Protocol for Management of Urinary Tract Infections

The Victorian Community Pharmacist Program

January 2026

VICTORIA State Government | Department of Health

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1. About

This Protocol has been developed to provide pharmacists authorised under the Drugs, Poisons and Controlled Substances Regulations 2017 (the Regulations) a clear framework to supply the Schedule 4 poisons documented in this Protocol for the treatment of suspected urinary tract infections (UTI) under a structured prescribing arrangement. It is a requirement of the Secretary Approval: Community Pharmacist Program that pharmacists comply with this Protocol when supplying Schedule 4 poisons for treatment of suspected UTIs. It is also a requirement of the Secretary Approval: Community Pharmacist Program that pharmacists have completed the current training requirements specified in the departmental guidance before supplying Schedule 4 poisons.

Pharmacists authorised to supply Schedule 4 poisons under the Regulations must:

- Operate at all times in accordance with the Drugs, Poisons and Controlled Substances Act 1981, the Regulations and all other applicable Victorian, Commonwealth and national laws.
- At all times act in a manner consistent with the Pharmacy Board of Australia's (the Board) Code of Conduct and in keeping with other professional guidelines and policies as set out by the Board as applicable.

Pharmacists are also expected to exercise professional judgment in adapting treatment guidelines to presenting circumstances.

1.1. Definitions and Acronyms

Cystitis: Urinary tract infection affecting the urinary bladder, most often caused by bacterial infection (especially Escherichia coli).

Gross haematuria: Presence of blood in the urine that is visible to the naked eye.

IUD: Intrauterine device

Pyelonephritis: Inflammation of the kidney, typically due to a bacterial infection. It usually begins in the urethra and travels up the urinary tract to one or both kidneys.

SGLT2 inhibitors: a class of medicines that lower blood glucose levels by inhibiting sodium-glucose transport proteins in the nephron.

