



Innovative Medical Technologies for Prevention of Healthcare-Associated Infections

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 **MedTech Europe**
from diagnosis to cure

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HAIs in Europe – Latest Data

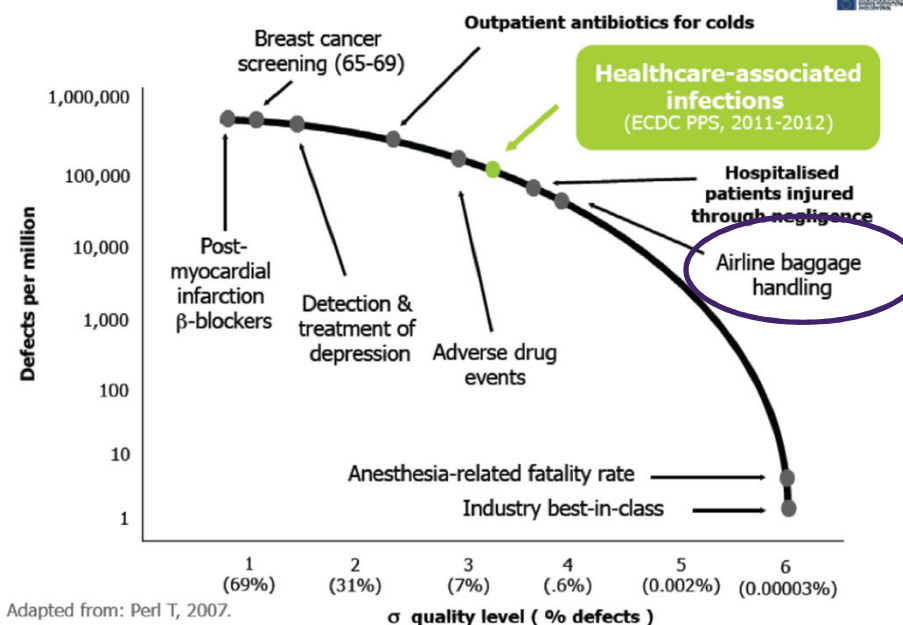
Healthcare-associated infections (HAIs) are infections that a patient acquires when receiving healthcare or during a stay in a healthcare institution.

