ANTIBIOTIC GUARDIAN: ACTIVITIES OVERVIEW
SEPTEMBER 2014 TO SEPTEMBER 2016
A PUBLIC HEALTH ENGLAND LED INITIATIVE
AUTHORS

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This is a pledge campaign, with the aim of stopping the overuse and misuse of antibiotics.

It supports the UK 5 Year Antimicrobial Resistance Strategy 2013-2018.

A “One Health” approach is taken.
Inappropriate use includes:
- not taking your antibiotics as prescribed
- skipping doses of antibiotics
- not taking antibiotics at regular intervals
- saving some for later
- sharing antibiotics with others

Inappropriate prescribing includes:
- unnecessary prescription of antibiotics
- unsuitable use of broad-spectrum antibiotics
- wrong selection of antibiotics
- inappropriate duration or dose of antibiotics
examples of existing action against AMR

Press release
Prime Minister warns of global threat of antibiotic resistance
WHAT IS THE UK 5 YEAR AMR STRATEGY?

Identifies 7 key areas for future action:

1. Improving infection prevention and control practices
2. Optimising prescribing practice
3. Improving professional education, training and public engagement
4. Developing new drugs, treatments and diagnostics
5. Better access to and use of surveillance data
6. Better identification and prioritisation of AMR research needs
7. Strengthened international collaboration

PHE, in collaboration with NHS England and Department of Health, sent letters to chief executives in primary and secondary care.

Within the letter, organizations were invited to register their support for the campaign and join a national promotional network.
“Antibiotic Guardian and Antibiotic Awareness Key Messages” was created so that a centralised resource of trustworthy information could be distributed.

- General information is included, as well as strategy information, a guide for self-care and information for animal keepers/pet owners.
PLEDGING TO ACTION
All the examples shown demonstrate a top-down approach; Antibiotic Guardian mirrors this with a bottom-up campaign.

Antibiotic Guardian builds on the awareness raised from the European Antibiotic Awareness Day (EAAD) campaign. This is the first year that the lead organisation aimed to reach out to both members of the public and HCPs and engage with them.

The campaign was developed by PHE in collaboration with all the UK devolved administrations and professional organisations.

The planning group is a multi-disciplinary group with public and third-sector representation from human and animal health sector across the UK.

The dangers of AMR are highlighted and commitment to action is taken.

This campaign is available all year round.
The pledge messages and language used were made more impactful through consultation with behavioural scientists and marketing specialists.

The website and pledges were tested with a pilot audience prior to the public launch.

Campaign materials (including the name and logo) were designed then user tested with the public and HCPs.

The final choices endorsed by the committee.
- Different sectors of the population are targeted.
A personalised pledge is then generated, according to your sector.

This makes it easier for the pledge taker to uphold their promise.
“This year there was a 10,000 pledge target for the public and health professional (human and veterinary) which has been exceeded.”

The 10,000 pledge target was achieved on 19 November 2014.

As of 10 July 2016, there were 32,039 pledges made.

Social media, professional bodies and local campaigns were key to success.
Our Pharmacy team have pledged to be @PHE_uk’s Antibiotic Guardians. @DrDianeAshiru
#AntibioticGuardians
A variety of different educational materials were created to allow HCPs to easily disseminate information.

These allowed the public and HCPs to support antibiotic awareness campaigns in the UK.
Dr Chris van Tulleken talks about antibiotic resistance suggesting three steps that public can take to help

Call for members of the public to become an antibiotic guardian

- Step 1: Don’t demand antibiotics
  - Ask a pharmacist how to treat your symptoms

- Step 2: Take antibiotics exactly as prescribed
  - Never save them for later
  - Never give them to someone else

- Step 3: Spread the word
Essential to connecting with the general public.

Tweeted in conjunction with “#AntibioticGuardian” and a link to antibioticguardian.com, allowing people to easily make a pledge.
If we don’t tackle drug-resistant infections now, it’s predicted that by 2050 they could cost the world $100 trillion in lost output.

Drug resistant infections could kill an extra 10 million people across the world, each year, by 2050.

Take antibiotics exactly as prescribed, never save them for later, never share them with others.

Think antibiotic resistance is a problem for future generations only? Drug-resistant infections are already killing hundreds of thousands of people, every year, across the world.
Without effective antibiotics many routine operations like hip replacements, organ transplants, caesarean sections and treatments for sepsis or chemotherapy will become increasingly dangerous or impossible.