STI: Sexually transmissible infection

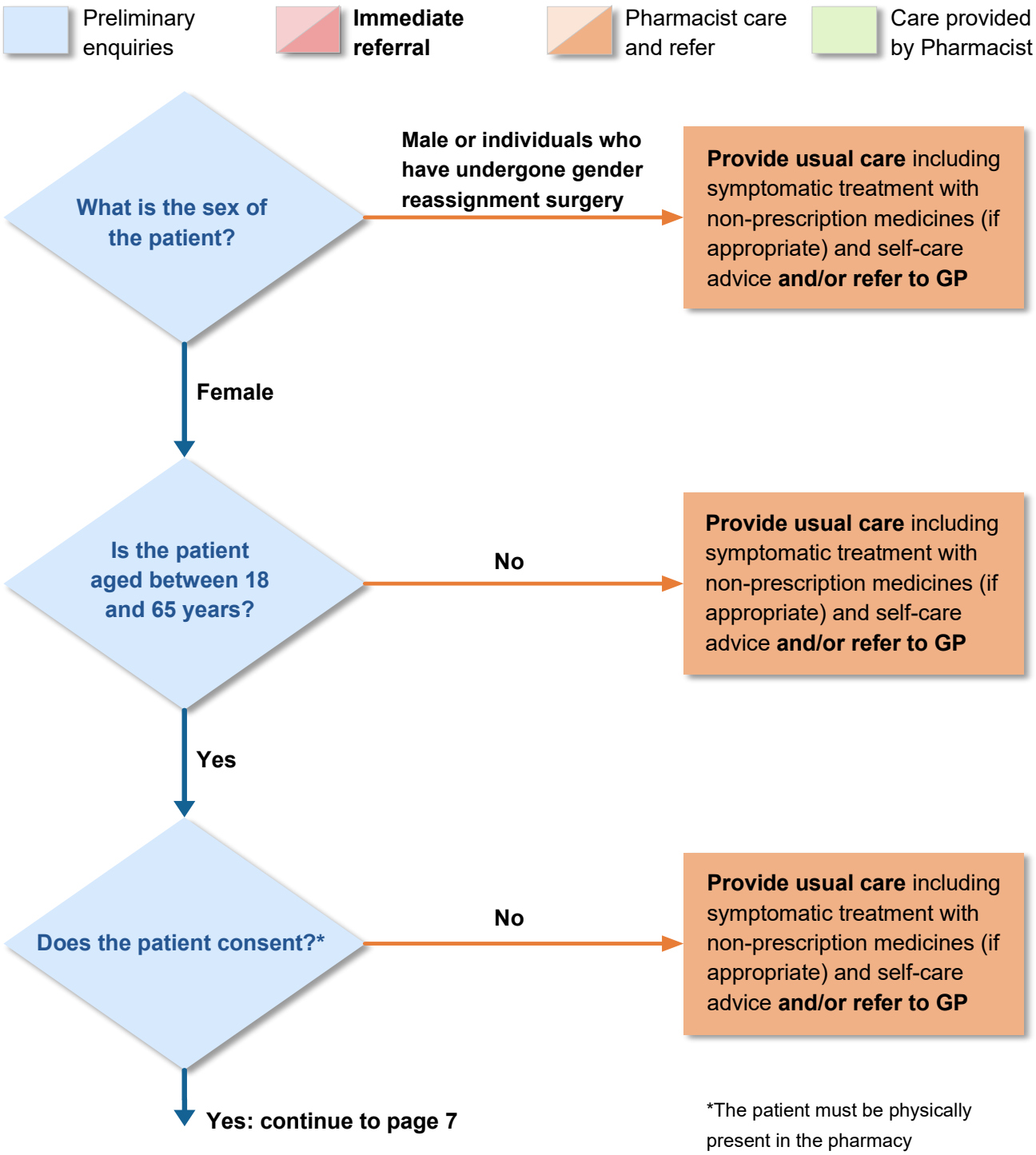
UTI: Urinary tract infection

Uncomplicated cystitis: Infection of the bladder in individuals without structural abnormalities, comorbidities, or conditions like pregnancy. This term is sometimes used interchangeably with "uncomplicated UTI".

2. Protocol for Management of Urinary Tract Infections

2.1. Key to colours used in this protocol

Where the protocol indicates to "Refer to General Practitioner", the Pharmacist may refer to a medical practitioner or other authorised prescribing health practitioner as clinically appropriate. If timely access to a GP is not available, referral to the Victorian Virtual Emergency Department (VVED) or an urgent care clinic may be considered as an alternative pathway.



Continued from page 6

Does the patient have signs and symptoms indicating **pyelonephritis?**

(e.g. fever >38°C, chills, nausea, vomiting, flank pain)

Yes → **Immediate referral to Emergency Department**

No

Is the patient presenting with 2 or more symptoms of acute cystitis?*

- Dysuria
- Urinary frequency
- Urinary urgency
- Suprapubic pain or discomfort

No: presenting with only 1 symptom of acute cystitis or atypical symptoms → **Conservative management** including symptomatic management treatment with non-prescription medicines (if appropriate) and self-care advice. **Refer to GP** as patient may benefit form laboratory investigations

go to: PHARMACIST CARE section on page 9 below.

Yes

Do symptoms of medical history (e.g. vaginal discharge, or vulval and vaginal discomfort) suggest a cause other than acute cystitis (e.g. vaginal thrush, bacterial vaginosis, vaginitis or vulvitis, chlamydia, gonorrhoea. trichomoniasis or other)

Yes → Consider appropriateness of S3 Pharmacist Only thrush treatment or **refer to GP** for investigation of other causes (e.g. infections such as bacterial vaginosis or herpes, or skin conditions)

No

Does the patient have any of the following?

- Pregnancy or less than 6 weeks post-partum
- Gross haematuria
- Cerebral palsy or other neurological diseases that may affect bladder function
- Recent insertion of IUD (within the last 3 months)
- Presence of history of anatomical or functional abnormalities of the urinary tract including:
  - Urinary tract obstruction
  - Urinary tract abnormality
  - Urolithiasis
  - Urinary catheterisation (in situ or in the last 48 hours)
  - Nephrostomy tube
  - Ureteral stent
  - Spinal cord injury

Yes → **Immediate referral to GP**

Symptomatic treatment with non-prescription medicines (if appropriate) and self-care advice may be provided by pharmacist prior to review by GP

*If vaginal discharge is absent and at least two symptoms of cystitis are present (i.e. acute dysuria, frequency, urgency), the probability of cystitis is greater than 90%

No: continue to page 8

Continued from page 7

Does the patient report any of the following?

