

Welcome!

Welcome to the World Antibiotics Awareness Week (November) edition of the TARGET antibiotics newsletter.

This edition shares TARGET's new logo, exciting new TARGET e-Learning, an update on our UTI diagnostic tools, published research around CRP POCT, and a focus on how nurses in general practice and in the community can use the TARGET resources.

World Antibiotic Awareness Week (12-18 Nov)

The [World Health Organisation website](#) has a host of campaign resources that you can download and use freely.

During WAAW TARGET aim to promote:-

- Re-branded TARGET leaflets via the Keep Antibiotics Working national campaign
- New TARGET Future Learn e-Learning
- Our exciting new research publications

TARGET antibiotics: Prescribing in Primary Care Future Learn e-Learning



TARGET have collaborated with the British Society of Antimicrobial Chemotherapy (BSAC) to develop a TARGET e-Learning series on the Future learn platform. A new topic is released every week for 7 weeks and each topic takes approx. 1 hour.

Registration for the course opens this week so click [here](#) to register. Week 1 will commence on **Monday 28th January 2019**.

The course aims to help primary care professionals to target the use of antibiotics to help towards the reduction in antimicrobial resistance. By the end of the course you will have an understanding of how to apply practical antimicrobial stewardship strategies in your practice.

Topics covered include: Introduction to antimicrobial resistance in primary care, Prescribing in Urinary Tract Infections, Assessing the Need for Antibiotics, Managing Patient Expectations, Back-up prescriptions, Antibiotics for Children, Common Practice Approach.

Research updates

Effectiveness of Behavioural Interventions to Reduce Urinary Tract Infections and E. coli Bacteraemia for Older Adults Across all Care Settings: A Systematic Review published in the **Journal of Hospital Infection**. Read more [here](#).

A qualitative study to explore the views of general practice staff on the use of point-of-care C-reactive protein testing for the management of lower respiratory tract infections in routine general practice in England has been published by the **BMJ Open**. Read more [here](#).

Come meet the team

We will be attending the following meetings/conferences.

- FIS, Nov 2018
- BSAC, March 2019
- PHE Public Health Research and Science Conf, April 2019

Read more [here](#).

[Mail us](#) if you are attending any of these events and would like to have a chat about the presentations, TARGET or just to say hi.

Antibiotic Guardian

Antibiotic Guardian supports the UK Antimicrobial Resistance strategy, European Antibiotic Awareness Day and World Antibiotic Awareness Week.

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**ANTIBIOTIC
GUARDIAN**

Keep Antibiotics Working

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Keep Antibiotic Working Campaign

On 23rd October 2018, Public Health England (PHE) relaunched the national 'Keep Antibiotics Working' (KAW) campaign highlighting that taking antibiotics when you don't need them puts you and your family at risk. To help keep antibiotics working you are urged to always take your doctor or nurse's advice on antibiotics.



NEW TARGET rebranding

"Keep Antibiotics Working" is the unifying brand to manage antimicrobial resistance (AMR) and currently includes the Antibiotic Guardian campaign. The TARGET logo and resources are being re-branded in 2018 to follow the KAW brand. So keep a look out for our new logo on our future resources and social media platforms.

TARGET leaflets

Keep Antibiotics Working in your practice

In 2017 the TARGET Treating Your Infection leaflet for respiratory tract infections (RTI) was rebranded to be used as part of the KAW campaign. The rebranded leaflets were disseminated by Public Health England and NHS England to all general practices in England who had signed up to the campaign. In 2018 PHE and NHS England are distributing KAW resource packs to approx. 7,500 general practices that will include the TARGET Treating Your Infection RTI leaflet. These will be distributed by PHE but if practices would like to order additional resources for the KAW campaign they can do so from the Campaign Resource Centre.

