Policy Category	BC - Best Care		
Best Care Goals	☒ Safe ☐ Personal ☐ Connected ☐ Effective		
Applies To	National		
Version	**Approval Authority**	**Effective from**	**Review by date**
1	National Medical Director, WA	5/10/2021	5/10/2024

Contents

1. Rationale

The purpose of this Clinical Protocol is to provide a guiding framework for Hospital at the Home service Medical Practitioners and clinical staff.

2. Scope

The Clinical Protocol applies to Nationally for HATH clients being treated for diagnosed urinary tract infection (UTI).

The Clinical Protocol does not apply to suspected UTI.

3. Acceptance to HATH Criteria and Pathway

RED
Unacceptable for community admission to HATH
Refer to ED/ Inpatient management.
(May become suitable for HATH after ED or inpatient stabilisation)
	• Evidence of impending septic shock:
	  • Systolic BP <90, and/or diastolic BP <60
	  • HR > 100/min
	  • Resp rate >30 per min
	  • Temp <35 or >38.5°C
	• Co-existing medical condition requiring hospital admission or complex medical co-morbidities (e.g. poorly controlled diabetes and/or renal failure). This is particularly important in patients aged >65.
	• Suspected or confirmed immediate penicillin allergy or hypersensitivity (anaphylaxis, angioedema and/ or urticaria) or cephalosporin hypersensitivity.
	• Suspected prostatitis, STI, testicular torsion, ureteric obstruction or renal calculi.
	• Pregnancy beyond 22 weeks gestation.

ORANGE Requires discussion with Medical Governor and/or Infectious Diseases Physician prior to acceptance.	• Previous treated UTI – not responsive to antibiotics (example Pseudomonas infection). • Evidence or suspicion of multi-resistant organism • International travel within last 6 months • Recent antibiotic exposure • Lack of response to initial therapy • Residential care • Known renal tract abnormalities or risks (e.g. long-term in dwelling catheter/supra-pubic catheter, ureteric stents). • Aged between 13 and 18, suitable for adult dosing who are not under the care of a paediatrician.

GREEN
Accepted for HATH UTI protocol
	All criteria must be met:
	• Client's medical condition has been assessed as stable, has a clear diagnosis/prognosis and is at low risk of deterioration.
	• Intravenous antibiotics deemed as the only appropriate choice or patient unable to take oral medication.
	• Required pathology has been collected:
	  • MSU prior to antibiotics
	  • FBC, U+E, LFT, CRP, BSL, BHCG if female
	  • Blood Culture (if history of fever)
	• Adults 18 years or over.

4. Pathology Work Up

- Mid stream urine (MSU) for Microscopy Culture and Sensitivity (MCS), prior to antibiotics if possible).
- Blood cultures (if temp >38°C).
- Blood for Full Blood Picture (FBP).
- Urea and electrolytes, (U&E) including creatinine, mandatory if gentamicin to be used.
- Check Beta Human Chorionic Gonadotropin (BHCG) if pregnancy is a possibility.
- Calculation of Ideal Body Weight and Creatinine Clearance by Cockcroft – Gault equation, as per aminoglycoside protocol

5. General Management

- Access results from referral source.
- MSSU for MCS must have been collected prior to the commencement of antibiotic therapy and result preferably available
- Consult with the medical governor regarding abnormal results including results of antibiotic susceptibility from MSSU culture.

- Initiate intravenous access and commence intravenous therapy as prescribed.
- Nursing care provided as per clinical pathway.
- Minimum of daily visits.
- Educate patient and carer regarding patient's condition and action plan if condition deteriorates.