- Over-use of antibiotics can lead to the development of drug-resistant bacteria which can cause serious infections.
- Antibiotics can cause side effects such as rashes, thrush, stomach pains, diarrhoea, reactions to sunlight and other symptoms.
- Help conserve antibiotics so that they remain effective.
- Your actions can protect antibiotics, join us at AntibioticGuardian.com.

A social graphic pack can also be obtained by emailing socialmedia@phe.gov.uk.
"GET WELL SOON WITHOUT ANTIBIOTICS" LEAFLET

Printed in eleven different languages, such as Chinese, Punjabi, Arabic and Somali.

ANTIBIOTIC GUARDIAN: ACTIVITIES OVERVIEW
Examples of #AntibioticGuardian engagement on Twitter from organisations all over the UK including: hospitals, community pharmacies, universities
On 12 May 2016, Antibiotic Guardian hosted the first Antibiotic Guardian Awards, championing those organisations and individuals who have demonstrated achievement in tackling antimicrobial resistance.

Award Categories included:

- Staff engagement: How have staff promoted Antibiotic Guardian and stewardship within their organisation?
- Community: How has your organisation worked within the community to highlight Antibiotic Guardian?
- Prescribing: How has your organisation tackled prescription and prescribing antibiotics effectively?
- Innovation: Tell us how someone has demonstrated innovation to address Antimicrobial Resistance?
- Antibiotic Stewardship: How has someone improved or measured antibiotic usage in your area or community?
- Collaborative Stewardship activities: How has your organisation demonstrated collaborative stewardship effectively?
- AMS Research: How has someone demonstrated development or research to support Antimicrobial Stewardship?
At the Antibiotic Guardian Award - Birmingham

Welcome to the Antibiotic Guardian Awards Evening #agawards

Great to see @BEVA_news have been highly commended at the Antibiotic Guardian Awards ow.ly/CQdu300mOe #AMR

Enjoying the antibiotic guardian awards this evening #agawards
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 supported the Antibiotic Guardian campaign and demonstrated achievement in their work to tackle antimicrobial resistance, one of the biggest global public health threats we face. At Public Health England we will continue to support and work with partners across the health system to improve antimicrobial prescribing and stewardship programmes.”
Social enterprise ‘4 All of Us’, was commissioned to conduct three professional roadshows on AMR.

The aim of the professional roadshows was to disseminate the latest information, resources, and guidance and further raise awareness of the threat of AMR.

Events have taken place in Leeds, Birmingham and most recently London.

130 delegates signed up to attend the London event, which included:

- GPs
- Pharmacists
- Healthy living pharmacy representatives
- Medical microbiologists
- Health professionals from across the NHS
A wide variety of topics were covered by 11 speakers, including:

- Dr Saskia Nahrgang of the World Health Organisation who presented a timeline of WHO’s efforts to tackle AMR since 2001
- Professor John Watson, Deputy Chief Medical Officer, who presented the UK Government’s position
- Dr Jan Clarke from the British Association for Sexual Health & HIV, who explained the risk of gonorrhoea becoming an untreatable disease

By organising events like these, we are able to reach people and interact on a more personal level, which as the positive feedback showed, is important for those working in healthcare.
Really interesting day at #AntibioticGuardian Roadshow in Leeds. Not just healthcare that needs to work on AB overuse. #Onehealth

Learning more about the affect of antibiotic use in agriculture on resistance #AntibioticGuardian roadshow

Great day today at #AntibioticGuardian roadshow. Good to hear the One Health approach is on the agenda. Vets & Drs need to share experience

Inspired by #AntibioticGuardian roadshow have emailed head at kids school to see if doing things to support EAAD & WAAW #Antibioticchampion

Very informative & interesting #AntibioticGuardian Roadshow in Leeds. Lots to take away. Highly recommend it if you can catch it elsewhere
British Society for Antimicrobial Chemotherapy (BSAC) was commissioned by PHE to organise and run two public debates.

Guests heard presentations on how antibiotics have changed our world for the better and a talk explaining resistance and the problems it’s causing.

There were also explanations on how antibiotic resistance could affect patients in the future with all manner of conditions, from cancer to urinary tract infections becoming harder to treat.

The debates concluded with a public and panel discussion titled ‘solving the crisis of antibiotic resistance’.

The London event was held on 24 February 2016.