Your infection	Most are better by	How to look after yourself and your family	When to get help
Middle-ear infection	8 days	<ul style="list-style-type: none"> Have plenty of rest. Drink enough fluids to avoid feeling thirsty. Ask your local pharmacist to recommend medicines to help your symptoms or pain (or both). Fever is a sign the body is fighting the infection and usually gets better by itself in most cases. You can use paracetamol if you or your child are uncomfortable as a result of a fever. 	<p>The following are possible signs of serious illness and should be assessed urgently:</p> <ol style="list-style-type: none"> If your skin is very cold or has a strange colour, or you develop an unusual rash. If you feel confused or have slurred speech or are very drowsy. If you have difficulty breathing. Signs that suggest breathing problems can include: <ul style="list-style-type: none"> breathing quickly turning blue around the lips and the skin below the mouth skin between or above the ribs getting sucked or pulled in with every breath. If you develop a severe headache and are sick. If you develop chest pain. If you have difficulty swallowing or are drooling. If you cough up blood. If you are feeling a lot worse. <p>If you or your child has any of these symptoms, are getting worse or are sicker than you would expect (even if your/their temperature falls), trust your instincts and seek medical advice urgently from NHS 111 or your GP. If a child under the age of 5 has any of symptoms 1-3 go to A&E immediately or call 999.</p> <p>Less serious signs that can usually wait until the next available appointment:</p> <ol style="list-style-type: none"> If you are not starting to improve a little by the time given in the 'Most are better by' column. In children with middle-ear infection: if fluid is coming out of their ears or if they have new deafness. Mild side effects such as diarrhoea, however seek medical attention if you're concerned. Other.....
Sore throat	7-8 days	<ul style="list-style-type: none"> Use a tissue and wash your hands well to help prevent spread of your infection to your family, friends and others you meet. Other things you can do suggested by GP or nurse: 	
Sinusitis	14-21 days	<ul style="list-style-type: none"> Use a tissue and wash your hands well to help prevent spread of your infection to your family, friends and others you meet. Other things you can do suggested by GP or nurse: 	
Common cold	14 days	<ul style="list-style-type: none"> Use a tissue and wash your hands well to help prevent spread of your infection to your family, friends and others you meet. Other things you can do suggested by GP or nurse: 	
Cough or bronchitis	21 days	<ul style="list-style-type: none"> Use a tissue and wash your hands well to help prevent spread of your infection to your family, friends and others you meet. Other things you can do suggested by GP or nurse: 	
Other infection: days	

Back-up antibiotic prescription to be collected after days only if you are not starting to feel a little better or you feel worse.

Collect from: Pharmacy General practice reception GP, nurse, other

Never share antibiotics and always return any unused antibiotics to a pharmacy for safe disposal.

The RTI and UTI leaflets are accessible and available to order to prescribing GP and healthcare professionals in surgery or practice settings via the [Public Health England campaign centre](#).

TARGET community pharmacy leaflet

Help Us Help You

This year the TARGET Treating Your Infection leaflet (RTI) for community pharmacy staff has been rebranded to be in line with the PHE and NHS England community pharmacy campaign "Help Us Help You".



"Help Us Help You" is the new umbrella campaign for Stay Well this Winter and Stay Well Pharmacy. The TARGET community pharmacy leaflet will be included and delivered to all pharmacies in England as part of the campaign.

Your infection	Without antibiotics most are better by	How to look after yourself and your family	When to get help
Middle-ear infection	8 days	<ul style="list-style-type: none"> Have plenty of rest. Drink enough fluids to avoid feeling thirsty. Ask your local pharmacist to recommend medicines to help your symptoms or pain (or both). Fever is a sign the body is fighting the infection and usually gets better by itself in most cases. You can use paracetamol if you or your child are uncomfortable as a result of a fever. 	<p>The following are possible signs of serious illness and should be assessed urgently:</p> <ol style="list-style-type: none"> If your skin is very cold or has a strange colour, or you develop an unusual rash. If you feel confused or have slurred speech or are very drowsy. If you have difficulty breathing. Signs that suggest breathing problems can include: <ul style="list-style-type: none"> breathing quickly turning blue around the lips and the skin below the mouth skin between or above the ribs getting sucked or pulled in with every breath. If you develop a severe headache and are sick. If you develop chest pain. If you have difficulty swallowing or are drooling. If you cough up blood. If you are feeling a lot worse. <p>If you or your child has any of these symptoms, are getting worse or are sicker than you would expect (even if your/their temperature falls), trust your instincts and seek medical advice urgently from NHS 111 or your GP. If a child under the age of 5 has any of symptoms 1-3 go to A&E immediately or call 999.</p> <p>Less serious signs that can usually wait until the next available appointment:</p> <ol style="list-style-type: none"> If you are not starting to improve a little by the time given in the 'Most are better by' column. In children with middle-ear infection: if fluid is coming out of their ears or if they have new deafness. Mild side effects such as diarrhoea, however seek medical attention if you're concerned. Other.....
Sore throat	7-8 days	<ul style="list-style-type: none"> Use a tissue and wash your hands well to help prevent spread of your infection to your family, friends and others you meet. Other things you can do suggested by your pharmacy team: 	
Sinusitis	14-21 days	<ul style="list-style-type: none"> Use a tissue and wash your hands well to help prevent spread of your infection to your family, friends and others you meet. Other things you can do suggested by your pharmacy team: 	
Common cold	14 days	<ul style="list-style-type: none"> Use a tissue and wash your hands well to help prevent spread of your infection to your family, friends and others you meet. Other things you can do suggested by your pharmacy team: 	
Cough or bronchitis	21 days	<ul style="list-style-type: none"> Use a tissue and wash your hands well to help prevent spread of your infection to your family, friends and others you meet. Other things you can do suggested by your pharmacy team: 	
Other infection: days	

