HCAI increases reliance on antibiotics — however, many are caused by multi-resistant strains. Top five resistant bacteria:

- MRSA (methicillin-resistant *Staphylococcus aureus*)
- VRSA (vancomycin-resistant *S. aureus*)
- ESBL (extended spectrum beta-lactamase)
- VRE (vancomycin-resistant *Enterococcus*)
- MRAB (multidrug-resistant *A. baumannii*)

About 1 to 3 out of every 100 patients who have surgery develop an SSI[4]

There is a lack of accurate surveillance data — and, accordingly, a need for improved surveillance. Factors leading to data insufficiency[6]:

- SSI data are typically based on voluntarily submitted figures
- Many reporting systems assume that people with SSI will present within 7 days when, in fact, they may present up to 30 days later (some experts suggest deep infections can present up to 1 year after an implant)
- People who have been discharged into the community may not return to the same hospital to have SSI treated, recorded and reported — so the actual incidence of SSI may be much higher

SSIs are tied for the top type of healthcare-associated infection[5]

1. Surgical site infection
1. Pneumonia
3. Gastrointestinal illness
4. All other types of infections
5. Urinary tract infections

SSI and costs due to prolonged hospitalisation, additional diagnostic tests, therapeutic antibiotic treatment and (sometimes) additional surgery.

- 50% reduction in SSI could save the average hospital approximately $200,000USD annually on length of stay alone[2]
- Costs per infection range from $400USD for superficial SSI to more than $30,000USD for serious organ or space infections[3]

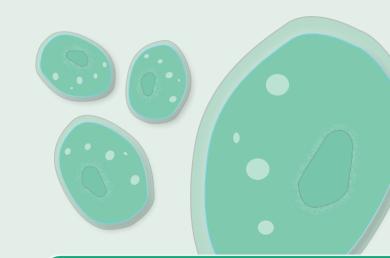**Infections due to multi-resistant strains each year result in extra healthcare costs and productivity losses of >EUR1.5 billion[1]**

Approximately 20–30% of healthcare-associated infections are considered to be preventable by intensive hygiene and control programmes[7]

Patient safety:
Surgical Site Infections

References
1. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/385977/AMR_EBO.pdf
2. https://www.ibms.org/includes/act_download.php?download=pdf/2010-Dec-Infection.pdf
3. http://www.ncbi.nlm.nih.gov/pubmed/16834543
4. http://www.cdc.gov/HAI/pdfs/ssi/SSI_tagged.pdf
5. http://www.cdc.gov/HAI/surveillance/
6. http://www.nice.org.uk/guidance/qs49/resources/qs49-surgical-site-infection-support-for-commissioning2
7. http://www.ecdc.europa.eu/en/healthtopics/Healthcare-associated_infections/Pages/index.aspx

Wounds INTERNATIONAL

Reducing reliance on antibiotics

Routine administration of antibiotics for every surgical procedure is unnecessary. Overuse of prophylactic antibiotics increases the risk of adverse effects and continues to contribute to the emergence of resistant bacteria worldwide.

- Use asceptic technique
- Cleanse the wound with a product containing a broad spectrum of efficacy (e.g. Prontosan®). Avoid tap water[1]
- Use non-adherent dressings with topical antimicrobial (e.g. Calgitrol® Ag) in wounds at risk of infection or to treat SSI
- Select absorbency capacity of dressing based on exudate levels
- Leave dressings on for maximum time to avoid disturbing the wound, monitoring regularly for signs and symptoms of infection
- Reassess at each dressing change and consider use to antibiotics for spreading infection
- Educate patient on signs and symptoms of SSI

•Reference
1. Rowley and Clare, 2014. http://www.wintjournal.com/journal-content/view/the-role-of-wound-cleansing-in-the-management-of-wounds

Before surgery

- ❑ Educate and train all staff on SSI, and the importance of preventing and controlling infections
- ❑ Assess to identify patients at risk of SSI development
- ❑ Pre-surgical body-washing and decolonoisation of multi-drug-resistant organisms with a product containing a broad spectrum of efficacy (e.g. Prontoderm®). Can be done at home by patient or in hospital

Perioperative period

- ❑ Ensure a high level of hygiene for operating rooms and immediate post-op areas
- ❑ Use best practices for disinfection, sterilisation and environmental cleaning
- ❑ Perform hand disinfection with a low-irritant solution (e.g. Softalind®)
- ❑ Disinfect skin with povidone iodine (e.g. Braunol®, Braunoderm®), or a chlorhexidine- or alcohol-containing solution
- ❑ Perform antiseptic lavage during orthopaedic surgical procedures (e.g. with Lavasept®), per local protocols

After surgery

- ❑ Cover wound with a low-adherent dressing (e.g. Askina® DresSil Border) to protect surgical incision sites and periwound skin, allow monitoring for signs of infection and avoid frequent dressing changes
- ❑ Provide post-operative education regarding the risks that lead to adverse events, as well as clear instructions for minimising the incidence of infection after discharge

After SSI development

- ❑ Report SSI, using common terminology and standardised data-collection methods
- ❑ Cleanse wound with a product containing a broad spectrum of efficacy (e.g. Prontosan®) and perform wound bed preparation[1]
- ❑ Apply an antimicrobial dressing (e.g. Askina®, Calgitrol® Ag)

❑ **Provide patient access to appropriate resources, education and channels of communication**