The second event had to be rescheduled due to unforeseen circumstances; and took place at the University of Manchester on 28 September 2016.
Great to be at 'Antibiotic Resistance and You!' Let's hope for an interesting public debate #AntibioticGuardian

So good to see @School_Pharmacy students at #AntibioticGuardian evening & being part of the debate! Great Ques to the panel from 1 of our Yr3! #proud

Panel discussion at #antibioticresistance and you #AntibioticGuardian public event
Sir Bruce Keogh becomes an Antibiotic Guardian during his Doubleday visit

26 November 2015

In support of European Antibiotic Awareness Day earlier this month (18 November), three final year pharmacy students delivered three simultaneous information workshops across the University campus.

Hannah Bloor, Hannah Cowley and Linda Owens organised the workshops where eForm surveys were used to gauge participants' perception of antibiotic resistance and to convince individuals to pledge to become Antibiotic Guardians.

An added and very welcome bonus to the day was the support offered by Sir Bruce Keogh, medical director to NHS England. Sir Bruce was visiting the medical school to deliver the annual Doubleday lecture and having heard about our campaign was keen to meet with us and lend his support. This he did by completing the online survey, signing up to be an Antibiotic Guardian and even sporting one of our specially designed bandannas!

This pharmacy-led interprofessional campaign also included undergraduate volunteers from the University's School of Nursing and Midwifery.

Antibiotic Guardian has attracted support from many different organisations.

Seven months on, Antibiotic Guardian has been taken up by many organisations, not least of which are the Royal Pharmaceutical Society, the Royal College of Nursing, the Faculty of Medical and Human Sciences, University of Manchester, MSSF, Manchester NHS Foundation Trust, the Scottish Medicines Consortium and the Scottish Antimicrobial Prescribing Group.
Welcome to the summer edition of our bulletin ‘Connect’ - for partners and stakeholders.

As you’ll see, it’s been a very busy few months for NHS North Kirklees Clinical Commissioning Group (CCG). In this newsletter you will find out about our forthcoming events and other updates from the CCG.

We also published our second report and accounts in June, which you will find on our website here.

Remember that you can keep up to date with news and forthcoming events on our website and through twitter.

Dr David Kelly, Clinical Lead

A CCG newsletter featuring a section on Antibiotic Guardian
Antibiotic Awareness Day was featured on the BBC drama “Doctors” in the episode “Crash Bang Pow” on 18 November 2015; following collaboration with PHE Antibiotic Guardian team. In this shot you can see the European Antibiotic Awareness Day logo.
Antibiotic Guardian participated in this media campaign, providing a supplement in an independent newspaper on the 18th November 2015.
INITIAL PROCESS EVALUATION (AUGUST 2014 – JANUARY 2015)

Data was collected from AntibioticGuardian.com and Google analytics between August 2014 and January 2015.
INITIAL PROCESS EVALUATION (AUG 2014 – JAN 2015)

- By midnight 30 November 2014 #AntibioticGuardian had 29,072 tweets by 9,964 contributors leading to 62.3 million timeline deliveries.
- There were 47,158 unique visits to the website.
- 2,509 visitors made a pledge (26.5%) to become Antibiotic Guardians (AGs); 69% were healthcare professionals.
- Social media directed the most traffic to the website - 24% of the public that signed up cited social media as how they discovered the campaign.
- Other acquisition routes such as self-directed, email or website referral, were more effective at encouraging visitors to pledge.

ANTIBIOTIC GUARDIAN: ACTIVITIES OVERVIEW

11/16/2016 39
• Average weekly conversion rates on AntibioticGuardian.com of unique visitors compared to pledges.

• The bimodal peaks in conversion rates align the launch of the YouTube video (w/c 8 September) and EAAD (w/c 17 November).
Of all website traffic, 60% visited on a computer and the remainder via a mobile device. Visitors on a computer were more likely to choose a pledge than those using mobile devices.

Social media provided the widest reach and ability of engaging the public as a freely available mass media tool.

Using social media referrals as a baseline for differences between acquisition routes demonstrates that people were more likely to make a pledge through the following routes:

- if they were self-directed
- through an email referral
- through a website referral
• Distribution of pledges by target audiences, 69% of the AGs signed up as healthcare professionals.
• The remaining 31% signed up as members of the public, \( n = 12,509 \).
CONCLUSIONS FROM PROCESS EVALUATION (AUGUST 2014 – JANUARY 2015)

- The campaign completed its goal of 10,000 AGs in the first year. Further work is required to improve engagement with target audiences and determine whether this campaign has an impact on antibiotic consumption and prescribing behaviour among the public and healthcare professionals.