Prevalence¹

- On any given day: 1/18 patients
- Each year: 3.2 million patients



Six sigma quality comparisons defect rates

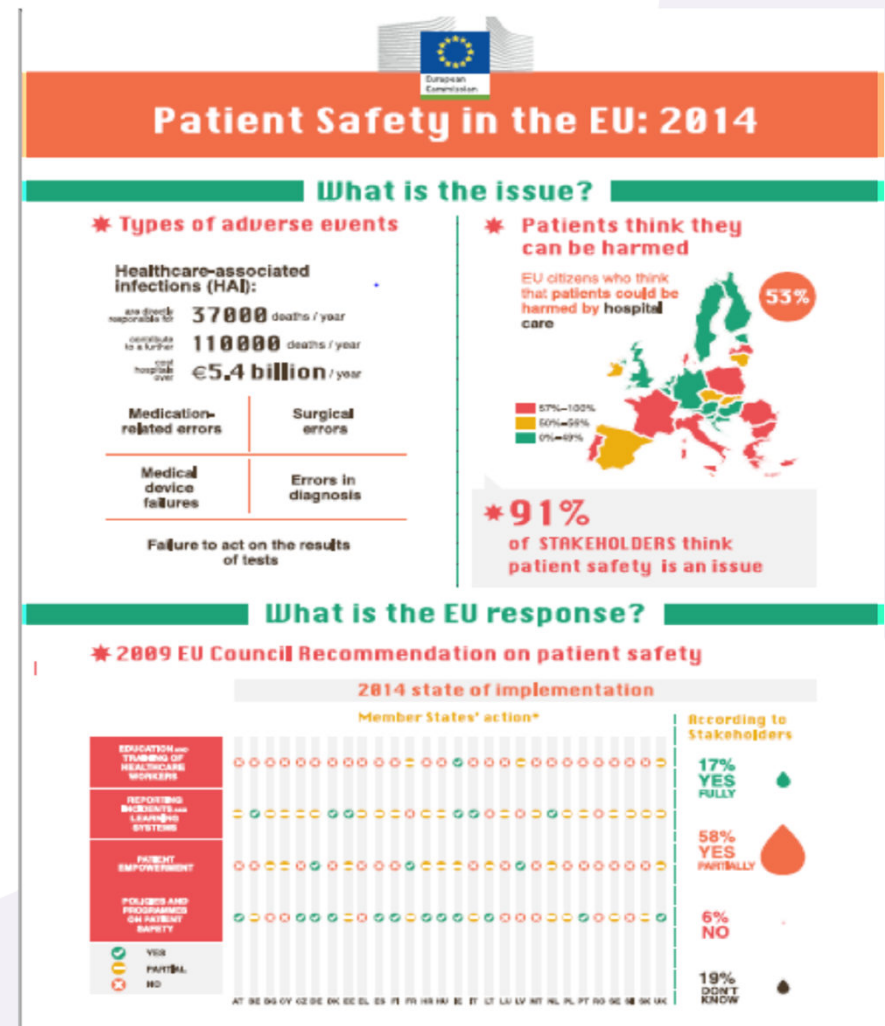


European Commission Patient Safety Package

June 2014:

EC published the Second Implementation Report and a set of documents stressing:

- ❑ how the Commission and EU countries are **addressing the challenge of patient safety** and the implementation status of the 2009 Council Recommendation
- ❑ **progress made** since 2009
- ❑ **areas to improve patient safety.**



HAIs in Europe – Impact

Healthcare-associated infections (HAI):

are directly responsible for	37 000 deaths / year
contribute to a further	110 000 deaths / year
cost hospitals over	€5.4 billion / year

HAIs are still a major issue in Europe.

Both the EU Commission and ECDC have prioritized addressing HAI in the next steps of EU strategy to improve Patient Safety².