Never share antibiotics and always return any unused antibiotics to a pharmacy for safe disposal.

PHE management of common infections antibiotic guidance update

The Public Health England *Management and treatment of common infections: antibiotic guidance for primary care* has been produced and updated over the last 20 years. It has been a journey from the simple original table to the 100 page document with detailed rationale we now have. This is very much in thanks to collaboration, feedback and input from you and many experts and stakeholders.

We are now going through a period of change. The Department of Health has asked NICE and PHE to develop management of infection guidance across primary and secondary care. This guidance, moving forward, will cover many of the sections that are already summarised in the PHE quick reference guide.

To facilitate CCGs use of the guidance, the two sets will be joined into one summary table and will be accessible together on the NICE managing infection website via a word document. The joint summary tables will now be produced by NICE/PHE and called *Summary of antimicrobial prescribing guidance – managing common infections*. As new syndromic NICE/PHE guidance is published, each PHE box in the NICE/PHE table summary will be replaced with content written by NICE, and users will be referred to the new rationale and infographic developed by the NICE team.

PHE references, rationales and surrounding text for the summary will be published in a separate document that will be on the PHE website (along with hyperlinks to the summary tables on the NICE website). PHE will continue to do occasional updates to PHE content based on user feedback or significant changes in the evidence base and a full review of their content every 3 years .

The joint guidance was published in October 2018 . Read more [here](#).

Please contact TARGETantibiotics@phe.gov.uk if you would like a document with changes highlighted.

Diagnosis of UTIs - UTI quick reference diagnostic tools

The UTI diagnostic flowcharts are currently going through the final publication process and expected to be published during World Antibiotics Awareness Week. Based on feedback from stakeholder consultation we have worked to ensure alignment with the new NICE/PHE UTI treatment guidance and have subsequently delayed publication until after this is available.

Future TARGET interactive webinars

Rosie Allison gave an excellent update on the TARGET resources on the 23 October 2018 to support the launch of the new TARGET logo, rebranding and the Keep Antibiotics Working campaign. The interactive webinar was so popular, with over 60 individuals joining live, that further webinars will be held on the UTI resources. Dates for these future interactive webinars will be circulated by the end of 2018.

Updated Under 65's Lower Urinary Tract Infection Patient Leaflet


The Treating Your Infection leaflet for lower urinary tract infections (UTIs) has been updated in line with the Public Health England review of the evidence around the diagnosis of UTIs in under 65 year olds and updated NICE/PHE UTI antibiotic guidance launched in October.

The main changes are:


- Management of a UTI is now based on only 3 discriminating key symptoms and signs: dysuria, new nocturia and cloudy urine
- Urine dip-sticking on recommended for women with 0 or 1 key symptoms or signs
- D-mannose has been added as a possible preventative agent for women with recurrent UTI, although evidence is poor

The updated leaflet is currently going through the NICE endorsement process to support the following NICE guidelines:


- ♦ [NG15 Antimicrobial stewardship](#): systems and processes for effective antimicrobial medicine use
- ♦ [NG63 Antimicrobial stewardship](#): changing risk-related behaviours in the general population
- ♦ [NG109 Urinary tract infection \(lower\)](#): antimicrobial prescribing




TREATING YOUR INFECTION - URINARY TRACT INFECTION (UTI)



For women under 65 years with suspected lower urinary tract infections (UTIs) or lower recurrent UTIs (cystitis or urethritis)

