

**TARGET Urinary Tract Infection Webinar – Panel Questions**

The following document covers questions and answers given during the live webinar “Applying diagnostic and prescribing guidance of urinary tract infections in practice”.

Find the live webinar recording [here](https://youtu.be/qRBdakomNbc).

Answers have been provided by a group of clinical experts and follow NICE antibiotic prescribing guidelines. They do not reflect the views of UK Health Security Agency (UKHSA) or the Royal College of General Practitioners (RCGP).

# Antibiotic resistance

## What would increase the risk of antibiotic resistance indicating a urine culture is required?

A history of recurrent UTIs, living in care home, recent hospital admission, previous antibiotic resistance and recent travel to a country with high levels of AMR.

And countries with a higher AMR risk are everywhere except Scandinavia and the Netherlands to be honest. Even Republic of Ireland is risky.

## How do you define antibiotic resistance in the context of UTI? And what exactly do we mean by ‘at risk’ for antibiotic resistance'?

AMR is resistance to antibiotics of choice for treatment according to national guidelines. Regarding ‘at risk’– may harbour bacteria with AMR genes such that if they cause infection, the infection may be harder to treat.

## What resistance rates are there in England to Nitrofurantoin for 16 -64years uncomplicated UTIs as per pharmacy PGD?

Pharmacy don’t send urine samples for culture so no data. However most walk-in centres and A&E and GP don’t either. Most urines samples tend to be from older people. However nitrofurantoin resistance remains very low in all samples sent by sentinel GP sites in the UK.

# Choice of antibiotic and course length

## Is there any rationale behind prescribing ascorbic acid with hipprex? So many patients got discharged from secondary care with this combi, please guide.

Methenamine needs an acidic environment to split into formaldehyde but avoid alkalising agents rather than add acidifying agents. Note: Pseudomonas produce ammonia so will alkalise, so methenamine not effective if pseudomonal UTI.

Nevertheless, there is no good evidence that giving ascorbic acid with methenamine does acidify the urine as desired because the renal system acts to counter the effects – there is poor understanding of how to acidify urine and poor evidence around the use of ascorbic acid.

Hipprex works in acidic urine. However, in Wales we do not recommend the co-prescribing of ascorbic acid as in the vast majority of patients their urine will be sufficiently acidic. Advice should be given around avoiding alkalising agents (available OTC in community pharmacy).

## If allergy to penicillin and issues with low eGFR, what else could be used please?

Options include trimethoprim (if sensitive) at reduced dose according the BNF but being cautious about risk of hyperkalaemia or Fosfomycin if eGFR > 10 mL/min (contraindicated at <10). This is not usually useful if the eGFR is less than 30. Cefalexin is an option or pivmecillinam or amoxicillin if the organism is sensitive.

## What is preferred choice of antibiotic for UTI in the first trimester?

Nitrofurantoin MR 100mg twice daily for 7 days

## If culture comes as gentamicin sensitive only, what would be the oral antibiotic of choice, given patient has uncomplicated UTI?

I would call the reporting lab as that’s not a helpful culture report to send, and ask them to advise as they may have supressed some choices.

## Urine showed pseudomonas sensitive to ciprofloxacin, meropenem or tazocin. Would you treat with ciprofloxacin?

I would consider oral ciprofloxacin if the patient is low risk and consent to it as it is far better to use an oral product as can discharge if possible too, which is often safer.

Maybe consider contacting the micro lab to see if there are additional antibiotics the organism is sensitive to or discussing with microbiology for advice.

## I find often that pt still c/o symptoms if course of 3 days is given. I tend to give 5 days and adv to stop the ab if they are fine after 3 days.

Little et al., (2009) showed that UTI in otherwise well women will get better without an antibiotic in 4.9 days. If an antibiotic is given that the pathogen is resistant to, they will get better in 4.7 days and if treated with an antibiotic to which the pathogen is sensitive, they will get better in 3.3 days. The evidence reviewed by NICE showed that 3 days was as effective as 7 days for symptom resolution.

The above is for simple, uncomplicated UTI. Longer courses (7 days) are advised for immunocompromised, functional abnormality or compounding factors (e.g., uncontrolled diabetes).

However, the studies are not great because if you did the Little study specifically in over 65’s the same results may not have been obtained as they studied 17-70yrs and this is probably fine for the young ones but not sure it generally applies. The strategy outlined is very common and shows the lack of decent studies.

# Collecting urine samples

## Is there a level of leucocytes in urine dip that make UTI more or less likely, e.g. 3+ vs 1+?

Leucocytes are from white blood cells, immune response of the body, which may have been triggered by UTI... or kidney stones or generalised inflammation. So therefore the strength of the result doesn’t promote UTI over the others. It should be used as part of a holistic assessment taking into account symptoms.

## If working out of hours - how long is an MSU viable to be sent off by the pts GP surgery after a weekend, and which bottle should it be sent in?

Boric acid 'red top' tubes and don’t think a sample lasts a whole weekend.

<https://view-health-screening-recommendations.service.gov.uk/asymptomatic-bacteriuria/>

# Management of complications

## I think I just missed you talking about sterile pyuria - please could you go over guidance for this?

In cases of sterile pyuria, consider vaginal infection, chlamydia, difficult to culture organisms such as TB or renal pathology

## What causes green coloured urine? And how to manage? Pseudomonas

There is little evidence to say what can cause green urine. There have been some cases noted where the authors identify *P. Aeruginosa* as the cause of a UTI that presented with green urine, however, green urine can also be caused by some medications, food colourings, and illnesses.

# Management in pregnancy

## A woman with PMh of UTI during pregnancy now non pregnant with feeling of discomfort only no urinary sx + with negative dipstick and negative MSU but shows pus cells significantly should be treated with UTI? Or wait & watch?

Wait and watch and consider other causes

# Accessing guidance

## Where can we access local guidance if we don’t work in primary care?

Suggest contacting your ICB AMR lead or local friendly consultant microbiologist.

I use the MicroGuide app. You can select your health board (Welsh terminology) and then primary care/secondary care guidance. Not all ICBs use MicroGuide but it would be a good place to start.

# Future TARGET work

## How do we know about future webinars?

If you sign up to the TARGET mailing list, we provide information to users about future webinars: <https://surveys.phe.org.uk/TakeSurvey.aspx?SurveyID=98KHl8m1J>

## Will you be discussing prophylactic use of antibiotics for recurrent UTIs?

Not in this webinar - but we would like to potentially do a webinar on this in the future.

## Are there any plans for TARGET to create any patient leaflets to support prescribers with fluoroquinolone prescribing relating to recent MHRA alert if it needs to be prescribed?

This is under consideration.