6. Medical Management / Treatment Plan

Suggested Antibiotic Regimen

- Ceftriaxone 1g intravenous daily is first line therapy.
- Gentamicin can be administered (according to aminoglycoside protocol) if infecting organism is suspected/ proven to be resistant to ceftriaxone and/or patients is intolerant or allergic to ceftriaxone. Treatment should not extend beyond 48 hours.
- Ertapenem 1g intravenous daily for infections proven to be secondary to an extended spectrum beta lactamase (ESBL) producing organism (and susceptible to ertapenem). Must be approved by an IDP or clinical microbiologist prior to acceptance.
- Oral fosfomycin (SAS supply via a hospital pharmacy) may be appropriate for uncomplicated UTI caused by ESBL organisms – must be discussed with IDP/Clinical Microbiologist.
- UTI caused by a resistant pathogen should be considered in people who have an increased likelihood of faecal carriage of multidrug-resistant organisms, including:
    - People who have travelled internationally within the past 6 months (particularly in South and East Asia)
    - People who have had recent antibiotic exposure
    - Patients who have not responded to initial therapy
    - Aged-care facility residents.
- If unusual or multi-resistant organism or intravenous therapy required >72 hours, then consult a Clinical Microbiologist and /or IDP.
- Options for stepdown therapy (correlate with MSU):
    - Trimethoprim 300mg orally, daily or

- Amoxicillin + Clavulanate 875 + 125 mg, orally 12 hourly Or
- Cephalexin 500mg orally 6 hourly or
- Norfloxacin 400mg orally 12 hourly or
- Nitrofurantoin 100mg orally 12 hourly

- Total duration of antibiotic therapy should be 5-7 days for uncomplicated cystitis and 10-14 days for complicated UTI or pyelonephritis.

7. Monitoring

- Clinical improvement (resolution of fever, loin pain) – start oral therapy.
- Clinical deterioration (see below) – discuss with medical governor and consider hospital referral.
- Indicators for urgent medical re-assessment or hospital admission:
  - Hypotension (systolic BP < 90, and/or diastolic BP <60).
  - HR >100/min
  - RR>30/min
  - Temp <35 or temp >38.5^{o}C despite 24 hours of antibiotic therapy
  - Symptoms suggestive of renal colic/calculi, which are unmanageable at home.
  - Lack of symptomatic response.

8. Medical Governance

- The client has access to medical governance support for 24 hours per day, 7 days per week.
- Primary medical governance can be held by referring medical specialists, credentialed referring GPs or by Silver Chain medical staff.
- When governance is retained by a Silver Chain medical officer the client will have a medical review within 24 hours of admission and the medical officer will determine when the scheduled follow up and discharge will occur.
- Where the primary medical governor is unavailable the Silver Chain medical officer can provide the medical governance.

- Care delivery is planned and provided in consultation with the client, medical officer/specialist holding medical governance and nursing staff.
- In the instance when a client's condition deteriorates, the Silver Chain medical officer or nursing staff will confer with an emergency department medical officer.
- A summary of the episode of care is sent to the referrer or the client's GP at discharge.

9. Discharge Planning

- Ensure the client has an appointment arranged with own General Practitioner (GP) prior to discharge to ensure continuity of care.
- Renal tract ultrasound is required in all men with pyelonephritis and in women with recurrent infections or suspected abnormal tract.

10. Supporting Documents

Silver Chain Group documents that directly relate to and inform this Clinical Protocol are available with this document in the Policy Document Management System (PDMS).

Other documents that directly relate to and inform this Clinical Protocol are as follows:

- Urinary Tract Infections. In: eTG complete March 2021 edition [Internet]. Melbourne: Therapeutic Guidelines Limited.

11. Document Details

Document Owner	Executive Medical Director, East Coast
Document Type	CP – Clinical Protocol
Consumer Participation	☐ Yes ☒ Not Applicable
Functional Area	Acute
Risk Rating	Moderate
Periodic Review	36 months

Silver Chain Group's policies align with relevant legislation and standards and are based on providing a fair, inclusive and safe working environment free from bullying and discrimination and one that enables equal opportunity for all Silver Chain staff. Our policies embody our values of Care, Community, Integrity and Excellence.