Clinical Guideline
Surgical Antibiotic Prophylaxis Guideline – Oral and Maxillofacial Surgery

Objective file number: 2011-10137
Policy developed by: South Australian expert Advisory Group on Antibiotic Resistance (SAAGAR)
Approved SA Health Safety & Quality Strategic Governance Committee on: 12 August 2014
Next review due: 12 August 2016

Summary
The Surgical Antibiotic Prophylaxis Guideline – Oral and Maxillofacial Surgery guideline provides recommendations on appropriate antibiotic prophylaxis for Oral and Maxillofacial surgical procedures, including orthognathic surgery, skin approach procedures, implants, trauma and reconstructive surgery.

Keywords
prophylaxis, antibiotic, surgery, oral, maxillofacial, orthognathic, TMJ, mandibular, implants, intraoral, reconstructive, trauma, SAAGAR, Surgical Antibiotic Prophylaxis Guideline, clinical guideline

Policy history
Is this a new policy? N
Does this policy amend or update an existing policy? Y
Does this policy replace an existing policy? Y
If so, which policies? Surgical Antibiotic Prophylaxis Guideline – Oral & Maxillofacial Surgery (12 Feb 2013)

Applies to All SA Health Portfolio

Staff impact All Clinical, Medical, Nursing, Allied Health, Emergency, Dental, Pathology

PDS reference CG079

Version control and change history

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<td>1.1</td>
<td>12/08/2014</td>
<td>12/08/2016</td>
<td>Vancomycin dosing, MRSA risk wording, replacement of non-SA Formulary antibiotic</td>
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Pre-Operative Considerations

Prophylaxis is not indicated for intra-oral procedures: dentoalveolar surgery (extractions, impactions, exposures); minor pathology (soft tissue, cysts).

Consider individual risk factors for every patient – need for prophylaxis, drug choice or dose may alter (e.g. immune suppression, presence of prostheses, allergies, obesity, diabetes, remote infection, available pathology or malignancy).

Pre-existing infections (known or suspected) – if present, use appropriate treatment regimen instead of prophylactic regimen for procedure. Doses should be scheduled to allow for re-dosing just prior to skin incision.

Practice Points

Drug administration
- IV bolus – should be timed ≤ 60 minutes before skin incision (optimal 30 minutes). Administration after skin incision or > 60 minutes before incision reduces effectiveness
- IV infusion – should be timed to end ≤ 30 minutes before skin incision (e.g. clindamycin, metronidazole, vancomycin)

Penicillin/beta-lactam allergy (severe type 1 penicillin or cephalosporin allergy), unless otherwise indicated:
- Replace penicillin or cephazolin with clindamycin (see clindamycin administration below)

MRSA risk (defined as history of MRSA colonisation or infection, OR inpatient of high risk hospital or unit (where MRSA is endemic) for more than the last 5 days)
- Replace penicillin or cephazolin with vancomycin (see vancomycin administration below)

Vancomycin administration
- Give vancomycin 1g (1.5g for patients > 80kg) (child < 12 years: 30mg/kg up to 1.5g) by IV infusion at a rate = 1g per hour.

Clindamycin administration
- Give clindamycin 600mg (child < 12 years:15 mg/kg up to 600mg) by IV infusion over at least one hour. Repeat 4 hourly intra-operatively for prolonged procedures

Repeat doses
A single pre-operative dose is sufficient for most procedures, however repeat intra-operative doses are advisable:
- for prolonged surgery (> 4 hours) when a short-acting agent is used (e.g. cephazolin), OR
- if major blood loss occurs, following fluid resuscitation

Recommended Prophylaxis

1. Orthognathic surgery
   (e.g. maxillary procedures, bimaxillary procedures, mandibular procedures)
   - benzylpenicillin 1.2g IV (child < 12 years: 30mg/kg up to 1.2g) before incision, then 2-hourly intra-operatively (for procedures greater than 2 hours duration)

2. Skin approach procedures (oral cavity not involved)
   (temporomandibular joint arthrocentesis, reconstruction; salivary gland surgery (parotidectomy, submandibular gland removal); mandibular reconstruction (without bone grafts))
   - cephazolin 1g IV (2g for patients ≥ 80kg) (child < 12 years: 25mg/kg up to 1g) before incision, then 8-hourly for 24 hours

3. Skin approach procedures (with concurrent oral cavity involvement)
   (TMJ, salivary gland)
   - cephazolin 1g IV (2g for patients ≥ 80kg) (child < 12 years: 25mg/kg up to 1g) before incision, then 8-hourly for 24 hours
   - metronidazole 500mg IV infusion (child < 12 years:12.5mg/kg up to 500mg) before incision, then 12-hourly for 24 hours

4. Implants
   (1st stage)
   - benzylpenicillin 1.2g IV (child < 12 years: 30mg/kg up to 1.2g) before incision, then 2-hourly intra-operatively (for procedures greater than 2 hours duration)

Trauma

5. Intraoral compound operation for injury of any age, compound to nose/skin/sinuses
   - benzylpenicillin 1.2g IV (child < 12 years: 30mg/kg up to 1.2g) IV at presentation, then 4-hourly for 2 days
   - metronidazole 500mg IV infusion (child < 12 years:12.5mg/kg up to 500mg) IV at presentation, then 12-hourly for 2 days

6. Skin approach with concurrent oral cavity involvement (reconstructive surgery with ORIF or bone graft placement)
   - cephazolin 1g IV (2g for patients ≥ 80kg) (child < 12 years: 25mg/kg up to 1g) before incision, then 8-hourly for 24 hours
   - metronidazole 500mg IV infusion (child < 12 years:12.5mg/kg up to 500mg) IV before incision, then 12-hourly for 24 hours

Post-Operative Care

Post-operative antibiotics (> 24 hours) are NOT indicated unless infection is confirmed or suspected, regardless of the presence of surgical drains. If infection is suspected, consider modification of antibiotic regimen according to clinical condition and microbiology results.


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