



وزارة الصحة  
Ministry of Health

# Surgical Site Infections Guidelines



وزارة الصحة  
Ministry of Health

### Abbreviations

IV: Intravenous  
Temp: Temperature  
WBC: White blood count  
Cm: Centimeter  
GI: Gastrointestinal  
g: Gram  
mg: Milligram  
kg: Kilogram  
MRSA: Methicillin-resistant Staphylococcus aureus  
h: Hours  
SSIs: Surgical site infections

## Introduction

Wound infections, or surgical site infections (SSIs) are common postoperative complications among surgical patients.

While many patients with a SSI will develop fever, it usually does not occur immediately postoperatively. In fact, most postoperative fevers may not be associated with an SSI

The most important therapy for an SSI is source control, which means opening the incision, evacuating the infected material, and continuing dressing changes until the wound heals by secondary intention.

### **Purpose:**

- In 2021, one of the most common infections reported by antimicrobial stewardship program at MOH hospitals was SSIs.
- **This treatment protocol** was developed to support MOH hospitals in activating/launching/improving the antimicrobial stewardship programs.

### **Aim and scope:**

- The protocol aims to provide an evidence-based, safe and cost-effective treatment guide for SSIs in the inpatient setting
- For hospital-acquired infections, the choice between the recommended agents should be based on local resistance data (i.e., the antibiogram)

**Targeted population:** Hospitalized immunocompetent patients who are diagnosed with SSIs.

**Targeted end users:** Physicians, pharmacists/clinical pharmacists, and nurses.

**Setup:** Inpatient setting.

### **Methodology:**

These recommendations are based on the high quality of evidence along with expert opinions maintaining the best practices guidelines and taking into consideration the local resources and cultural variation.

**Conflict of interest:** This protocol was developed based on valid scientific evidence, critical assessment of that evidence, and objective clinical judgment that relates the evidence to the needs of practitioners and patients.

**Funding:** No fund was provided

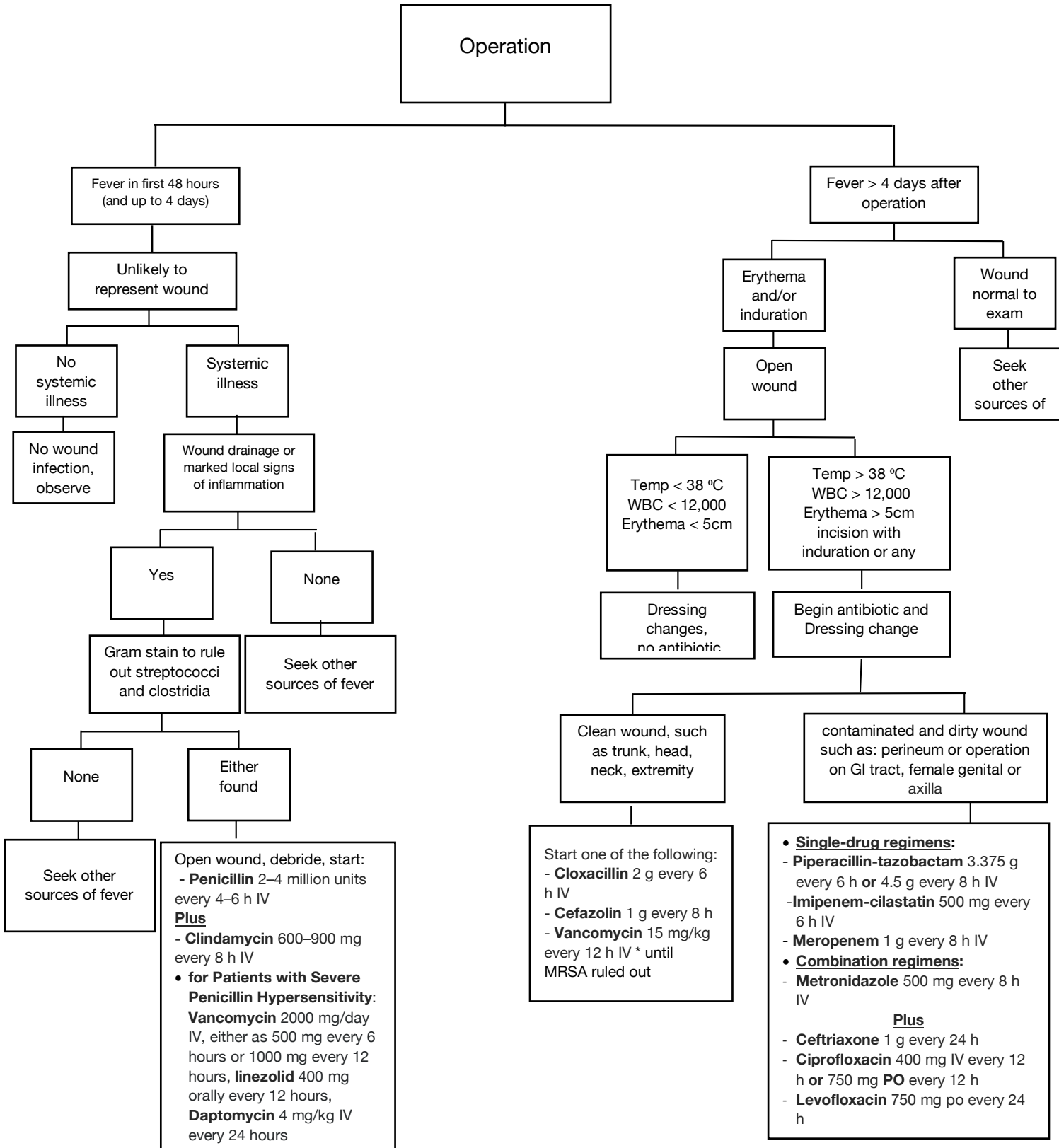
**Updating:** First version of this protocol updated in 2022. The protocol will be updated every three years or if any changes or updates released by international/national guidelines, pharmacotherapy references, or MOH formulary