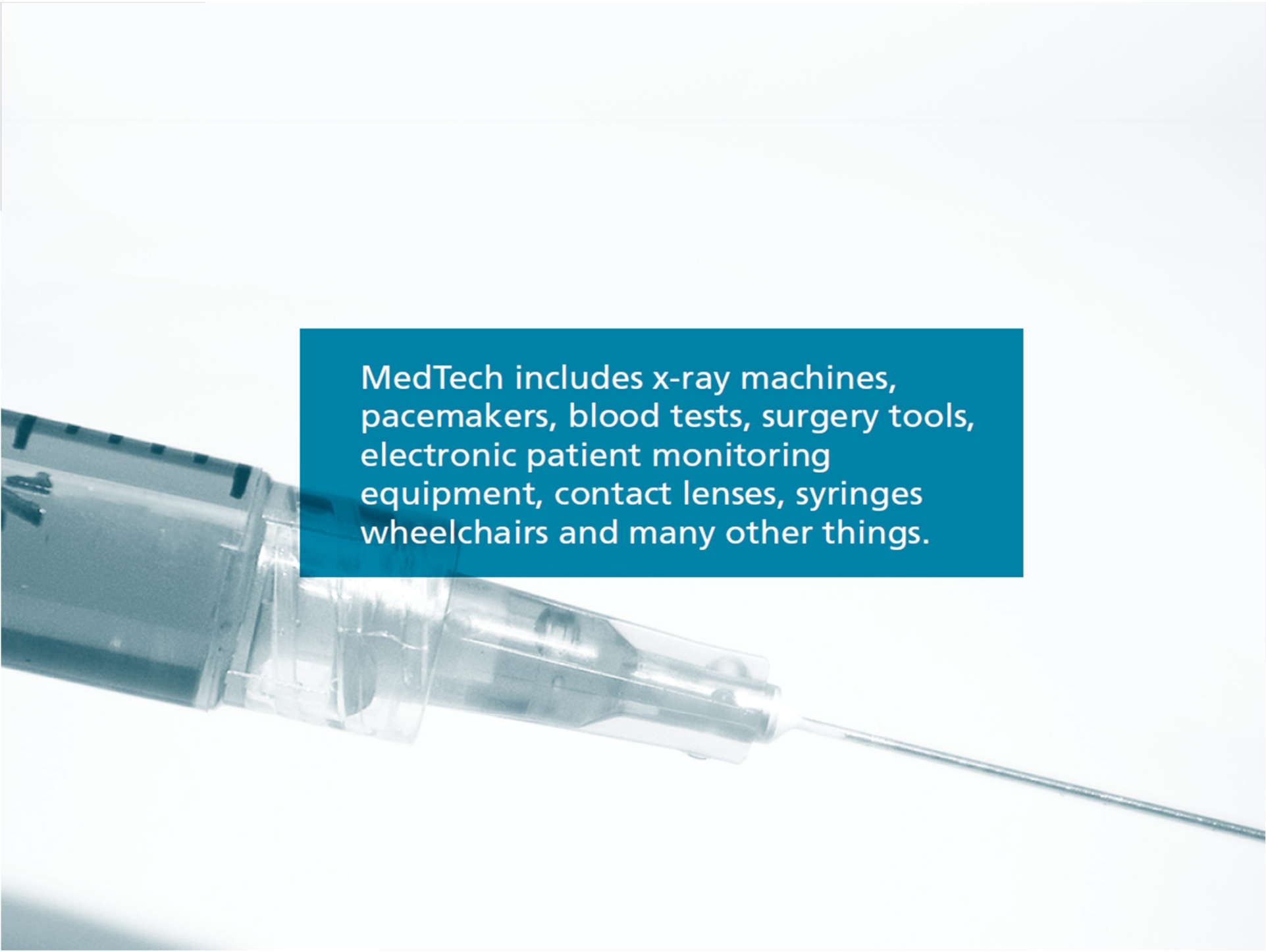


Medical Technology

WHAT IS IT?

MedTech is almost everything that you would find in a hospital or doctor's office that is not a medicine (pill).





MedTech includes x-ray machines, pacemakers, blood tests, surgery tools, electronic patient monitoring equipment, contact lenses, syringes wheelchairs and many other things.

Pregnancy tests, leg braces, bandages and ostomy bags are things you might use at home. They're all MedTech, too.

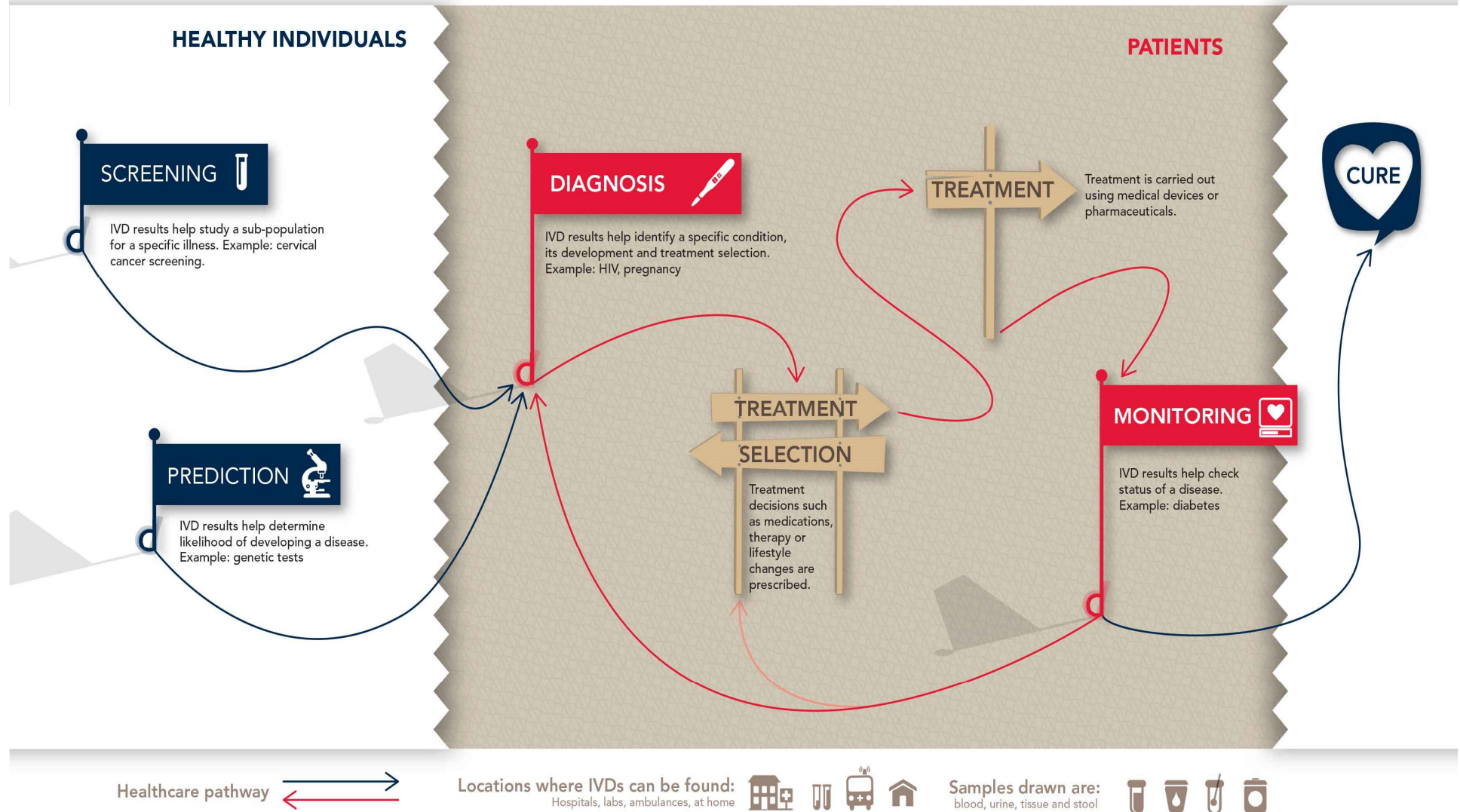


MEDICAL DEVICES THROUGHOUT LIFE



IN VITRO DIAGNOSTICS (IVDs)

are tests used to determine the status of your health.



