Welcome!

It has been an eventful few months in the TARGET calendar particularly following the publication of the UK 5 year national action plan and 20 year vision for AMR. The eagle eye amongst you will have noted that TARGET resources have been highlighted as a case study and we will endeavor to continue to keep you up to date with relevant resources to help facilitate your antibiotic prescribing. With that in mind, whilst most people enjoy the summer there is also an increase in concern regarding UTIs in warmer weather. Visit the UTI resource suite of the toolkit to find a range of tools to help aid your consultation—from diagnostic flowcharts to patient information leaflets.

Resource Updates and Developments

Updates to the PHE/NICE guidelines
- UTI diagnostic flowchart
- Acute Cough Audit
- Updates to PHE/NICE management of common infection summary table.

New TARGET resources
- The new ‘older adults and urinary tract infections’ workshop
- UTI audit over 65 years (non-catheterised)
- The urinary tract infection self assessment checklist

Research Findings

TARGET Process Evaluation
Each year we review the TARGET website weblogs to see what has been accessed, this gives us an indication of what you, the user, needs. Our findings are published and can be found here.

Current TARGET Research—would you like to be involved?

TARGET focus group
We are currently recruiting clinicians to take part in two primary care based focus groups to discuss:
- Chlamydia infection quick reference diagnostic tools
- Public facing leaflets for Carbapenamase-Producing Enterobacteriaceae (CPE)
Please email the TARGET team for more information.

Input into the design of CPE resources
Public Health England is reviewing their Toolkit for Managing Carbapenamase-producing Enterobacteriaceae (CPE) in Non-acute and Community Settings. This includes 3 brief information leaflets for members of the public. Can you spare 10-15 min to give us your thoughts on their content and lay out? Upon completion you can enter into a draw for £40 worth of high street vouchers. Click on this link to provide feedback by 22nd July.

GP survey - Antibiotic surveillance report
We would like GP feedback on how practice level antibiotic surveillance reports can be improved. If you would like to take part in this survey, please email us.

To remove your name from our mailing list, please click here.
Resource Updates

The UTI diagnostic flowchart

The UTI diagnostic flowchart for adults over the age of 65 years is currently under NICE endorsement review to ensure alignment with the NICE/PHE guidance on catheter associated urinary tract infections. The proposed wording changes are being discussed with the NICE review team and will be finalised when discussions are completed (expected to be summer 2019).

Documents with changes highlighted are available if you email the TARGET team. Changes include alignment with wording around catheter change/removal in relationship to antibiotic use, including when to change the catheter in relationship to starting antibiotics; hyperlinking the CAUTI guidance in the text; and to obtain the urine sample before providing antibiotics. Re-consulting if no improvement after 48 hours of starting antibiotics was also added to safety netting advice in all adult flowcharts (though currently covered in leaflets).
Acute Cough Audit

The TARGET acute cough audit tool has been updated to align with the new PHE/NICE treatment guidelines for acute cough (NICE Guidelines [NG120]). This included changing the first line antibiotics to doxycycline and including two other treatment options (clarithromycin and erythromycin). A version with highlighted changes is below.

The guideline rational for this change states that when discussing the options for antibiotic treatment, that there was no robust evidence directly comparing different antibiotics. Doxycycline was preferred over amoxicillin as first choice because there was limited evidence from subgroup analyses that showed benefits on some outcomes where amoxicillin did not. Also, because amoxicillin drives resistance not just in pneumococci but also in gram-negative organisms, the steering group agreed that if possible amoxicillin should be reserved for use in more serious infections where bacterial infection is more common. Alternative first-choice antibiotics for adults unable to take doxycycline, which have good activity against common causal bacteria, are: amoxicillin (a penicillin), clarithromycin (or erythromycin in pregnancy), which are macrolides. The recommendations noted that doxycycline is contraindicated in pregnancy, and alternatives should be considered when choosing antibiotics for women of child bearing age.
Resource Updates

Updates to PHE/NICE management of common infection summary table

In July 2019, the antibiotic summary table will include a new summary of bronchiectasis. This has been developed by NICE based on guidelines published December 2018.