Possible urinary signs & symptoms	The outcome	Recommended care	Types of urinary tract infection (UTI)
<p>Key signs/symptoms: Dysuria: Burning pain when passing urine (wee) New nocturia: Needing to pass urine in the night Cloudy urine: Visible cloudy colour when passing urine</p> <p>Other severe signs/symptoms: Frequency: Passing urine more often than usual Urgency: Feeling the need to pass urine immediately Haematuria: Blood in your urine Suprapubic pain: Pain in your lower tummy</p> <p>Other things to consider: Recent sexual history • Inflammation due to sexual activity can feel similar to the symptoms of a UTI. • Some sexually transmitted infections (STIs) can have symptoms similar to those of a UTI. Changes during menopause • Some changes during the menopause can have symptoms similar to those of a UTI.</p>	<p>All women: <input type="checkbox"/> If none or only one of: dysuria, new nocturia, cloudy urine; AND/OR vaginal discharge</p> <ul style="list-style-type: none"> • Antibiotics less likely to help. • Usually lasts 5 to 7 days. • You may need a urine test to check for a UTI. <p>Non-pregnant women: <input type="checkbox"/> If 2 or more of: dysuria, new nocturia, cloudy urine; OR bacteria detected in urine; AND NO vaginal discharge</p> <ul style="list-style-type: none"> • Antibiotics are more likely to help. • You should start to improve within 48 hours • Symptoms usually last 3 days. <p>Pregnant women: Always request urine culture <input type="checkbox"/> If suspected UTI.</p>	<p><input type="checkbox"/> Self-care and pain relief. • Symptoms may get better on their own.</p> <p><input type="checkbox"/> Delayed or backup prescription with self-care and pain relief. Start antibiotics if symptoms: • Get worse. • Do not get a little better with self-care within 48 hours.</p> <p><input type="checkbox"/> Immediate antibiotics prescription plus self-care.</p> <p><input type="checkbox"/> If mild symptoms, delayed or back-up antibiotic prescription plus self-care.</p> <p><input type="checkbox"/> Immediate antibiotic prescription.</p>	<p>UTIs are caused by bacteria getting into your urethra or bladder, usually from your gut. Infections may occur in different parts of the urinary tract.</p> <div style="display: flex; align-items: center;">  <ul style="list-style-type: none"> ← Kidneys (make urine) Infection in the upper urinary tract • Pyelonephritis (pie-lo-nef-right-is). Not covered in this leaflet and always needs antibiotics. ← Bladder (stores urine) Infection in the lower urinary tract • Cystitis (sis-tight-is). ← Urethra (takes urine out of the body) Infection or inflammation in the urethra • Urethritis (your-ith-right-is). </div>
Self-care to help yourself get better more quickly	When should you get help?	Options to help prevent a UTI	Antibiotic resistance
<ul style="list-style-type: none"> • Drink enough fluids to stop you feeling thirsty. Aim to drink 6 to 8 glasses including water, decaffeinated and sugar-free drinks. • Take paracetamol or ibuprofen at regular intervals for pain relief, if you have had no previous side effects. • You could try taking cranberry capsules or cystitis sachets. These are effective for some women. There is currently no evidence to support their use. • Consider the risk factors in the 'Options to help prevent UTI' column to reduce future UTIs. 	<p>The following symptoms are possible signs of serious infection and should be assessed urgently.</p> <p>Phone for advice if you are not sure how urgent the symptoms are.</p> <ol style="list-style-type: none"> 1. You have shivering, chills and muscle pain. 2. You feel confused, or are very drowsy. 3. You have not passed urine all day. 4. You are vomiting. 5. You see blood in your urine. 6. Your temperature is above 38°C or less than 36°C. 7. You have kidney pain in your back just under the ribs. 8. Your symptoms get worse. 9. Your symptoms are not starting to improve within 48 hours of taking antibiotics. 	<p>It may help you to consider these risk factors: Stop bacteria spreading from your bowel into your bladder. Wipe from front (vagina) to back (bottom) after using the toilet. Avoid waiting to pass urine. Pass urine as a soon as you need a wee. Go for a wee after having sex to flush out any bacteria that may be near the opening to the urethra. Wash the external vagina area with water before and after sex to wash away any bacteria that may be near the opening to the urethra. Drink enough fluids to make sure you wee regularly throughout the day, especially during hot weather.</p> <p>If you have a recurrent UTI, also consider the following:</p> <ul style="list-style-type: none"> • Cranberry products and D-mannose: Some women find these effective, but there is currently poor evidence to support this. • After the menopause: You could consider topical hormonal treatment, for example, vaginal creams. 	<p>Antibiotics can be lifesaving. But antibiotics are not always needed for urinary symptoms.</p> <p>Antibiotics taken by mouth, for any reason, affect our gut bacteria making some resistant.</p> <p>Antibiotic resistance means that the antibiotics cannot kill that bacteria.</p> <p>Antibiotic resistant bacteria can remain in your gut for at least a year after taking an antibiotic.</p> <p>Common side effects to taking antibiotics include thrush, rashes, vomiting and diarrhoea. Seek medical advice if you are worried.</p> <p>Keep antibiotics working, only take them when advised by a health professional. This way they are more likely to work for a future UTI.</p>