The Surgical Patient Pathway

*5,4% of surgical patients develop a surgical site infection
1,7 % a urinary tract infection and 1,1 % a blood stream infection ⁽¹⁾*



On Admission

- Pre-surgical **nasal** rapid **screening** to optimize patient care, reducing the risk of infection and cross-contamination.



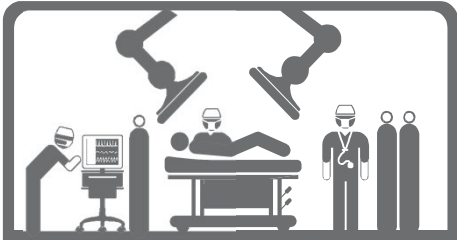
Arrival at the ward

- Safe Hair Removal using **surgical clippers** and not razors.
- Safe placement of IV catheters to prevent catheter related blood stream infections: using **integrated safety catheters** and **CHG dressings** for central line placement.

The Surgical Patient Pathway

2/3

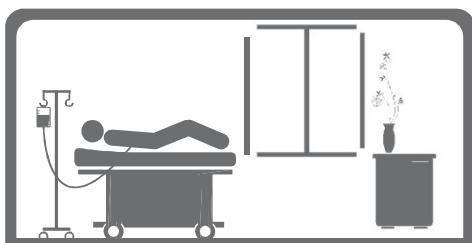
In the OR



- Preventing patient hypothermia: Use of **active warming blankets** during the whole peri-operative process.
- Using aseptic technique with **gowns, masks, surgical impervious drapes** and **antimicrobial incise drapes** for high risks procedures as well as **antimicrobial sutures**
- Reprocessing of reusable instruments: **high level disinfection**, appropriate **sterilization** combined with a systematic monitoring of these processes are vital.

The Surgical Patient Pathway

3/3



Hospital Stay

- Patient Monitoring with single-use **ECG cables**.
- Optimum Environmental **Surface cleaning & disinfection**:
Monitoring of high touch points surface cleanliness and effective surface manual cleaning combined with automated decontamination system **are essential**.

Discharge – Back at home

- Wound Care management with **advanced dressings** for an optimized patient recovery
- Monitoring : e.g. timely detection of nosocomial diarrhea with **IVD tests** help clinicians to rapidly start the appropriate treatment and infection prevention or control measures.

Real life Example 1 *SSI Prevention Program*

Dutch VMS Program – SSI Prevention Bundle of Care



4 Bundle Elements/Interventions:

Hair Removal (with surgical clipper)