In addition to this update, the wording within the Chlamydia summary has been changed to clarify some of the different advice given when treating for Chlamydia, urethritis, or M. Genitalium. The wording in the conjunctivitis section has also been changed to clarify when eye ointment should be used.

In April 2019, NICE added a statement to the guideline website and the summary table regarding the new Medicines and Healthcare Products Regulatory Agency recommendations around the use of fluoroquinolone antibiotics. Fluoroquinolone antibiotics: In March 2019, the Medicines and Healthcare products Regulatory Agency issued restrictions and precautions for the use of fluoroquinolone antibiotics because of rare reports of disabling and potentially long-lasting or irreversible side effects (see Drug Safety Update for details). NICE is reviewing recommendations relating to fluoroquinolone antibiotics.
Resource Developments

The new ‘older adults and urinary tract infections’ workshop

We have been working closely with Dr Philippa Moore, a consultant medical microbiologist, to develop a new TARGET workshop on the topic of UTIs in older adults.

The workshop is being piloted to protected learning time groups across Gloucestershire and is being modified iteratively based on feedback received from the evaluation forms.

Workshop content

♦ Self-assessment: The workshop starts with a self-assessment of best practice in UTI management for older adults, to allow individuals to reflect on their practice

♦ Practice level data: We provide practice level data on prescribing rates and sensitivity rates

♦ Clinical scenarios: To encourage debate, discussion and interaction with colleagues

♦ TARGET resources: We introduce the audience to the PHE diagnostic tools for UTI in over 65s, the TARGET older adult UTI leaflet, the TARGET older adult UTI audit, TARGET UTI eModule and the ToDipOrNotToDip video

♦ Evidence: We present findings from recent studies

♦ Action planning: We encourage the audience to create a plan for their personal practice and for their team as a whole

The workshop is due to be finalised in the autumn; once completed we will share it online.
Resource Developments

UTI audit over 65 years (non-catheterised)

The TARGET team have been working closely with a local GP to develop three new UTI audits:

- UTI Audit for older adults (live on TARGET website)
- Uncomplicated UTI audit (being updated in line with guidance documents)
- UTI audit for catheterised patients (under review)

The content of each audit has been developed in line with the new PHE diagnostic tools and the PHE/NICE antibiotic management guidance; covering diagnostic criteria, management decisions, advice giving and treatment. At the end of each audit we encourage clinicians to reflect on their practise.
Resource Developments

The TARGET urinary tract infection self assessment checklist

As part of developing the new TARGET UTI workshop we have developed a self assessment checklist on the topic of UTIs to allow clinicians to reflect on their current practice. The checklist covers topics such as:

- Use of the PHE diagnostic tools
- Antibiotic treatment decisions
- Auditing of personal practice
- Use of patient information leaflets
- Surgery action plans
- Urine dipstick strategies
- Back up antibiotics
- Online UTI eLearning modules
- Practice champions
- Read coding
Research Findings

TARGET Process Evaluation

As 99% of CCGs promote TARGET to their general practices, a process evaluation of the TARGET toolkit website was undertaken to assess website use over 2018/19 and the resources accessed. Google Analytics was used to collect participant interaction with the TARGET website. TARGET remains the most accessed page on the RCGP website by primary care clinicians with over 61,000 views during 2018/19. Monthly website views (Figure 1) show how the website is used throughout the year. Peaks in website use can be seen following promotional activities or the release of new resources.

*The figures from 2018/19 may underrepresent the actual figures as the RCGP change their way of recording website visits in August 2018.

**Figure 1. Monthly TARGET website views (April 2018 - March 2019) highlighting promotional activities**

The average time each viewer spends on the TARGET website was 16:23 minutes. Interestingly, although website views dropped between June and August 2018 (Figure 1), user time on the site for the same period increased (Figure 2). The average time spent on the TARGET website increased by over 100% from just over 10 minutes to over 20 minutes and has remained at a similar length of time since August 2018. The most popular section on the TARGET website was the Leaflets to share with patients (Figure 3) followed by the UTI Resource Suite (released in August 2018).