simplified



Developed in collaboration with professional medical bodies. Version 20 October 2021. KAW18-07 © Crown copyright 2018.

NICE endorsement for the older adult UTI resources

What is NICE endorsement?

The NICE Endorsement Programme formally endorses resources produced by external organisations that support the implementation of NICE guidance and the use of quality standards in part or in full.

Why do we want NICE endorsement for our resources?

Any TARGET resources endorsed will benefit from having the a NICE endorsement statement. Resource will also be signposted to from the relevant NICE guidance and quality standard webpages and listed on the NICE endorsement webpage. It also provides an opportunity to develop the resource further with support from NICE.

In October 2018 the TARGET UTI leaflet for older adults and carers and the UTI quick reference diagnostic tools were endorsed by NICE, pictured below.

Public Health England
URINARY TRACT INFECTIONS
A leaflet for older adults and carers.

WHAT IS A URINE INFECTION?
A urine infection occurs when bacteria in any part of the urine system cause symptoms.

WHAT YOU CAN DO TO HELP PREVENT A URINE INFECTION?
Are you drinking enough? Look at the colour of your urine.

- Drink enough fluid (6-8 glasses) so that you pass pale coloured urine regularly during the day, and to avoid feeling thirsty, especially during hot weather
- Avoid drinking too many fizzy drinks or alcohol
- There is no proven benefit of cranberry products or cystitis sachets
- Prevent constipation. Ask for advice if needed
- Maintain good control of diabetes

Stop bacteria spreading from your bowel into your bladder:

- Wipe genitals from front to back after using the toilet
- Change pads and clean garments if soiled
- Keep the genital area clean and dry; avoid scented soaps
- Wash with water before and after sex

WHAT SIGNS AND SYMPTOMS SHOULD YOU LOOK OUT FOR?
Consider these symptoms if you have a urinary catheter:

- Shivering or shaking
- High or low temperature
- Kidney pain in your back just under the ribs

New or worsening signs of urine infection in all people:

- Pain or burning when passing urine
- High or low temperature
- Shivering or shaking
- Urgency (feeling the need to urinate immediately)
- Pain in your lower tummy above pubic area
- Incontinence (wetting yourself more often than usual)
- Passing urine more often than usual
- Cloudy urine, or visible blood in your urine
- Confusion, change in behaviour, or unsteadiness on feet

ALTHOUGH CONFUSION IS CAUSED BY URINE INFECTION, CONSIDER OTHER THINGS THAT MAY ALSO CAUSE CONFUSION

- Pain
- Constipation
- Poor sleep
- Low mood
- Not drinking enough
- Side effects of medicine
- Other infection
- Change in your routine or home environment
- Poor diet

Speak to your pharmacist about referral to a GP or other treatments.

WHAT CAN YOU DO TO HELP FEEL BETTER?

- Drink enough fluid so that you pass urine regularly during the day, especially during hot weather.
- Drink enough fluids to avoid feeling thirsty and to keep your urine pale.
- There is no proven benefit of cranberry products or cystitis sachets.
- If you're worried about wetting yourself, see your doctor or nurse for advice
- Ask for advice from your pharmacist/carer
- Take paracetamol regularly, up to 4 times daily to relieve fever and pain

WHAT MIGHT YOUR PHARMACIST / NURSE / DOCTOR DO?

- If your symptoms are likely to get better on their own you may receive self-care advice and pain relief
- Ask you to drink more fluids
- Ask you for a urine sample
- You may be given an antibiotic that you can use if your symptoms don't improve or you start to feel worse.