- Healthcare professionals most commonly found out about the campaign through professional networks and channels, while the public engaged via social channels highlighting the importance of maximising the use of social media to reach more members of the public.

- For the first time, measurable engagement in an AMR public health campaign is achieved. Previous campaigns within the UK such as “Andybiotic” or EAAD activities raised awareness rather than engagement and did not utilise a social marketing strategy.
CONCLUSIONS FROM PROCESS EVALUATION (AUGUST 2014 – JANUARY 2015)

- PHE has commissioned a follow-up evaluation with individuals who pledged to become an Antibiotic Guardian to further inform future changes to the campaign.
- Future work to develop the campaign should investigate how to best engage with target audiences and embed this new initiative within both public and professional spheres. These differences should be taken into account to optimise and improve communication channels.
PROCESS EVALUATION (2014-2016)
## Measurable Key Process Outcomes from 2011-2013 (EAAD)

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## Measurable Key Process Outcomes from 2014 – Jul 2016 (EAAD, AG and WAAW)

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As of 17 Jun 2016, there were 31,847 Antibiotic Guardians in total.
Activity on the website was concentrated around WAAW. 40% of pledges were made during WAAW.
PAID FOR FACEBOOK ADVERTISING

- Paid for advertising was used for Antibiotic Guardian for the first time (on Facebook), from 10-25 March 2016. As seen in Figure 2, there was a marked increase in traffic during this period.

- Ads were targeted at
  1. Mothers of young children through the NHS Choices Facebook page.
  2. Healthcare students aged 18-25, through PHE Facebook page.

- Evaluation of this activity is currently in progress.
CONVERSION RATES VS TOTAL PLEDGES

Plotting conversion rates (the number of Antibiotic Guardian pledges per number of visitors to the Antibiotic Guardian website) demonstrates an increase in comparison to the previous year, and an increase with the use of paid Facebook posts.
HOW ANTIBIOTIC GUARDIANS REPORTING HEARING OF THE CAMPAIGN

As with the previous year target groups heard of the campaign in differing ways and reported this when signing up.
PLEDGE UPTAKE: ADULTS

Public Pledges Year 2 Adults: n= 3,122
2014 –2016: 7,080 pledges

SELECT A PLEDGE MESSAGE*

- For infections that our bodies are good at fighting off on their own, like coughs, colds, sore throats and flu, I pledge to try treating the symptoms for five days rather than going to the GP
- For infections that our bodies are good at fighting off on their own, like coughs colds sore throats and flu, I pledge to talk to my pharmacist about how to treat the symptoms first rather than going to the GP
- It is vital we prevent antibiotics from getting into the environment. I pledge to always take any unused antibiotics to my pharmacy for safe disposal
- If the NHS offers me a flu vaccination, I pledge to accept
- If I’m prescribed antibiotics, I will take them exactly as prescribed and never share them with others

| Percentage | 51.8% | 24.2% | 11.9% | 12.1% | 0.0% |

ANTIBIOTIC GUARDIAN: ACTIVITIES OVERVIEW
PLEDGE UPTAKE: FAMILIES

Public pledges (Year 2) - Families: n=1,309

Oct 2014 to 31 March 2016 : 1,997 pledges

SELECT A PLEDGE MESSAGE*

Messages will display below

- When I think my child has a likely respiratory infection, I pledge to talk to my pharmacist about how to treat my child’s symptoms first rather than going to the GP

- Sing the ABC song when washing our hands with soap and water. Washing hands properly (at least 30 seconds), especially before eating, is the single best way to prevent the spread of infections and keep your family healthy

- I will visit the ebug website (www.e-bug.eu) with my child(ren) and take one of the antibiotic awareness quizzes together

- If anyone in my family is prescribed antibiotics, I will ensure they are taken exactly as prescribed and never shared with others

- If the NHS offers a flu vaccination for individuals in my family, we pledge to accept.
FURTHER PUBLIC PLEDGES

- Other public pledges (2014 to 31 March 2016)
- Farmers: n=36; Pet owners: n=34
Distribution of Antibiotic Guardians as of 31 March 2016 in England, Wales, Scotland and Northern Ireland by NHS Area Teams
As of 9 May 2016, there were 31,440 Antibiotic Guardian pledges. There was at least one pledge from 77 countries across the world. There were five or more pledges from 24 countries including South Africa, USA, India, Nigeria, Australia and several countries in Europe.
IMPACT OF ANTIBIOTIC GUARDIAN
• An online questionnaire was developed to determine if the campaign resulted in changes in self-reported knowledge/awareness and self-reported behaviour amongst Antibiotic Guardians.