**Figure 2. Average time in minutes spent on the TARGET website**

The most popular section on the TARGET website was the Leaflets to share with patients (Figure 3) followed by the UTI Resource Suite (released in August 2018).
Figure 3. Total number of slider clicks on the TARGET website, May 2018 to March 2019

Of the leaflets to share with patients, the TARGET TYI-UTI leaflet is the most popular followed by the TARGET TYI-RTI leaflet (Figure 4). The TARGET specific leaflets are more popular than the non-TARGET specific leaflets.

Figure 4. User clicks on each link on the leaflets to share with patients available on the TARGET website, April 2018 – March 2019

The Self-Assessment Checklist (SAC) was the third most frequently accessed resource on the website receiving almost 4000 clicks.

The TARGET resources are constantly being updated to ensure compliance with the latest research and guidance. All updates and developments are freely available on the TARGET antibiotics website.
In summer 2018 our practice received a letter from Dame Sally Davies, Chief Medical Officer, to notify us that we were within the top five percent of high antibiotic prescribers nationally, and directed us to utilise the TARGET website as a way to make improvements in our prescribing habits. Around that time, I was starting a Delivering Quality Improvement in Practice module as a part of my MSc Advanced Practice training and I felt that this would be an ideal opportunity to tackle this significant problem as my project. The TARGET website was invaluable as a source of supportive material for clinicians and patients alike at it helped me to plan and implement my project. As a nurse, leading a project which aimed to change the prescribing behaviours of GP’s and Advanced Practitioners, I felt that undertaking the TARGET Train the Trainer workshop and becoming a recognised trainer would boost my professional credibility and confidence, particularly being inexperienced in project leadership and presenting to a professional audience. I delivered my first TARGET training session in March 2019 to our GP’s and AP, using the sore throat clinical scenario. The session was very well received and the scenarios really got us thinking about how we could make improvements as a team. In turn, it was a great boost to my confidence as a leader and educator and I have further sessions booked with our remaining GP’s and also at our local CCG Advanced Practitioner forum later in the summer. I hope also to deliver the session at the CCG GP educational sessions at some point in the future. The impact of the project so far is very encouraging, and based on data obtained through the Fingertips AMR indicator website which I accessed through the TARGET website link, our prescribing rates have improved, with a narrowing gap between ourselves, England and our CCG average. Becoming a TARGET trainer has not only enabled me to successfully implement my university project, but it has opened professional doorways that I had not previously anticipated. I would therefore encourage any Nurse or Doctor who has an interest in antibiotic stewardship, education, and leadership to nominate themselves as their practices lead antibiotic guardian and enrol on the TARGET train the trainer workshop.

About Me: Kath Hartigan, Nurse Practitioner/Research and Clinical Trial Manager/Trainee Advanced Nurse Practitioner

I qualified as an adult nurse in 2002 working in Intensive Care, before moving onto clinical trials. After having three beautiful children, I moved into General Practice where I have worked for the past 10 years, initially as a Practice Nurse but now as a Nurse practitioner. Whilst undertaking my Masters degree, I ran a project which aimed to reduce our surgery’s antibiotic prescribing rates for self-limiting infections. This led me to undertake the TARGET training to become an approved trainer.

If you also would like to become a TARGET Approved Trainer, please contact the TARGET team or have a look at the TARGET website under ‘TARGET Approved Trainers’
Antibiotic Guardian Awards

Birmingham, June 27th, 2019: The fourth inaugural Antibiotic Guardian awards took place last night to celebrate the work of healthcare professionals across UK and abroad in tackling antimicrobial resistance. These awards form part of the ongoing Antibiotic Guardian campaign which is led by Public Health England in collaboration with UK devolved administrations and professional bodies.

The Antibiotic Guardian campaign aims to increase commitment and raise awareness among the public and healthcare professionals about how we can slow the development of resistant bacteria and cut overuse and unnecessary use of antibiotics. Without effective antibiotics many routine treatments will become increasingly dangerous.

As part of the campaign, groups including students and educators, farmers, veterinary and medical, nursing and pharmacy communities and professional organisations can all sign up to become Antibiotic Guardians.