ALWAYS TRUST YOUR PHARMACIST'S / NURSE'S / DOCTOR'S ADVICE ABOUT ANTIBIOTICS

- Antibiotics can be life saving for serious urine infections
- But antibiotics are not always needed for urinary symptoms
- Common side effects of taking antibiotics include thrush, rashes, vomiting and diarrhoea; ask for advice if you are worried
- Antibiotics affect the bacteria in your bowel, which may make them resistant to antibiotics for at least a year
- Keep antibiotics working, only take them when your doctor/nurse advises them

WHEN SHOULD YOU GET HELP?
The following symptoms are possible signs of serious infection and should be assessed urgently:

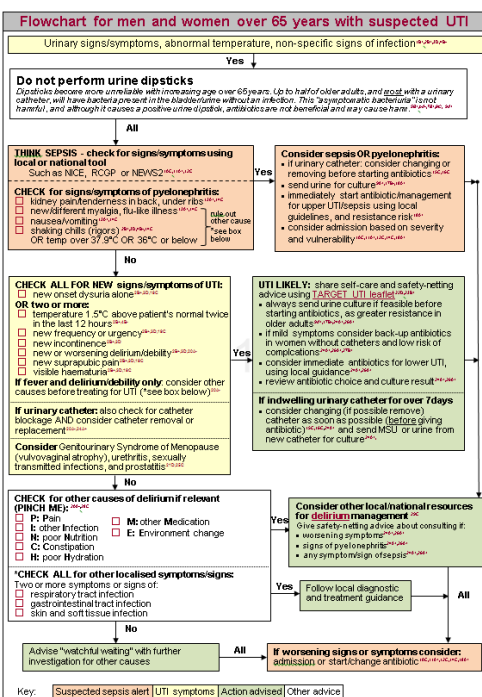
Contact your GP Practice or contact NHS 111 (England), NHS 24 (Scotland dial 111), NHS direct (Wales dial 0845 4647), or GP practice (NI)

Shivering, chills and muscle pain	Feeling very confused, drowsy or slurred speech
Not passing urine all day	Temperature is above 38°C or less than 36°C
Trouble breathing	Kidney pain in your back just under the ribs
Visible blood in your urine	Very cold skin

Symptoms are getting a lot worse, or not starting to improve within 2 days of starting antibiotics.

Trust your instincts, ask for advice if you are not sure how urgent the symptoms are.

Developed in collaboration with professional medical bodies. Version 1.2, Published: October 2018, Revision: June 2021



How do these resources link to NICE guidance?

The UTI leaflet for older adults and their carers and the UTI quick reference diagnostic tools accurately reflects recommendations in the NICE guideline on:

- ◆ [NG15 Antimicrobial stewardship](#): systems and processes for effective antimicrobial medicine use
- ◆ [NG63 Antimicrobial stewardship](#): changing risk-related behaviours in the general population
- ◆ [NG109 Urinary tract infection \(lower\)](#): antimicrobial prescribing

Other TARGET resources endorsed by NICE

TARGET currently have three other leaflets endorsed by NICE:

- ◆ The Treating Your Infection Respiratory Tract Infection leaflet
- ◆ The TYI Respiratory Tract Infection pictorial leaflet
- ◆ The Treating Your Infection Uncomplicated Urinary Tract Infection leaflet (*seeking re-endorsement following updates*)

Published research

"Effectiveness of Behavioural Interventions to Reduce Urinary Tract Infections and E. coli Bacteraemia for Older Adults Across all Care Settings: A Systematic Review" published in the **Journal of Hospital Infection**. The full article will be available [here](#).

Jones L, Meyrick J, Bath J, Dunham O, McNulty CAM

Background: Escherichia coli bacteraemia rates in the UK have risen; rates are highest amongst older adults. Previous Urinary Tract Infections (UTIs) and catheterisation are risk factors. This review examines effectiveness of behavioural interventions to reduce E.coli bacteraemia and/or symptomatic UTIs for older adults.

Method: Sixteen databases, grey literature and reference lists were searched. Titles and/or abstracts were scanned and selected papers read fully to confirm suitability. Quality was assessed using Critical Appraisal Skills Programme guidelines and Scottish Intercollegiate Guidelines Network grading.

