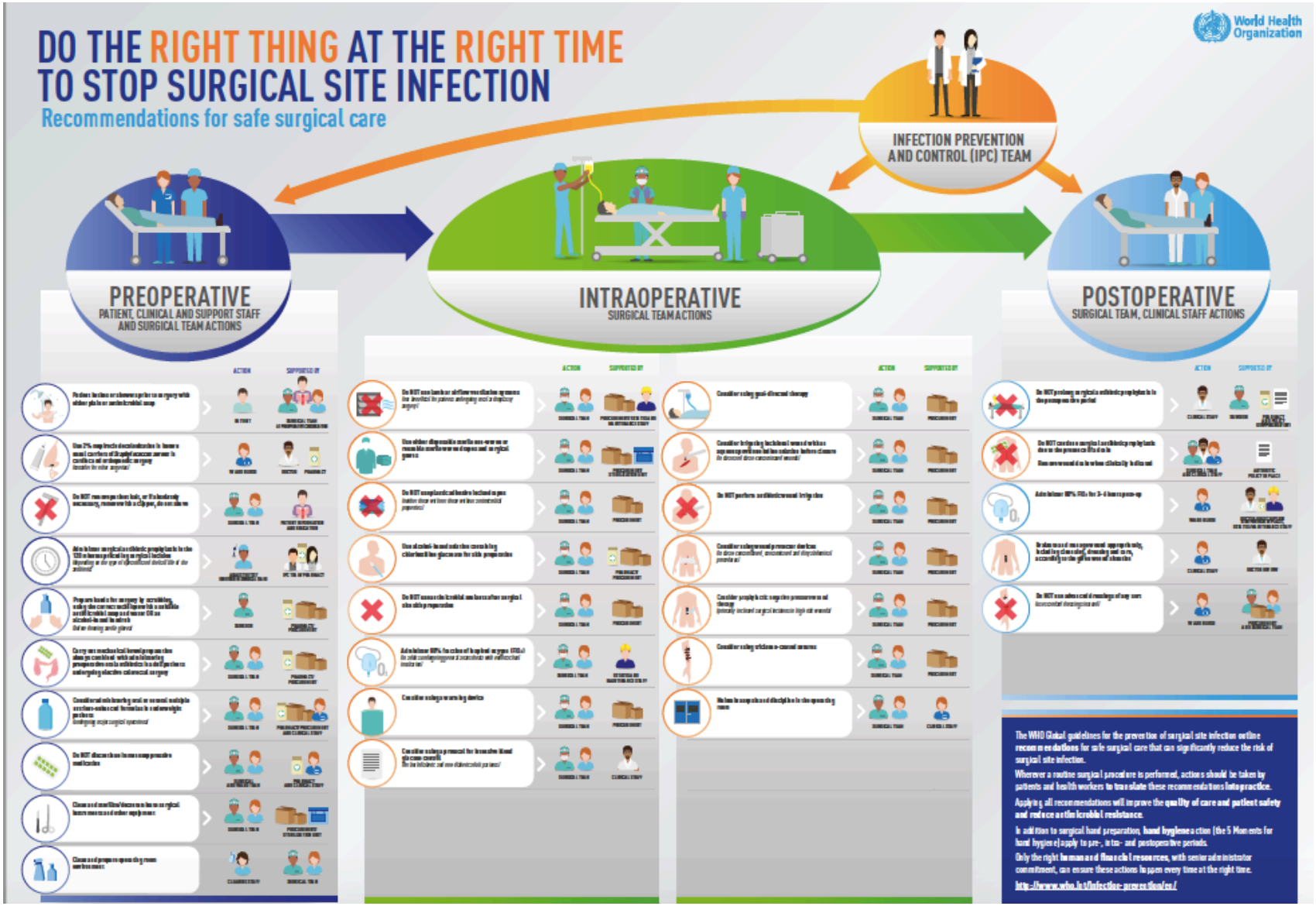

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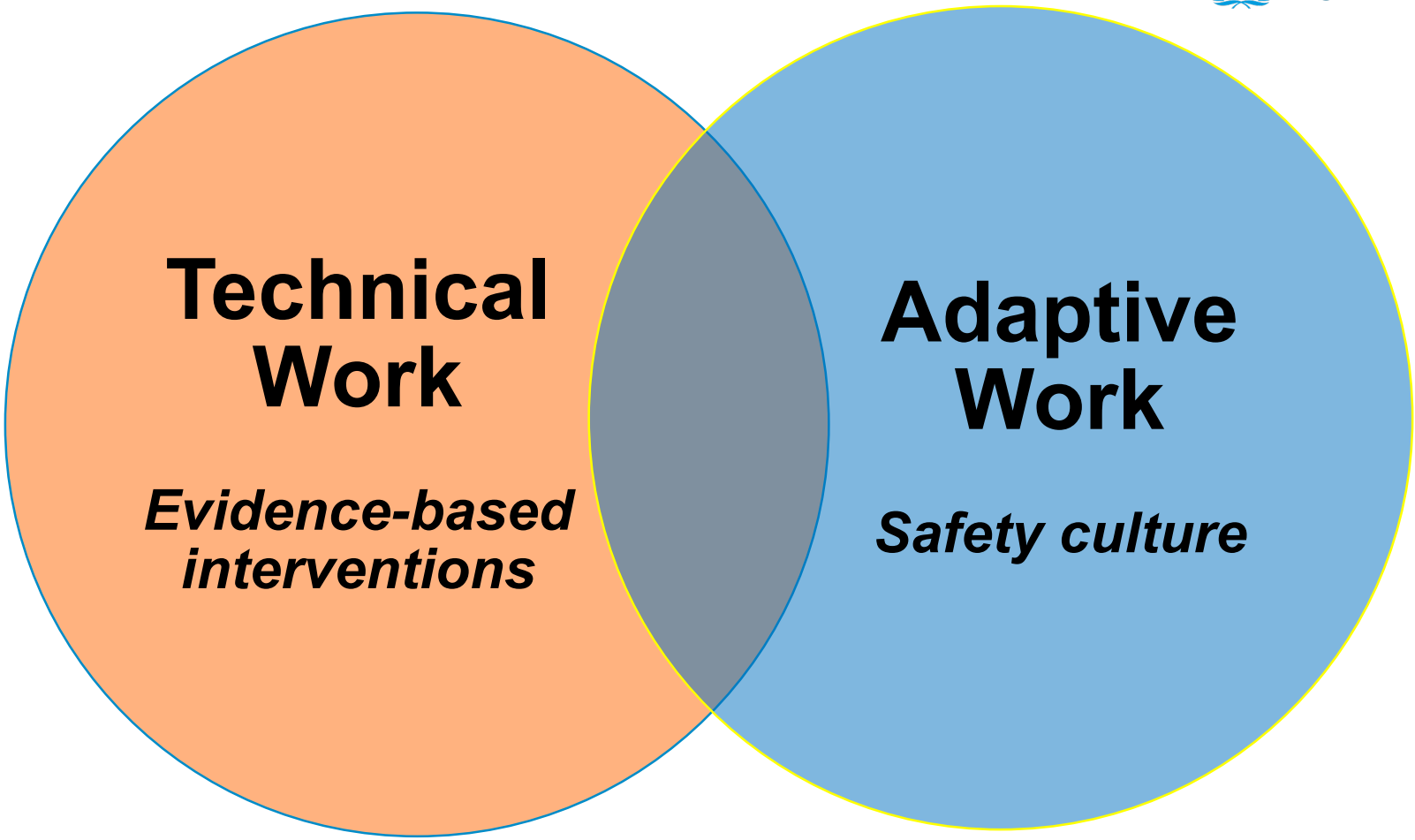

Dangerous macro-organisms: MRMS

World Health Organization

Multi-Resistant
Medical Specialist

MRMS…

Resistant to good advice

Allergic to professional guidelines

Non-compliant with infection control

Blind to nosocomial infections

Other priorities

Missing feeling of accountability

In the book “Confessions of a Medical Heretic” Robert S. Mendelsohn, M.D. wrote:

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"In 1976 in Bogota, Colombia, doctors went on strike during a 52-day period. The death rate went down 35% during that time.

In Los Angeles in 1976, doctors went on strike to protest increasing costs of malpractice insurance. The death rate decreased by 18%. When the strike ended, the death rate returned to pre-strike proportions.

In Israel in 1973, during a month-long strike, the death rate dropped 50%. The last time the death rate had been that low was when there was a doctor's strike 20 years before."

Implementation - technical and adaptive work

TECHNICAL WORK	ADAPTIVE WORK
Work that we know we should do: implementation of evidence-based recommendations (e.g. appropriate antibiotic dosing and skin preparation)	The intangible components of work, like ensuring team members speak up with concerns and hold each other accountable
Work that lends itself to standardization (e.g., **checklists and protocols**)	Work that shapes the **attitudes, beliefs, and values** of clinicians, so they consistently perform tasks the way they know they should
Evidence-based interventions	Safety culture, including improved communications and teamwork

