



Longstay Facilities Antimicrobial Usage Procedure

Procedure Number

CHC-IC-0049

Version Nos:

3

1. Purpose

This Procedure is performed to assist with the management of common infections in Long Term Care Facilities within the West Coast District Health Board (WCDHB).

2. Application/Responsibilities

This Procedure is to be followed by all WCDHB staff members.

3. Definitions

There are no definitions associated with this Procedure:

4. Staff Authorised To Perform Procedure/Responsibilities

For the purposes of this Procedure:

The *Clinical Nurse Specialist Infection Control, & the Infection Control Committee* is required to:

- oversee all aspects of this Procedure

Staff Members are required to:

- ensure they abide by the requirements of this Procedure;
- abide by WCDHB Medication and Prescribing Policy

5. Resources Required

This Procedure requires:

- i) Access to preferred medicine list (either hard copy or intranet)
- ii) Access to Medical Consultant
- iii) Understanding of Wound Care Management
- iv) Laboratory Liaison
- v) Infection Control Liaison

6. Process

1.00 Urinary Tract Infections (UTI) Non – Catheterised Patients

- 1.01 Asymptomatic bacteriuria in the elderly **does not** require treatment except if there is obstructive uropathy, vesicoureteric reflex, following insertion & removal of urinary catheter, or before an invasive urological procedure.
- 1.02 If Symptoms of confusion or deterioration in continence occur - collect urine for culture. Assist elderly to collect urine sample as contamination of urine frequent. Clean area, in uncircumcised males retract foreskin\do not put penis in pottle. Colonies counts need to be assessed. UTI is more likely if recent antibiotics, recently removed catheter, or repeated growth. Contamination is more likely if mixture of organisms is grown.



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- 1.03 Pyelonephritis is suggested by fever, flank pain, vomiting, confusion, systemic unwellness. Assessment at Hospital may be required to manage these patients.
- 1.04 Prostatitis is suggested by fever, perineal and back pain, urinary retention, enlarged and tender prostate on rectal examination
- 1.05 In-dwelling catheter urine is invariably contaminated after a few weeks of insertion especially urine in the collection bag. Don't sample urine or treat unless symptomatic (e.g. Suprapubic tenderness, fever, flank pain, confusion) Prescribing empirically, until culture results can guide targeted choice
- 1.06 Follow-up and Prevention
- Follow-up urine culture not indicated unless symptoms reoccur.
 - For patients without a urinary catheter, cranberry juice 50mls daily or Cranberry capsules 10 000 mg BD reduces reoccurrences by approx >50% and topical oestrogen cream in post-menopausal women reduces infections by >10%. Prophylactic use of antibiotics may need to be considered with consultant if patient having 5 or more infections per year.
 - Assessment with patients with a urinary catheter to consider removal and alternatives to management i.e. condom catheters, prompted voiding, Keep system closed as much as possible, empty regularly, replace obstructed or crusted catheters, and ensure that collection bag is always below the level of the bladder. Do not routinely irrigate catheter. **Do not use prophylactic antibiotics in patients with indwelling urinary catheters.**
 - If Infection in Catheterised patient is established via microbiology report the patient should receive 3 days of the antibiotic course before the catheter is removed and reinserted to prevent contamination of the new catheter.
- 1.07 **Cystitis:** First choice: Trimethoprim 300mg daily po for 3 days, Nitrofurantoin 50mg QID po for 7 days. Alternatives: Norfloxacin 400mg BD po for 3 days, Amoxicillin/clavulanate 500mg TDS po for 7 days
- 1.08 **Pyelonephritis** or urinary tract infection associated with indwelling catheter, obstruction. Reflux, transplant, recent instrumentation, frequent antibiotics, and First **choice:** no vomiting ciprofloxacin 500mg BD for 10-14 days, **Alternatives:** While vomiting- IV Gentamycin 3-5mg/kg daily or Ceftriaxone 1g q24h (NB: needs approval from consultant at Grey Hospital) If urine gram-stain microscopy shows gram- positive cocci, add amoxicillin to cover enterococci
- 1.09 **Acute prostatitis.** First choice: Norfloxacin 400mg BD for 4 weeks Alternative: Co-trimoxazole 480mg 2 BD for 4 weeks
- 2.02 Treatment**
- Most long-term elderly-care residents will require hospital assessment management
 - Give adequate analgesia for pleuritic chest pain
 - Chest physiotherapy benefits most, patients with retained secretions
 - Recommended empiric antibiotic choices for mild pneumonia
Treat patients for 7 days – longer if slow to resolve



2.03 Follow up and prevention

- i) Identify treatable causes or risk factors for pneumonia, i.e. impaired swallowing (dysphagia or depressed consciousness) suboptimal treatment of underlying chronic lung disease (e.g. COPD) poor dental hygiene or immunodeficiency
- ii) Consider repeat CXR in approximately 6 weeks to exclude underlying pathology
- iii) **Annual influenza vaccine is strongly recommended**

2.04 First Choice: Amoxicillin 1 g TDS po and Roxithromycin 300mg po. (*Mild penicillin allergy* cefaclor 500mg TDS po; *Severe penicillin allergy or any cephalosporin allergy* doxycycline 200mg po daily. If suspected aspiration: Amoxicillin/Clavulanate 625mg TDS po (*Any penicillin allergy;* Clindamycin 450mg TDS po alone)

3.00 Cellulitis

3.01 Diagnosis

- i) Consider if skin is hot, swollen, shiny, painful and tender. There could be malaise fever and regional adenitis or lymphangitis. Differential diagnosis includes DVT, contact dermatitis or venous stasis dermatitis
- ii) If not responding to antibiotics, clean wound and take swab for culture to rule out MRSA. Interpret results with caution- surface colonization with gram- negative bacilli is common and almost meaningless.