The evening, co-organised by 4 All of Us, was attended by healthcare organisations across England, Scotland, Wales, Europe & Asia, who had all submitted entries and then shortlisted for their achievements in work to help combat antibiotic resistance and protect antibiotic usage. Award categories included Animal Health, Community Engagement, Diagnostics, Innovation, Prescribing and Research. Chief Veterinary Officer for the UK, Christine Middlemiss, was honorary guest for the evening on hand to present the awards alongside Dr Diane Ashiru-Oredope (Lead for the Antibiotic Guardian campaign and Lead Pharmacist for the AMR Programme at Public Health England).

Winners on the night included Mid Essex Hospitals Services NHS Trust for their behaviour change approach to antimicrobial stewardship, NHS Wales Informatics who scooped the Innovation & Technology award for their IT platform in community pharmacies in Wales to support an NHS funded sore throat test and treat service. University of Birmingham collected the award for best research project for their BactiVac, a network to support the study, development and implementation of bacterial vaccines to address the global AMR challenge.

Alongside these other notable winners were Kite Consulting who picked up the Animal Health, Agriculture & Food Supply Award for their Antibiotic Monitoring and Reduction Programme—a cross industry project to drive down antibiotic usage in dairy cattle in the UK. International winners on the night included Sociedad Española de Microbiología who were recognised for their public engagement work on a citizen science project examining Antibiotic discovery and raising awareness. There were three winning teams from Scotland, and the healthcare student of the year award was won by Issaya Mbwilo from Tanzania.

Dr Diane Ashiru-Oredope, Lead for the Antibiotic Guardian campaign, said:

“The Antibiotic Guardian awards are an excellent opportunity for us to champion organisations and individuals who have demonstrated achievement in their work to tackle antimicrobial resistance, one of the biggest global public health threats we face. These awards have highlighted the wealth of fantastic work taking place across the country. I’d like to personally congratulate all the nominees and winners for their contributions. At Public Health England we will continue to support and work with partners across the health system to tackle antimicrobial resistance.”
Antibiotic Guardian Award Winners

**Animal health, Agriculture and Food Supply**
- **Sponsored by AB Agri**
  - Winner: Kite Consulting
  - Highly Commended: ForFarmers
  - Commended: Pruex

**Children & Family**
- Winner: NHS Orkney
- Highly Commended: Buckinghamshire Healthcare NHS Trust
- Commended: South Gloucestershire Council

**Community Communications**
- Winner: NHS Grampian

**Diagnostics - Sponsored by Abbott**
- Winner: Mid Yorkshire Hospitals NHS Trust
- Highly Commended: Schwabe Pharma

**Infection prevention and control - Sponsored by MPH Packaging**
- Winner: Health Protection Scotland

**Innovation - Sponsored by ABPI**
- Winner: NHS Wales Informatics Service
- Highly Commended: Public Health Agency
- Highly Commended: University Hospital Southampton NHS FT

**Prescribing & stewardship**
- Winner: Mid Essex Hospital Services NHS Trust
- Highly Commended: Wirral University Teaching Hospitals
- Commended: East and North Herts CCG

**Public engagement**
- Winner: Sociedad Española de Microbiología
- Highly Commended: Gloucestershire County Council
- Commended: University of Reading, Department of Typography & Graphic Communication
- Commended: University of Oxford

**Research - sponsored by The AMR Centre**
- Winner: University of Birmingham
- Winner: University of Bristol
- Highly Commended: London School of Hygiene and Tropical Medicine

**Student of the Year**
- Winner: Issaya Mbwilo - Tanzania Pharmaceutical Students' Association (TAPSA)
- Highly Commended: Julie Arnott - University College Cork

**Das Pillay Memorial Antimicrobial Stewardship Award**
- Winner: David Oliver Hamilton, Doctor, Pennine Acute Hospitals NHS Trust
- Highly Commended: Nicola Walker, Pharmacy Technician, Mid-Yorkshire Hospitals NHS Trust

You can find out more about the Antibiotic Guardian campaign at: [www.antibioticguardian.com](http://www.antibioticguardian.com) and via Twitter using #AntibioticGuardian.