The Surgical Unit-based Safety Program (SUSP)

- Is one example of a proven approach to reducing SSI by improving (perioperative) safety including through documenting the culture of safety within a health care facility.
- Provides tools and resources to improve safety culture and reduce SSIs.
- Aids tracking of valid performance measures.
- Engages frontline clinicians and hospital leaders to implement evidence-based interventions and improve patient care.
- Supports infrastructure development to improve teamwork and learn from mistakes.
- Is an approach that has now been tested in both the US and four African countries.

The Surgical Unit-based Safety Program (SUSP) approach

Patient safety culture improvement (CUSP):

- Science of safety education
- Staff safety assessment
- Leadership
- Learning from defects
- Team work & communications

+

Infection prevention best practices *identified according to local staff assessment*

Improvement of the patient safety climate

Reduction of:
Surgical site infections
Surgical complications

Summary of success factors for a SSI prevention implementation

- **Use of multimodal strategies (this does not mean checklists and bundles)**
- Having a step-wise action plan
- Mapping recommendations according to the surgical patient journey
- Empowering teams and involving front-line staff
- Engaging leadership
- Letting teams take the lead on adaptation
- Catalysing collective and individual ownership
- Using data to create awareness
- Awarding teams and work demonstrating a safety culture spirit

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WHO Infection Prevention and Control Global Unit

Thank you

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