Results: 21 studies were reviewed, and all lacked methodological quality. Six multi-faceted hospital interventions including education, with audit, and feedback or reminders reduced UTIs but only three provided statements of significance. Dickson et al reported decreasing catheter associated UTI (CAUTI) by 88% $F(1,20)=7.25$. Smith et al, reported reductions in CAUTI from 11.17 to 10.53 during Phase I and by 0.39 during Phase II (Chi-square=254). Van Gaal et al reported fewer UTIs per patient week ($rr=0.39$). Two hospital studies of online training and catheter insertion and care simulations decreased CAUTIs from 33 to 14 and from 10.40 to 0. Increasing nursing staff, community continence nurses, and catheter removal reminder stickers reduced infection. There were no studies examining prevention of E. coli bacteraemias.

Conclusions: The heterogeneity of studies means one effective intervention cannot be recommended. We suggest feedback should be considered because it facilitated reductions in UTI when used alone or in multifaceted interventions including education, audit or catheter removal protocols. Multi-faceted education is likely to be effective. Catheter removal protocols, increased staffing and patient education require further evaluation.

"A qualitative study to explore the views of general practice staff on the use of point-of-care C-reactive protein testing for the management of lower respiratory tract infections in routine general practice in England" has been published in the **BMJ Open**. The full article will be available [here](#):

Eley CV, Sharma A, Lecky DM, Lee H, McNulty CAM

Objectives: To explore the knowledge, skills, attitudes and beliefs of general practice staff about C-reactive protein (CRP) point-of-care tests (POCT) in routine general practice and associated barriers and facilitators to implementing it to improve the management of acute cough.

Design: A qualitative methodology including interviews and focus groups using the Com-B framework to understand individuals' behaviour to implement CRP POCT in routine general practice. Data was analysed inductively and then aligned to the Com-B framework.

Setting: A service evaluation of CRP POCT over a 6 month period was previously conducted in randomly selected GP practices from a high prescribing NHS CCG in England. All eleven intervention practices (eight accepting CRP; three declining CRP) and the eight control practices, which were not offered CRP POCT, were also invited to interview. A further randomly selected practice not allocated to intervention or control was also invited to participate.

Participants: Seven of eight accepting CRP, one of three declining CRP, and four of nine control practices consented to participate. 12 practices and 26 general practice staff participated; eleven interviews, three focus-groups and one hand written response.

Results: Participants reported that CRP POCT can increase diagnostic certainty for acute cough, inform appropriate management, manage patient expectations for antibiotics, support patient education, and improve appropriate antibiotic prescribing. Reported barriers to implementing CRP POCT included; CRP cost, time, easy access to the POCT machine, and effects on clinical workflow. Participants with greater CRP use usually had a dedicated staff member with the machine located in their consultation room.

Conclusions: CRP POCT can help general practice staff improve patient care and education if incorporated into routine care, but this will need enthusiasts with dedicated POCT instruments or smaller, cheaper, more portable machines. In addition, funding will be needed to support test costs and staff time.

The role of practice and community nurses in appropriate antibiotic use

Everyone has a responsibility to tackle AMR by preventing infection and using antimicrobials appropriately. In the primary care setting, nurses are the point of contact for many patients presenting with self-limiting infections, such as coughs, colds, ear infections, urinary symptoms. This often includes parents accompanying their children; nurses are responsible for managing patient and parents' expectation during these consultations.

Managing patient and parents' expectations during a consultation: the six Rs

Patients and parents need to feel that their concerns have been listened to and addressed, which in turn should help reduce future GP consultations and unnecessary antimicrobial prescriptions. 'The six Rs' of good practice for information exchange can be used to elicit patient concerns and expectations:

1. **Reassurance**—reassure the patient about the severity of the infection
2. **Reasons**—provide reasons if antimicrobials are not necessary. Communicate these to the patient in a clear manner
3. **Relief**—this can be advised in the form of paracetamol for pain
4. **Realistic**—give a realistic natural history or length of duration of illness
5. **Reinforce**—reinforce the key message that back-up prescriptions (if appropriate ie. when there is clinical uncertainty about whether a condition is self-limiting or is likely to deteriorate) must only be used if symptoms worsen or do not begin to settle in the expected time
6. **Rescue**—give safety netting advice at the end of the consultation.

These will be covered in the [TARGET webinar number 4](#) by Paul Little.