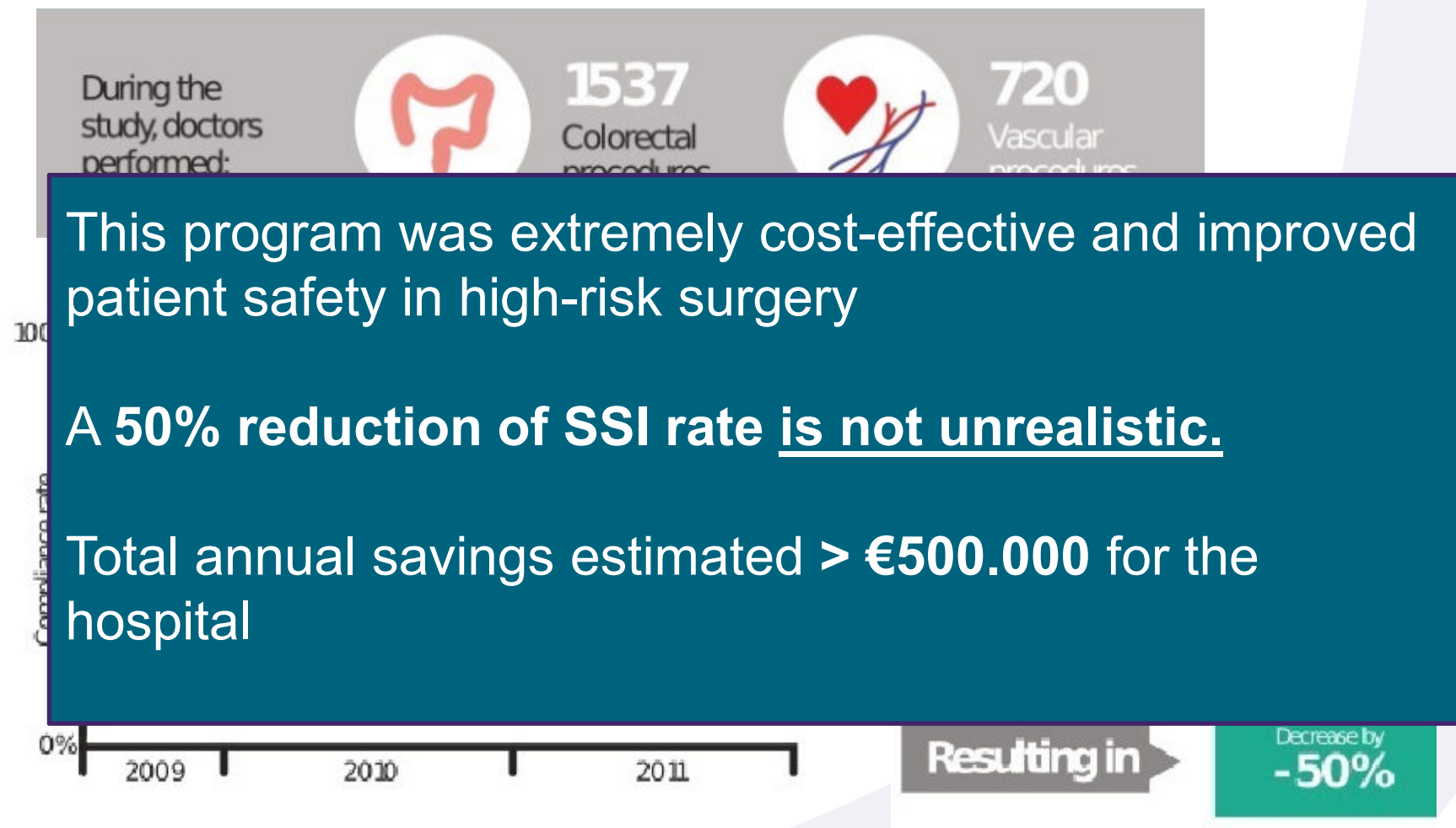
**Antimicrobial prophylaxis (timing: 15 to 60 min
before incision)**

Normothermia (Patient temp 36-38C)

OR Discipline (Door openings <10)

Every Intervention on Every Patient , Every Single Time !

Dutch VMS Program – SSI Bundle



Crolla RMPH, et al. PLoS ONE 7(9): e44599. doi:10.1371/journal.pone.0044599

van der Slegt J et al. (2013) PLoS ONE 8(8): e71566. doi:10.1371/journal.pone.0071566

Prof Jan Kluytmans - Cologne , Oct 2013 - Infection Prevention Expert Conference

Example 2 Active Surveillance Program

“Search and destroy” surveillance programs



Is it cost-effective?

Without surveillance	With surveillance
Unknown colonisation increases risk 10x	38-fold <u>lower</u> risk of infection
Average cost per patient \$8k	Annual reduction cost per hospital between \$15k and \$362k

YES!

Just six fewer infections makes the surveillance programmes cost-effective

Conclusions (1/2)

- Healthcare Associated Infections (HAIs) are still a severe **patient safety issue** and a strong **financial burden** on hospital and healthcare systems.
- **Medical Technologies solutions are effectively contributing to reduce the risk of developing HAIs.**
- HAIs reduction rate have an **immediate positive impact** on :
 - Patient outcome
 - Hospital efficiency and budget
 - Healthcare system economical sustainability

and should therefore **become a top strategic priority of healthcare programs in Europe.**

Conclusions (2/2)

The MedTech industry calls for 3 primary steps to bring Europe closer to a safer healthcare pathway:

1. Realistic rate reduction target setting at EU and national levels.
2. Creation of implementation support framework,
 - Focus on Healthcare workers education (multi modal continuous educations)
 - Fostering a culture of patient safety; focusing on both patient & staff empowerment;
 - Focus on infection Prevention Bundle Programs (incl. process indicators measures).
3. Identification of key essential mandatory interventions and continuous identification of best practices to be exchange at EU level.

Reaching zero risk is impossible, reaching zero tolerance for non-compliance with safety measures should be a PRIORITY!

THANK YOU !