• Logistic regression models, adjusted for variables including age, sex and pledge group (pledging as member of public or as healthcare professional), were used to estimate associations between outcomes and AG characteristics.
METHOD: ONLINE QUESTIONNAIRE

- “Evaluation of the Antibiotic Guardian campaign 2014” was sent via e-mail to all 11,833 Antibiotic Guardians (3 February 2015)
- Invitation to participate in focus groups/in depth interviews

- Survey included questions on:
  - Type of pledge
  - Motivation
  - Change in behaviour (acting according to pledge)
  - Knowledge acquired
  - Clarity of promotion materials
  - Demographics (age, sex, health-related profession, use of social media)
QUESTIONNAIRE RESULTS

- 2,478 Antibiotic Guardians responded – a 21% response rate.
  - 1,696 pledged as healthcare professionals (68%)
  - 782 pledged as members of public (32%)
- These proportions are similar to that of the total population of 11,833 Antibiotic Guardians.

- 76.9% were connected to the healthcare system.
- 96.3% had prior knowledge of AMR.

- 83.7% remembered at least the general meaning of their pledge.
- Roughly two thirds (63.4%) of respondents reported always acting according to their pledge.
More participants reported a sense of personal responsibility towards tackling AMR post-campaign, increasing from 58.3% of participants pre-campaign to 70.5% post-campaign.

Healthcare professionals less likely to act according to their pledge than members of public.

People confused about AMR prior to the AG campaign acquired more knowledge after the campaign.

67.4% agreed to different extents that the AG campaign was well promoted.

56.7% seemed to think that the website itself was the best source of information but more than half of AGs have not seen other promotional materials.
How Antibiotic Guardians reported hearing of the AG campaign in season 2, $n=12{,}821$.

1 in 4 members of the public found the Antibiotic Guardian campaign through social media.
QUESTIONNAIRE SUMMARY

- Good response of an overall representative sample.
- Increased self-reported knowledge and changed self reported behaviour, particularly with those with prior AMR awareness.
- Clear increased commitment to tackling AMR by both HCPs and members of the public.
- Less successful engagement with the general public most likely due to modes of promotion and no use of mass media.
- The majority of Antibiotic Guardians thought the campaign was well promoted.
- Online pledge schemes can be an effective and inexpensive way to engage people with the problem of AMR especially among those with prior awareness of the topic.
RECOMMENDATIONS FOLLOWING QUESTIONNAIRE

- Regular communication with pledgees via e-mails or newsletters to remind their pledge and provide information.
- Engagement with wider members of public: form initiatives for alternative promotion methods to get the public aware and engaged with the campaign.
- Adopt the lessons learnt from other similar campaign:
  - allow pledgees to create personalised pledges
  - set pledges that are easier to achieve
  - get individuals to make pledges in public
- Evaluations should be built into the design of future campaigns – capture pre and post campaign effects in the future.
“This study demonstrated that the campaign increased commitment to tackling AMR […], increased self-reported knowledge and changed self-reported behaviour particularly among people with prior AMR awareness.”

- The “Impact of a United Kingdom-wide campaign to tackle antimicrobial resistance on self-reported knowledge and behaviour change” concluding on its findings
ANTIBIOTIC GUARDIAN TWITTER ANALYTICS
The #AntibioticGuardian Influencers

Top 10 by Mentions
- @phe_uk 9,645
- @drdianeashiru 3,135
- @rpharms 678
- @nhschoices 587
- @nhsengland 555
- @antibiotic lleeds 444
- @wennurses 315
- @sepsisuk 312
- @cppeengland 306
- @eaad_eu 300

Top 10 by Tweets
- @drdianeashiru 2,068
- @4allofusclub 302
- @antibiotic lleeds 272
- @smhopkins 225
- @hyperhygiene 223
- @phe_uk 206
- @gavalda_j 205
- @elizbeech 203
- @sepsisuk 182
- @paulacppe 146

Top 10 by Impressions
- @phe_uk 12,493,766
- @nhsengland 3,329,507
- @nhschoices 3,287,101
- @drdianeashiru 2,204,532
- @dhgovuk 1,886,755
- @sepsisuk 1,793,299
- @imascientist 1,681,919
- @kazaston 1,446,802
- @devoncc 811,295
- @wennurses 810,610