Photos available upon request.
Antibiotic Awareness Campaigns

Antibiotic Guardian

The Antibiotic Guardian campaign asks you to become antibiotic guardians by choosing one simple pledge about how you’ll make better use of antibiotics to help save these vital medicines from becoming obsolete.

Pre-worded pledges are available in the following categories

- Health or social care professional or leader
- Member of the public
- Student, educator or scientist

Or alternatively, you can make your own pledge.

Antibiotic Guardian supports the UK antimicrobial strategy, European Antibiotic Awareness Day (18th November) and World Antibiotic Awareness Week (11—17 November 2019).

Keep Antibiotics Working

Support the new campaign Keep Antibiotics Working launched in England on October 2018 to raise public awareness and understanding of the dangers antibiotic resistance.

The campaign delivers a simple messages that resonate with the public: **Taking antibiotics when you don’t need them puts you and your family at risk.** Taking antibiotics encourages harmful bacteria that live inside you to become resistant. That means that antibiotics may not work when you really need them. This puts you and your family at risk of a more severe or longer illness.

By increasing the public’s awareness of the risks of taking antibiotics when they don’t need them, the campaign supports the efforts of local doctors, nurses and other healthcare practitioners in reducing inappropriate prescribing due to patient pressure. The campaign encourages those who typically ask for antibiotics to take their doctor or nurse’s advice.

If you don’t already have campaign materials on display and wish to support the campaign, share messages, pictures or videos during the week 13—19 November 2017, using the hashtag #KeepAntibioticsWorking. Tell the world what you do, in your professional or personal life, at individual or collective level, to use antibiotics responsibly and keep them working!

ECDC European Antibiotic Awareness Day (EAAD)

The European Antibiotic Awareness Day is an annual European public health initiative that takes place on 18 November to raise awareness about the threat to public health of antibiotic resistance and the importance of prudent antibiotic use.

On the 10th European Antibiotic Awareness Day (EAAD), the European Centre for Disease Prevention and Control (ECDC) is launching a social media campaign called #KeepAntibioticsWorking. Share a message via Twitter, Facebook or Instagram, explaining what you are doing to ensure that antibiotics remain effective. Everyone is responsible for keeping antibiotics working!

If you wish to support the campaign, share messages, pictures or videos during the week 13—19 November 2017, using the hashtag #KeepAntibioticsWorking. Tell the world what you do, in your professional or personal life, at individual or collective level, to use antibiotics responsibly and keep them working!

WHO World Antibiotics Awareness Week (WAAW)

The theme of this year’s WAAW is **Seek advice from a qualified health care professional before taking antibiotics.** Various campaign materials, including posters for practice waiting rooms are available on the [WHO website](https://www.who.int/mediacentre/news/releases/2019/world-antibiotic-awareness-week-2019/en/).
The TARGET Team

Professor Cliodna McNulty, TARGET Programme Lead

Cliodna, 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 HCAIs.

Dr Donna Lecky, TARGET Programme Manager

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 for patients.

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 management and maintenance of the toolkit, and updating/reviewing quick reference tools.

Gemma Smith, TARGET Research Project Support Officer

Gemma has a background in parasitology and public health, with a focus on migrant health. Gemma is currently working on updating the quick reference tools for primary care and will provide support for other TARGET projects.

Leah Jones, TARGET Research Project Support Officer

Leah has a background in health psychology and is currently studying for a Professional Doctorate in Health Psychology. Leah’s current work includes the evaluation of a urinary tract infection patient leaflet for older adults and the PHE UTI diagnostic tools. Leah is working to develop a full suite of UTI resources including a workshop, audits and self-assessment tool.

Rosie Allison, TARGET Research Project Support Officer

Rosie is a TARGET Project Support Officer with a background in biology and public health. Rosie’s current work includes developing tools to increase adherence and self-care advice given by community pharmacy staff.

Petronella Downing, TARGET Research Assistant

Petronella has a background in biochemistry and public health. Petronella is currently working on maintaining and monitoring the TARGET website and is also conducting a needs assessment looking at enhanced feedback for appropriate prescribing in suspected UTIs in older adults.

Rosie Alouat, RCGP Project Manager

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.