Use "Leaflets to share with patients" to support clear communication with patients and parents

- TARGET TYI-RTI—appropriate for patients who present with: middle-ear infection; sore throat; sinusitis; common cold; cough or bronchitis, and do not require treatment with antimicrobials. Available in nearly 20 languages, but do [contact us](#) if you require other languages.
- TARGET TYI-RTI (pictorial) - suitable for people with lower literacy and language needs, and emphasises how to manage an infection through self-care.
- When should I worry?—information for parents about the management of RTIs, such as: coughs, colds, sore throats and ear aches in children.
- Caring for children with coughs—contains information about how to look after a child who has a cough (not due to asthma)
- TARGET TYI-UTI—appropriate for women who have urinary symptoms suggestive of an uncomplicated UTI.
- TARGET TYI-UTI for older adults—designed to be used with older adults who are at risk of UTI, experiencing urinary symptoms or have been diagnosed with UTI

ACTION: Encourage practice and community nurses to sign up to [Future Learn](#) e-Learning to reflect on your practice and tests your knowledge on managing patient expectations OR watch the full hour webinars [here](#) (Webinar 3)

ACTION: Encourage practice and community nurses to [sign up](#) to TARGET to keep up-to-date

ACTION: Encourage practice and community nurses to use 'leaflets to share with patients' in consultation to aid clear communication. All leaflets can be downloaded from the [TARGET website](#).

Come meet the team: Meetings and Conferences

Infection Prevention Society Conference #IP2018

It was lovely to see so many of you at the Infection Prevention Society Conference in Glasgow in September. TARGET delivered an oral presentation, three poster talks and a symposium. The team came away with the “Best Small Exhibition Stand” award—thoroughly deserved.



General Practice Research on Infections Network (GRIN) Conference

This year saw the 20th annual GRIN conference, held in Zeist, Netherlands. TARGET were invited to present our research on: CRP implementation; local AMS initiatives; GP’s research needs; and our recent development of UTI resources for older adults. All were warmly received by the delegates, especially our insight into facilitators and barriers for real-life implementation of CRP in general

Future Meetings and Conferences

Federation of Infection Societies (FIS) Conference

For full programme [click here](#)

Dates: 13-15th November 2018

Venue: Sage Gateshead, Newcastle

Public Health England have an exhibition stand at this conference. The TARGET resources will be promoted on this PHE stand. Please visit the team!

British Society for Antimicrobial Chemotherapy (BSAC) Spring Conference

For full programme [click here](#)

Dates: 21-22 March 2019

Venue: International Convention Center, Birmingham

Abstracts from the TARGET team will be submitted to this conference.

Public Health England Health Research and Science Conference

For full programme [click here](#)

Dates: 9-10 April 2019

Venue: University of Manchester

Abstracts from the TARGET team will be submitted to this conference.

The TARGET Team



Professor Clodna McNulty, TARGET Programme Lead

Clodna, a clinical microbiologist, leads the Public Health England Primary Care Unit. She has led numerous large surveys on the public's use of and attitudes to antibiotics and resistance and is an expert advisor to the ECDC Advisory Committee on AMR and HCAs.



Dr Donna Lecky, TARGET Programme Manager (*on maternity leave*)

Donna has a background in microbiology research, programme management and resource development having previously managed the development of the e-Bug educational resources for school aged children, the PHE stool collection leaflet and the TARGET Urinary Tract Infection leaflet.



Charlotte Eley, TARGET Programme Manager (*maternity cover*)

Charlotte is TARGET Programme Manager maternity cover. Charlotte also manages research projects within the TARGET Programme including a point-of-care C-reactive protein study in Oldham CCG. Previously been involved in developing the TARGET TYI-RTI pictorial leaflet for patients with lower literacy levels.



Emily Cooper, TARGET Project Manager

Emily has a background in nursing and public health. She works part time supporting resource development projects within TARGET and is currently involved in activities that focus on prevention and management of urinary tract infections in older adults.



Leah Jones, TARGET Research Project Support Officer

Leah has a background in Psychology and is currently studying for a Professional Doctorate in Health Psychology. Leah's current work includes the development of a urinary tract infection patient leaflet for older adults, and exploratory work in community pharmacies with the view of developing resources for the pharmacy setting.



Rosie Allison, TARGET Research Project Support Officer

Rosie is a TARGET Research Assistant with a background in Biology and Public Health. Rosie has previously been involved in qualitative research studies and her current work involves liaising with medicines management teams to collect data on local implementation of antimicrobial stewardship initiatives via a national questionnaire.



Rosie Alouat, Project Manager (RCGP)

Rosie is a Project Manager for the RCGP's Clinical Innovation and Research Centre, focusing on the College's quality improvement projects. Her portfolio of work includes the maintenance of the TARGET Toolkit on the RCGP website and managing QI Ready.