- ☐ Having diabetes or using medicines that increase the risk of UTI (e.g. SGLT2 inhibitors)
- ☐ Reoccurrence of UTI symptoms within 2 weeks of completing appropriate antimicrobial treatment for a previous episode
- ☐ Symptoms of UTI persisting 48-72 hours after starting appropriate antibiotic treatment
- ☐ 2 or more symptomatic UTIs in previous 6 months OR 3 or more in previous 12 months
- ☐ Long-term inpatient care (including residential aged care facilities)

Yes →

Conservative management including symptomatic management treatment with non-prescription medicines (if appropriate) and self-care advice.

Refer to GP as patient may benefit form laboratory investigations

→ go to: **PHARMACIST CARE** section on page 9 below.

No ↓

Does the patient report / present with any of the following?

- ☐ Risk factors for sexually transmitted infection (STI) including:
  - Age <30 years
  - Previous STI
  - Sexual contact without a condom/dental dam outside a mutually monogamous relationship
  - A new sexual partner in last 60 days
  - A sexual partner recently treated for an STI
  - Sexual contact with a sex worker
- ☐ History of pyelonephritis
- ☐ Taking immunosuppressant medicines
- ☐ Being immunocompromised
- ☐ Asplenia
- ☐ Renal disease or impairment
- ☐ IUD in situ (greater than 3 months)

Yes →

Conservative management including symptomatic management treatment with non-prescription medicines (if appropriate) and self-care advice.

Refer to GP following provisional treatment by pharmacist.

Refer patient for STI testing where risk factors are identified.

→ go to: **PHARMACIST CARE** section on page 9 below.

Antibiotic treatment by pharmacist may still be considered, **concurrent to a referral to the GP**, if clinically appropriate (e.g. possible delay in access to GP and no contraindications to antibiotics).

→ go to: **ANTIBIOTIC THERAPY** section on page 10 below.

No ↓

Provisional diagnosis for uncomplicated cystitis and proceed to appropriate treatment

Continue to pharmacist care on page 9

Continued from page 8

PHARMACIST CARE

CONSERVATIVE MANAGEMENT

1. Provide the option of conservative management with non-prescription medicines as first line treatment for patients without immune compromise.*

Analgesia: Ibuprofen 400mg orally, every 8 hours for up to 3 days. Maximum daily dose of 2.4g in 24 hours

2. Provide non-pharmacological and self-care advice

Provide patient with Consumer Medicines Information and/or a Self-Care Fact Card.

Provide patient with guidance on recognising signs and symptoms of worsening infection (e.g. fever 38ºC or higher, rigors, loin or back pain, vomiting) that require prompt medical review.

Increasing water intake (up to 1.5 L daily) may reduce the risk of recurrent UTI in pre-menopausal females who have inadequate fluid intake (<1.5 L per day).

If patient continues to have symptoms after 48 hours of conservative management, advise patient to return to pharmacy for review and consider antibiotic therapy.

if appropriate, go to: ANTIBIOTIC THERAPY section on page 10 below.

*For non-pregnant adult females under 65 with mild cystitis symptoms who are not immunocompromised, consider a trial of non-antibiotic therapy to manage symptoms and minimise unnecessary antibiotic use.

Many women and gender diverse people under 65 years treated symptomatically (without antibiotic therapy) for acute uncomplicated cystitis become symptom-free within 1 week. The risk of developing acute pyelonephritis or sepsis following uncomplicated cystitis is low (estimated 1% to 5%), and while antibiotics reduce this risk, the benefits should be carefully considered against potential antibiotic adverse effects. Antibiotics are associated with faster symptom resolution, but the absolute difference is typically only a few days.

ANTIBIOTIC THERAPY

Does the patient have allergies, drug-drug interactions or any other contraindications to management options?