The Numbers

- Impressions: 63,163,252
- Tweets: 29,590
- Participants: 10,074

Data taken from Symlur
TWEET ACTIVITY ON #ANTIBIOTIC GUARDIAN

Efforts were concentrated around World Antibiotic Awareness Week and European Antibiotic Awareness Day, both of which are held in November each year. There was a lower peak of Twitter activity in 2015, but it was maintained for a greater period of time.
### The #EAAD Influencers

#### Top 10 by Mentions

- @caad_eu (2,611)
- @who_europe (1,568)
- @phe_uk (1,234)
- @ecdc_eu (955)
- @drdianeashiru (780)
- @eu_health (668)
- @who (367)
- @sanidadgob (361)
- @theurgentneed (360)
- @ema_news (307)

#### Top 10 by Tweets

- @gavalda_j (428)
- @drdianeashiru (403)
- @eaad_eu (329)
- @eaadbball (127)
- @ffitzp (124)
- @patcp66 (114)
- @ema_news (95)
- @eu_health (87)
- @who_europe (83)
- @jonotter (76)

#### Top 10 by Impressions

- @WHO (6,323,924)
- @WHO Europe (2,366,987)
- @EU Health (1,474,666)
- @EMA News (1,405,878)
- @phe_uk (1,257,985)
- @soilassociation (1,087,787)
- @sanidadgob (1,070,351)
- @marianorajoy (989,872)
- @desdelamoncloa (782,591)
- @innovationunion (621,067)

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Data taken from Symplyr

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The Numbers

- **45,206,171** Impressions
- **17,193** Tweets
- **6,691** Participants

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#EAAD analytics for time period 07/08/2014 00:00 to 07/09/2016 00:00 (Pacific Time: GMT-0700) [change time period]
TWEET ACTIVITY ON #EAAD

Efforts were again concentrated around November of each year to promote *World Antibiotic Awareness Week* and *European Antibiotic Awareness Day*. 
A thunderclap is a platform that helps to get a specific message out, creating a “wave of attention” at a predetermined time.
FURTHER RESOURCES
RESOURCES FOR THE PUBLIC

- On the “Antibiotic Guardian” website, further resources are listed for people to find out more.
- These include:
  - “Treat Yourself Better”
  - e-Bug Science Show
  - Quizzes and Crosswords on AMR
  - Information on World Antibiotic Awareness Week
  - “Listen to Your Gut”
E-BUG SCIENCE SHOW

- A virtual funfair of games aimed at children
- Teaches them about microbes, how they spread and how we can stop them spreading.
e-Bug is a **free** educational resource for classroom and home use that makes learning about microbes, the spread, treatment and prevention of infection and antibiotics fun and accessible for all.

**Teaching Resources**
In the teachers section of the e-Bug website you will find a variety of free resources that have been designed to complement the National Curriculum.

- Lesson plans
- Presentations
- Worksheets
- Activities

**Student Resources**
The student pages complement the teacher resources by providing online games, revision pages and lots more for students to continue learning at home.

- Games
- Quiz
- Disease fact files
- Home science

**Community resources**
e-Bug have developed a community hygiene course called **Beat the Bugs** which aims to increase awareness and change behaviour around antibiotic use.

The course is suitable for a range of community groups and can be downloaded from the Beat the Bugs webpage: [www.e-bug.eu/beat-the-bugs](http://www.e-bug.eu/beat-the-bugs)

[Follow us on twitter! @eBug_UK](http://twitter.com/eBug_UK)
Antibiotic Guardian Quiz

Winter is coming...

Antibiotics are not effective against coughs, colds, flu and most sore throats...

- Some are mostly caused by viruses, which antibiotics do not work against
- But antibiotics sometimes work against viruses, so you should take them just in case
- However, antibiotics work against everything when they are taken

When I have a cough, cold or sore throat, I should...

- Book an appointment with my GP for all mild symptoms or illness
- Seek immediate emergency medical attention
- Check with a pharmacist about how to treat my symptoms

There is a lot of colds going around. I’ve been told taking antibiotics ‘just in case’ can drive up the number of drug-resistant infections, but...

- Taking antibiotics when you don’t need to will allow bacteria to develop a resistance to the antibiotic
- Only people can get drug resistant infections
- Taking antibiotics will help build up your defences and stop you getting a cold in the first place

My GP has only given me a short prescription of antibiotics but I think I need them for longer. I should...