3.02 Treatment

- i) Refer for hospital treatment if “septic” (E.g. altered mental status, rapid breathing, systolic blood pressure >90 mmHg, decreased urine output), extensive or rapidly progressive infection, or poor oral intake.
- ii) Refer urgently to hospital if necrotising infection.
- iii) Empirical antibiotic choices for mild, community acquired cellulitis: First choice is Flucloxacillin 500mg QID po. *If mild penicillin allergy*, use cefaclor 500mg TDS po. *If severe penicillin allergy* use erythromycin ethyl succinate 800mg BD (in community) or erythromycin stearate 500mg BD (in hospital) or doxycycline 200mg daily po.
- iv) For cellulites with diabetic foot disease, first choice is amoxicillin/clavulanate 500mg TDS; po if mild penicillin allergy use cefaclor 500mg TDS po; if severe penicillin allergy or cephalosporin allergy use clindamycin 300-450mg TDS po
- v) Treat for 7-14 days, depending on response
- vi) Keep infected limb elevated as much as possible
- vii) Analgesia e.g. paracetamol – **Do not use NSAIDs because increases risk of necrotising fasciitis.**
- viii) Apply dressings to all open wounds or ulcers dressing should promote healing, reduce bacterial contamination and further wound infection, reduces fluid loss and trauma to the wound, facilitates debridement, and acts as a barrier to microbes spreading to staff and environment

3.03 Prevention

- i) Good skin hygiene
- ii) Avoid damage (e.g. scratches, insect bites) to the affected skin
- iii) Wash and dry breaks in the affected skin
- iv) Treat fungal infections between toes in patients with lower leg cellulites



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- v) Minimise leg oedema- elevation, diuretics, varicose vein surgery, compression bandage or stocking and exercises.
- vi) Long term preventative antibiotics rarely required- seek infectious disease consultant advice if recurrences >3 per year.

(Mild penicillin allergy = rash, nausea etc. Severe penicillin allergy = anaphylaxis, angioedema, urticaria, hypotension or bronchospasm)

4.00 Exacerbation Of Chronic Bronchitis (COPD)

4.01 Diagnosis

- i) Consider if increase in volume of purulent sputum
- ii) Do not routinely send sputum for culture because many cases are viral, sputum correlates poorly (25% concordance) with bronchial samples & many COPD patients have colonised lower respiratory system even when “Well”

4.02 Treatment

- i) Co-trimoxazole 480mg 2 tabs BD, doxycycline 100-200 mg daily, cefaclor 500mg TDS, amoxicillin/clavulanate 500mg TDS, roxithromycin 300mg daily, or erythromycin ethyl succinate 800mg BD (in community) or erythromycin stearate 500mg BD (in hospital) are all likely to be equally effective.
- ii) Give oxygen at lowest flow rate needed to maintain SaO₂ >90%

4.03 Prevention

- i) Stop smoking
- ii) Optimise treatment of COPD
- iii) Influenza vaccine
- iv) Rapid treatment at the first sign of infective exacerbation is preferable to prophylactic antibiotics for those with recurrent infective exacerbations, because of the risk of side-effects and antibiotic- resistant infections

5.00 Infected Skin Ulcers

5.01 Diagnosis

- i) Skin ulcers are frequently colonised with a variety of aerobic and anaerobic organisms, depending on their proximity to the anus and the presence of devitalised tissue
- ii) In some case, these organisms invade deeper tissues, leading to symptoms of infection and delayed wound healing.
- iii) The presence of organisms on a surface swab does not indicate deep infection and the type of organism identified on superficial swabs correlates poorly with those invading deeper tissues.
- iv) Nor does a foul odour coming from an ulcer indicate deep infection as opposed to being colonisation
- v) If there is cellulitis surrounding an ulcer or excessive exudates from in an ulcer, a superficial swab for culture is not routinely indicated as the results are likely to be misleading
- vi) If there is an abscess associated with an ulcer, it should be aspirated or drained to obtain pus for culture



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5.02 Treatment

- i) Excessive exudates may be amenable to increased wound care, i.e. Frequent lavage, debridement and use of an absorptive dressing
- ii) Cadexomer iodine dressings or silver dressings reduce superficial bacterial load without host cell toxicity, & have shown to speed ulcer dressing. They should be considered in cases of suspected low-grade ulcer infection.
- iii) *Staphylococcus aureus*, and Beta- haemolytic streptococci are the premier soft –tissue pathogens responsible for deep infections around ulcers- treat them empirically in all cases (see cellulitis guideline for options)
- iv) If this fails, take superficial swab culture to rule out MRSA and consider referral for tissue biopsy and culture.

7. Precautions And Considerations

- ➔ Wear gloves and always wash your hands after handling catheters or bags
- ➔ Apply contact isolation if known multi-resistant organism, or if patient has cellulitis with discharge, heavily colonized ulcers or associated with an open wound.
- ➔ Apply droplet isolation if known or suspected influenza

8. References

Infection Control in Older People: Gould. G, Nursing Older People, April vol 13 no2 2001
West Coast District Health Board Infection Control Manual; July 2010
Andrea Lord Continence Nurse Consultant. (Lecture Aug 2009)

9. Related Documents

Guidelines - Management of Common Infections in Long Term Elderly Care Facilities. Everts. R, Mills. G, 2002 Hamilton.

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	Developed By:	Infection Control Advisor/Pharmacy Manager
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