### Surgical Site Infection Criteria

1. Superficial Incisional SSI:
  - Date of event occurs within 30 days after operative procedure.
  - Affecting the skin and subcutaneous tissue.
  - patient has at least one of the following:
    - purulent drainage from the superficial incision.
    - organism(s) identified from an aseptically-obtained specimen from the superficial incision or subcutaneous tissue by a culture.
    - patient has at least one of the following signs or symptoms: localized pain or tenderness; localized swelling; erythema; or heat.
2. Deep incisional SSI:
  - Date of event occurs within 30 or 90 days after operative procedure.
  - involves deep soft tissues of the incision (for example, fascial and muscle layers).
  - patient has at least one of the following:
    - purulent drainage from the deep incision.
    - a deep incision that spontaneously dehisces, or is deliberately opened or aspirated by a surgeon, or physician **AND** organism(s) identified from the deep soft tissues of the incision by a culture.
    - patient has at least one of the following signs or symptoms: fever (>38°C); localized pain or tenderness.
    - an abscess or other evidence of infection involving the deep incision that is detected on gross anatomical or histopathologic exam, or imaging test.
3. Organ/Space SSI
  - Date of event occurs within 30 or 90 days after operative procedure.
  - involves any part of the body deeper than the fascial/muscle layers that is opened or manipulated during the operative procedure
  - patient has at least one of the following:
    - purulent drainage from a drain that is placed into the organ/space (for example, closed suction drainage system, open drain, T-tube drain, CT guided drainage).
    - organism(s) identified from fluid or tissue in the organ/space by a culture.
    - an abscess or other evidence of infection involving the organ/space that is detected on gross anatomical or histopathologic exam, or imaging test evidence suggestive of infection.



## Surgical Site Infections



### Recommendation on antibiotic treatment of surgical site infection

- While antibiotics are not always necessary to treat superficial SSI, antibiotics are nearly always required to treat deep and organ/space SSI.
- All antibiotic therapy should be reviewed in the light of their clinical progress after culture results have been reported.
- Treatment duration can range between 5 to 14 days depending on clinical response.
- In the event of treatment failure, the patient should be reviewed clinically for evidence of noninfectious reasons for wound breakdown, such as poor nutrition or underlying surgical problems (for example, a collection of pus, an anastomotic leak or a foreign body).

### References:

1. Stevens, D., Bisno, A., Chambers, H., Dellinger, E., Goldstein, E., & Gorbach, S. et al. (2014). Practice Guidelines for the Diagnosis and Management of Skin and Soft Tissue Infections: 2014 Update by the Infectious Diseases Society of America. *Clinical Infectious Diseases*, 59(2), e10-e52. doi: 10.1093/cid/ciu296