- Use some of my friends’ antibiotics as they didn’t use all the ones they were given last year
- Take one less a day than prescribed, to make them last longer
- Take the antibiotics exactly as prescribed – or they may not clear the infection

Drug-resistant infections, also known as antibiotic resistant infections are serious because...

- Antibiotics may not work against resistant bacteria
- Without effective antibiotics, many routine treatments or operations like chemotherapy, surgery and
  dose reduction will become increasingly dangerous or impossible
- Overuse of antibiotics means that antibiotic resistance will spread faster and faster
- Drug-resistant infections affect both humans and animals

- All of the above

Click to see the answers!

Antibiotic Guardian: Antimicrobial Stewardship: a public health approach to promoting the prudent use of antibiotics

Public Health England has been established to protect and improve the nation’s health and wellbeing, and to reduce inequalities.

Find out more about Public Health England

Antibiotic Guardian Quiz

- Allows people to test and improve their knowledge of antibiotics.
- This is a form of active learning, which means information is better retained.
- On completion of the quiz, you can download a fact sheet and follow a link to antibioticguardian.com to make a pledge.
LISTEN TO YOUR GUT CAMPAIGN

- This campaign aimed to help parents cut down on unnecessary antibiotics use when treating minor ailments such as coughs and colds.
- It also highlights the importance of “good bacteria” living in the gut.
- The campaign directs parents to make a pledge at antibioticguardian.com.
- It won the “Community” section of the Antibiotic Guardian Awards 2016.

Listen to your Gut campaign launched to tackle antibiotic misuse

A campaign to help parents care for their children when they have minor ailments like coughs and colds, without using unnecessary antibiotics, has been launched across Devon.

The Devon County Council Public Health campaign, ‘Listen to your gut’ follows a successful pilot by parents at the Braunton and Ilfracombe Children’s centre, which saw the development of a social media campaign consisting of an animation of ‘talking tumns’. These tumns represent parents in the playground sharing tips for treating minor ailments, looking after healthy gut bacteria and avoiding the side effects of antibiotics.

As part of the campaign, self-help treatment guides will be available throughout pharmacists and GPs. Produced by Public Health England and delivered in partnership with North East and West (NEW) Devon Clinical Commissioning Group (CCCG), the guides are designed to support people treating their children’s minor
Look after your happy bugs

Our gut is home to trillions of bacteria. Our bodies live in partnership with these bacteria. For instance, we know that these bacteria produce essential vitamins, such as Vitamin K. Some evidence suggests that these bacteria help us develop healthy immune systems, and may also help us digest our food in ways that keep us more healthy.

Antibiotics are designed to treat the infections caused by bad bacteria that make us ill, but they also kill off the good bacteria in your gut. These bacteria can take years to regrow. So we have to be careful to balance these good and bad effects of antibiotics.

We should try to avoid antibiotics when they are not likely to do us any good, such as for most coughs and colds, sore throats and middle ear infections. This is how we can prevent damage to your healthy bacteria. In the meantime, you can help your good bacteria by eating a healthy balanced diet with plenty of fruit and vegetables. So maybe the old saying ‘an apple a day keeps the doctor away’ was right all along!

• Contains information on unwanted side effects of antibiotics
This quiz could help your child. True or False?

Get started

Take our short ‘True or False’ quiz, and reveal what you really know about common illnesses, antibiotics and the effects they can have on your child’s tummy.

When you've finished the quiz you can share your results with your friends and encourage them to take part too.

Good luck!

• The integrated quiz reinforces learned information in an interactive way
Additionally, the gov.uk website contains toolkit with guidance on how to use Antibiotic Awareness resources to support the campaign.

The toolkit is available at: https://www.gov.uk/government/publications/european-antibiotic-awareness-day-resources-toolkit-for-healthcare-professionals-in-england
FUTURE PLANS
EVENTS

- Three roadshows, a public debate and an awards ceremony will take place through 2016-17.

