Best Practice Message

November 2024

What the Fosfomycin?

Practice changing moments

- Nitrofurantoin is the most appropriate choice for the majority of UTI cases.
- Fosfomycin is now an option for UTI treatment in community for patients with resistance or a contraindication to other agents.

Background

The most common organism involved in UTI is Escherichia coli (E.coli). In Hawke's Bay 99% of E.coli from community urine specimen were sensitive to nitrofurantoin in 2023.

Fosfomycin, an oral antibiotic, is funded for UTI treatment in community from 1 November 2024. While Pharmac estimates that approximately 3,500 additional people in New Zealand will use fosfomycin in the first year of funding, for the vast majority of patients with uncomplicated urinary tract infections, treatment will not include fosfomycin. Nitrofurantoin remains the most appropriate antibiotic treatment for the majority of UTI cases. Cefalexin and trimethoprim are good alternative options, as resistance in Hawke's Bay remains low.

Antibiotics of choice

Antibiotic	Considerations	Hawke's Bay antibiotic susceptibility Awanui community urinary site data for 2023 showing the range of susceptibility to antibiotic between different organisms. See the antibiogram for more details
Nitrofurantoin	• Nitrofurantoin is recommended to only be used in patients with a creatinine clearance >60mL/min. • Prescribe by brand to ensure correct formulation is prescribed (modified release capsules vs immediate release tablets). • Avoid after 36 weeks gestation in pregnancy. • Serious pulmonary reactions can occur with short or long term use.	99-100%
Cefalexin	• Avoid if history of immediate hypersensitivity reaction to beta-lactam antibacterials.	93-100%
Trimethoprim	• Avoid in the first trimester of pregnancy. • Fatalities have occurred due to concomitant use of methotrexate and trimethoprim.	76-97%

Fosfomycin

From 1 November 2024, fosfomycin (UroFos) is funded for use in community E.coli UTI treatment. Fosfomycin is highly effective against E.coli. It inhibits the enzyme phosphoenolpyruvate transferase which interrupts cell wall biosynthesis, leading to bacterial cell death. The contents of the sachet should be dissolved and given as a single 3g dose on an empty stomach. Following the dose, symptoms will usually resolve within 3 days. Providing information to patients on the timeframe to symptom resolution is recommended.[3]

The use of fosfomycin is reserved for when usual antibiotic options for UTI have failed. Eligibility criteria for its use include resistance to or a contraindication or intolerance to all of; trimethoprim, nitrofurantoin, amoxicillin, cefaclor, cefalexin, amoxicillin with clavulanic acid, and norfloxacin.[4] Hawke's Bay Awanui labs do not report on norfloxacin or cefaclor. Pharmac have confirmed that Hawke's Bay prescribers can assume ciprofloxacin resistance as an indicator for norfloxacin and cefalexin as a proxy for cefaclor resistence.[5]

Tools:

- The Bpac antibiotic Guide: choices for common infections - 2023 can be found here.

- The New Zealand Formulary guide on UTI treatment can be found here.
- Further information on Pharmac's decision to fund fosfomycin in the community can be found here.
- Past best practice messages on UTI prophylaxis and treatment can be found here.
- HealthPathways information on UTI in adults can be found here.
- Further details on the New Zealand Microbiology Network Choosing Wisely recommendations can be found here.

Patient resources:

- Healthify patient information on UTI in women can be found here.

CARM:

Prescribers should continue to report adverse reactions to all medications to the Centre for Adverse Reactions Monitoring (CARM). This allows continued monitoring of the benefit/risk balance of the medicine. Healthcare professionals can report any suspected adverse reactions via this form.

References:

1. Antibiotic Guide: choices for common infections - 2023 [Internet]. [cited 2024 Sep 26]. Available from: https://bpac.org.nz/antibiotics/guide.aspx#uti-adult
2. Js M, Ar M. Delayed and Non-Antibiotic Therapy for Urinary Tract Infections: A Literature Review. Journal of pharmacy practice [Internet]. 2024 Feb [cited 2024 Oct 15];37(1). Available from: https://pubmed.ncbi.nlm.nih.gov/36134708/
3. fosfomycin - New Zealand Formulary [Internet]. [cited 2024 Sep 26]. Available from: https://nzf.org.nz/nzf_70370
4. Government P| TPW| N. Decision to fund fosfomycin in the community for urinary tract infections [Internet]. Pharmac | Te Pātaka Whaioranga | NZ Government. 2024 [cited 2024 Sep 26]. Available from: https://pharmac.govt.nz/news-and-resources/consultations-and-decisions/2024-09-decision-to-fund-fosfomycin-in-the-community-for-urinary-tract-infections
5. Sebastian - Implementation Advisor PHARMAC. Fosfomycin special authority criteria [email]. Message to Albertyn, R. 2024 November 15 [cited 2024 November 15].

Authored by: Riani Albertyn **Reviewed by:** Brendan Duck

Acknowledgements: Thanks to Ben Robertson for content contribution and guidance.