Yes → Where antibiotic therapy is considered the appropriate treatment options but all recommended antibiotics under this protocol are contraindicated, **refer patient to GP**

No: proceed with antibiotic therapy

1. Provide empirical antibiotic therapy, where indicated

Nitrofurantoin (1st line) 100mg orally, every 6 hours for 5 days (Supply 20 capsules)

Fosfomycin (2nd line) 3g orally, as a single dose (Supply 1 sachet)

Trimethoprim (3rd line) 300mg orally, daily at night for 3 nights (Supply 3 tablets)*

*Only if the patient has not used trimethoprim or had a trimethoprim-resistant *E. coli* in the last 3 months

→ Dispense any medications (if supplied) via pharmacy dispensing software and label according to the legislative requirements outlined in the Drugs, Poisons and Controlled Substances Regulations 2017

2. Provide follow-up advice and expectations around duration of symptoms

Symptoms should respond to appropriate antibiotic treatment within 48 hours.

If symptoms persist 48-72 hours after finishing antibiotic treatment or symptoms develop that are not symptoms of acute cystitis, patient should be advised to see a GP.

* This guidance has been reviewed in line with the Therapeutic Guidelines: Antibiotic March 2025 update, which reflects that trimethoprim is no longer the first-line empirical recommendation for acute cystitis. Although trimethoprim is well tolerated and effective for acute cystitis if the pathogen is susceptible, the rates of trimethoprim resistance among E. coli urine isolates in Australia have been increasing and are estimated to be around 20% (AURA 2023).

3. Clinical documentation requirements

The pharmacist must make a clinical record of the consultation that contains:

- Sufficient information to identify the patient
- Date of treatment
- Name of the pharmacist who undertook the consultation and their Healthcare Provider Identifier-Individual (HPI-I) number
- Consent given by the patient regarding: program participation, costs, pharmacist communication with other healthcare practitioners (e.g. patient's usual treating GP) and access to the patient's My Health Record for the purpose of checking inclusion/exclusion criteria and uploading information relating to the consultation as required
- Any information known to the pharmacist that is relevant to the patient's diagnosis or treatment and any observations and assessments including allergies and adverse drug reactions
- Any clinical opinion reached by the pharmacist
- Actions taken by the pharmacist (including any medications supplied or referrals made to a medical practitioner)
- Particulars of any medications supplied to the patient (such as form, strength and amount)
- Information or advice given to the patient in relation to any treatment proposed by the pharmacist who is treating the patient

The pharmacist must share a copy of the record of the service to the patient and with the patient's usual treating medical practitioner or medical practice, where the patient has one.

The pharmacist must make a record in the pharmacy software and an IT system approved by the Victorian Department of Health, regarding the supply.

Supplementary information

The supplementary information provided below has been included to assist Victorian pharmacists participating in the Community Pharmacist Program (the Program) and along with the management protocol, is intended to be used together with the Pharmaceutical Society of Australia Treatment guideline for pharmacists: Cystitis.

4. Confirm management is appropriate

Consult Therapeutic Guidelines, Australian Medicines Handbook and other relevant references to confirm the treatment recommendation is appropriate, including for:

- Considerations for nonantibiotic therapy in line with the Therapeutic Guidelines recommendations
- Contraindications and precautions
- Lactation, including with nitrofurantoin if the infant is under one month or has G6PD deficiency
- Medicine interactions, including with over-the-counter products such as urinary alkalinising agents, which significantly reduce the efficacy of nitrofurantoin and fosfomycin

5. Medicines list

Offer analgesia, including ibuprofen, to patients with symptoms of acute cystitis. Provide non-pharmacological and self-care advice (see patient information in Resources section). Increasing water intake (up to 1.5 L daily) may reduce the risk of recurrent UTI in pre-menopausal females who have inadequate fluid intake (<1.5 L per day).

Non-antibiotic therapy may be discussed as an option for mild acute cystitis in nonpregnant females under 65 without immune compromise due to minor differences in symptom resolution, low complication risk (1-5%), and avoidance of antibiotic adverse effects. Provide patient with guidance on recognising signs and symptoms of worsening infection (e.g. fever 38ºC or higher, rigors, loin or back pain, vomiting) that require prompt medical review.