Upcoming Meetings

21 September 2016
Antibiotic Guardian, Leeds: Implementing local action plans to tackle antimicrobial resistance
Antibiotic resistance is one of the biggest threats facing us today! European Antibiotic Awareness Day (EAAAD) is part of the UK...
Continued

28 September 2016
Antibiotic Resistance and You!
University Place, University of Manchester, Oxford Road, M13 9PL Antimicrobial resistance affects you, but do you know how? Come and join in the...
Continued

23 November 2016
Antibiotic Guardian, London: Implementing local action plans to tackle antimicrobial resistance
Antibiotic resistance is one of the biggest threats facing us today! European Antibiotic Awareness Day (EAAAD) is part of the UK...
Continued
COMMUNITY PHARMACY

- Goals
  1. To double the pharmacy team pledges
  2. For 50% of the members of the public who become Antibiotic Guardians during 2016/17 to find out about AG via community pharmacy
  3. At least 10% of the 11,700 pharmacy premises register to promote antibiotic awareness/Antibiotic Guardian during World Antibiotic Awareness Week. Materials for promotion could be sent to those premises that register.
EXAMPLES OF ANTIBIOTIC AWARENESS CAMPAIGNS IN COMMUNITY PHARMACY

Photos courtesy of Reena Barai, S.G. Barai Pharmacy, with the theme “Bacteria vs. Virus – which one is defeated by antibiotics?”
HEALTHCARE STUDENTS

- Aim: to engage with healthcare student bodies nationally to promote antibiotic awareness across the UK universities

- Goals:
  1. Twenty universities offering healthcare courses (medicine, nursing, pharmacy, veterinary or dentistry) to:
     - Nominate 1-2 representatives
     - Run a campaign, which is documented with photographs and an abstract
  2. Planning group to produce how-to guides to assist university reps to run campaigns during WAAW

This activity would then be rewarded with a digital badge that can be added to a LinkedIn account.
To engage with families, children and healthcare students, badge missions have been created.

People can choose a virtual badge for all kinds of activities, have a go at earning it and share it to other people.

It is a kind of social media for education.

Makewaves is used for the junior and family badges, with “over 65,000 students and 10,000 Teachers” using their social network to safely share information.

Open Badge Academy is used for the healthcare student badge.
JUNIOR ANTIBIOTIC GUARDIAN

- Participants must:
  1. Complete e-Bug games or host/participate in a debate using the e-Bug Antibiotic debate kit
  2. Produce either a poster, PowerPoint or video showcasing knowledge on Antibiotics and Antibiotic resistance
  3. Choose a pledge to make

Available at: https://www.makewaves.es/badge/4163
FAMILY ANTIBIOTIC GUARDIAN

- Participants must:
  1. Watch the e-Bug video and complete the e-Bug spread of germs activity, then create a story that demonstrates knowledge
  2. Wash their hands using the correct technique
  3. Encourage 2-5 members of their family to become Antibiotic Guardians

Available at:
https://www.makewaves.es/badge/4164
Participants must:

1. Register to lead an activity during World Antibiotic Awareness Week
2. Complete the HEE AMR e-learning programme
3. Reflect on their learning including submitting an abstract about their campaign

Available at: https://www.openbadgeacademy.com/badge/1126
CONCLUSION

- Improving professional education, training and public engagement is one of the seven key areas of the 5 year UK AMR strategy.
- For the first time, using behaviour change strategies, the Antibiotic Guardian campaign has shown evidence of moving from increasing awareness to engagement and commitment from healthcare professionals and the public.
- Evaluation of the antibiotic guardian campaign highlighted that it is an effective for increasing knowledge and changing behaviour (self reported) particularly among members of public.
CONCLUSION

- The impact of the Antibiotic Guardian campaign on prescription rates is yet to be determined; direct association would be difficult to make as there are several interventions currently in progress.

- To improve and sustain improvements in the whole population’s behaviour towards the use of antibiotics, important to move from the limited impact of using awareness only modes of education - leaflets, posters and professional education to a coordinated and comprehensive/multimodal approach that addresses all aspects of behaviour (e.g. capability, opportunity and motivation).

- Any campaign should have an integrated evaluation plan from development to post-implementation, using a combination of formative, process and summative measures from outset to completion of the campaign.
ACKNOWLEDGEMENTS

- British Society for Antimicrobial Chemotherapy for the funding the initial website development in 2014 and continued active support.
- Pharma Mix for implementing the design and development of Antibiotic Guardian website at www.antibioticguardian.com.
- Inkling London (www.inklinglondon.com), for providing marketing and behavioural insights on the pledges during development.
- Members of the core EAAD-AG planning group are acknowledged for their contribution in the planning of the AG campaign.
- Organisations and individuals who have actively participated in the wider planning and delivery of the campaign are also acknowledged and can be found listed in the web appendix methods of published manuscript on process evaluation of AG.