The efficacy of urinary alkalinising agents for the symptomatic treatment of acute cystitis has not been established in trials, but some patients find them useful for symptom relief. Patients on certain antibiotics (e.g., nitrofurantoin and fosfomycin) should avoid the use of alkalinising agents as they may significantly reduce the efficacy of their antibiotics. Cranberry products, ascorbic acid and methenamine hippurate are not effective for the treatment of acute cystitis.

1. Consider conservative management with non-prescription medicines as first line treatment in patients without immune compromise
Analgesia: Ibuprofen 400mg orally, every 8 hours for up to 3 days. Maximum daily dose of 2.4g in 24 hours.

2. Empirical antibiotic therapy where indicated*

Antibiotic	Dose	Contraindications
Nitrofurantoin (1st line)	100mg every 6 hours for 5 days	• Previous serious adverse reaction to nitrofurantoin • Glucose-6-phosphate dehydrogenase (G6PD), enolase, or glutathione peroxidase deficiency (may lead to haemolytic anaemia) • Severe renal impairment • Avoid in breastfeeding if infant is under one month or has G6PD deficiency
Fosfomycin (2nd line)	3g orally as a single dose (at night)	• Previous serious adverse reaction or hypersensitivity to fosfomycin • Severe renal impairment • Not recommended in cases of fructose intolerance, glucose-galactose malabsorption or sucrase-isomaltose insufficiency
Trimethoprim (3rd line)	300mg daily (at night) for 3 nights	• If the patient has been treated with trimethoprim in the previous 3 months, or had a trimethoprim-resistant *E. coli* isolate during this time, use an

	alternative antibiotic for empirical therapy. • Previous serious adverse reaction to trimethoprim-containing medicines • Megaloblastic anaemia due to folate deficiency • Other causes of folate deficiency • Other severe blood disorders • Porphyria • Hyperkalaemia • Treatment with methotrexate • Treatment with phenytoin • Treatment with lamivudine

*Where antibiotic therapy is considered the appropriate treatment option but all recommended antibiotics under this protocol are contraindicated, refer the patient to their GP for further investigation and consultation. Cefalexin has been excluded from the Medicines List of this Protocol to limit potential overuse and the emergence of cefalexin resistance.

6. Communicate agreed management plan

Comprehensive advice and counselling (including supporting written information when required) as per the Australian Medicines Handbook and other relevant references should be provided to the patient regarding:

- Medicine use (e.g. dosing) and how to manage adverse effects if pharmacotherapy is indicated
- When to seek further care and/or treatment
- When to return to the pharmacist for clinical review
- Where to access testing for STIs if risk factors are identified (e.g. with the patient's usual healthcare provider, or via Melbourne Sexual Health Centre or sexual health GP partner clinics).

7. Resources

7.1. Guidelines

Pharmaceutical Society of Australia. Treatment guideline for pharmacists: Cystitis
https://my.psa.org.au/s/article/Treatment-guideline-for-pharmacists-cystitis

Antibiotic [published March 2025]. In: Therapeutic Guidelines. Melbourne: Therapeutic Guidelines Limited; accessed 1 April 2025. https://www.tg.org.au

Australian STI management guidelines for use in primary care.
https://sti.guidelines.org.au/sexual-history/

7.2. Professional Practice Standards

Professional Practice Standards 2023, version 6.
https://www.psa.org.au/practice-support-industry/pps/

7.3. Patient Information

Victorian Community Pharmacist Program – Uncomplicated UTI patient handout:
https://www.health.vic.gov.au/primary-care/community-pharmacist-program-resources-for-pharmacists

Better Health Channel:
https://www.betterhealth.vic.gov.au/health/conditionsandtreatments/urinary-tract-infections-uti

UTI fact sheet from Kidney Health Australia:
https://kidney.org.au/wp-content/uploads/2025/10/KHA-Factsheet-urinary-tract-infections-2018.pdf

PSA self-care fact sheet:
https://www.psa.org.au/wp-content/uploads/2023/02/4254-FC-Urinary-tract-infection_ekiosk.pdf

Melbourne Sexual Health Centre for free STI checks:
https://www.mshc.org.au/clinics-services/our-services/sti-clinic