



# ANTIBIOTIC GUARDIAN

## ANTIBIOTIC GUARDIAN: ACTIVITIES OVERVIEW SEPTEMBER 2014 TO SEPTEMBER 2016

A PUBLIC HEALTH ENGLAND LED INITIATIVE

# AUTHORS

- Dr Diane Ashiru-Oredope: Antibiotic Guardian Lead, Pharmacist Lead, Antimicrobial Resistance Programme, Public Health England
- Trevor Lowe: Pharmacy Student, University College London

# INCEPTION

- On 16 September 2014, Public Health England launched “Antibiotic Guardian”.
- 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.



## Blog

# Public health matters

Organisations: [Public Health England](#)

  
Public Health England

### Public health matters

The official blog of Public Health England, providing expert insight on the organisation's work and all aspects of public health. [More about this blog.](#)

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## Why we must all become antibiotic guardians

Diane Ashiru-Oredope and Paul Cosford, 16 September 2014 — Antimicrobial resistance, Health Protection

Today PHE launches [Antibiotic Guardian](#), a pledge campaign which forms a key part of the UK's support for [European Antibiotic Awareness Day](#) and the wider fight against antibiotic resistance.

This campaign matters because we have to stop the overuse and misuse of antibiotics which is leading to many bacteria becoming resistant to these essential medicines. We need people to know that our antibiotics could soon be useless unless we all work together to preserve them.

Antibiotics have dramatically reduced the number of deaths from infections and infectious diseases since they were introduced 70 years ago.



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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



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Press release

## Prime Minister warns of global threat of antibiotic resistance



ANTIBIOTIC GUARDIAN: ACTIVITIES OVERVIEW

A European Health Initiative



11/16/2016

# WHAT IS THE UK 5 YEAR AMR STRATEGY?

Identifies 7 key areas for future action:

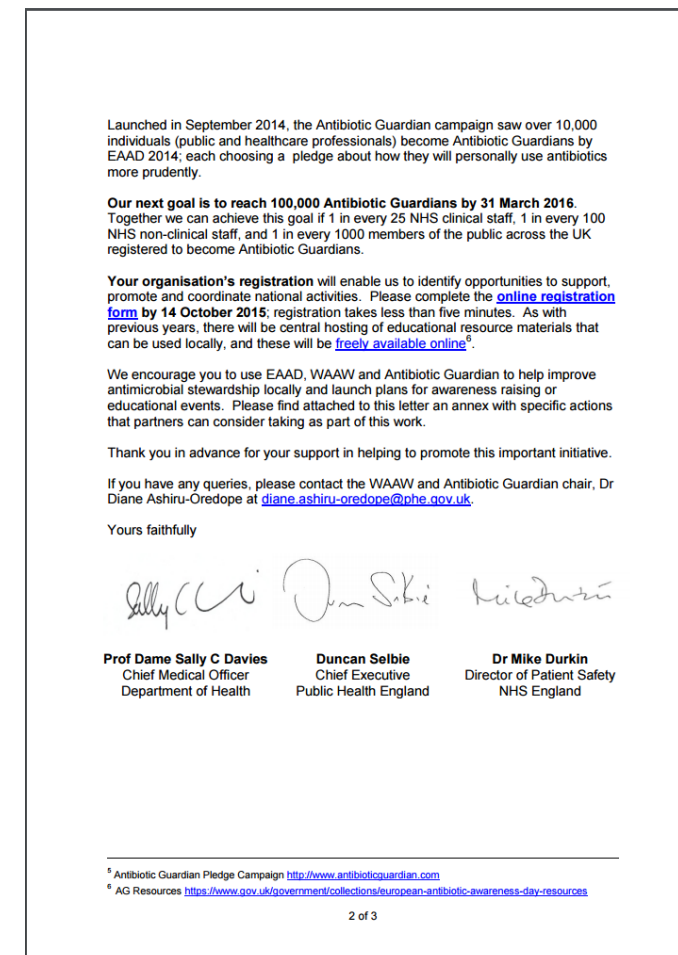
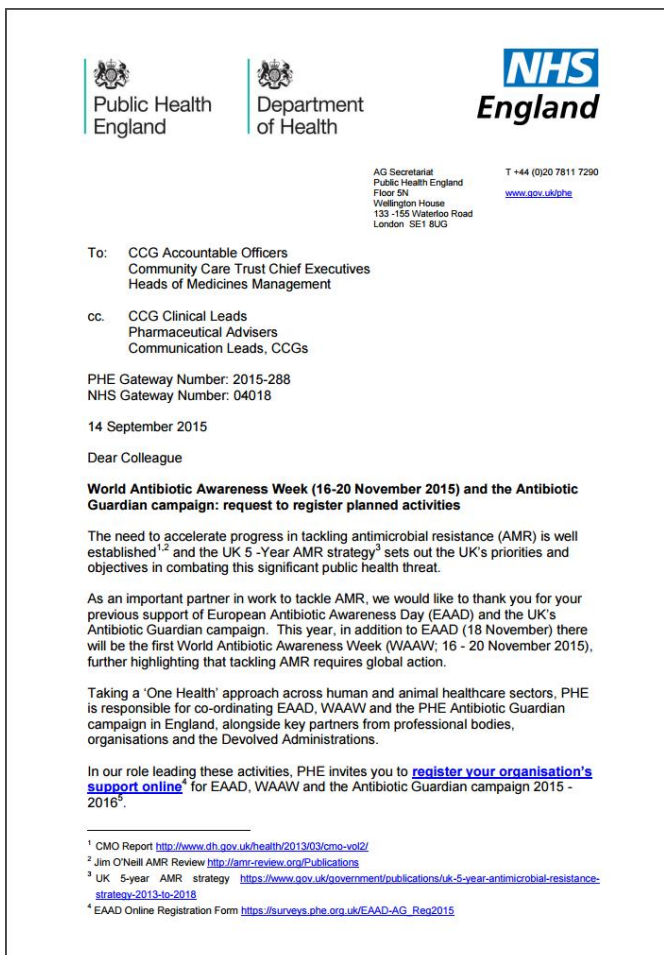
1. Improving infection prevention and control practices
2. Optimising prescribing practice
3. Improving professional education, training and public engagement
4. Developing new drugs, treatments and diagnostics
5. Better access to and use of surveillance data
6. Better identification and prioritisation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

The full document can be found here:

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/244058/20130902\\_UK\\_5\\_year\\_AMR\\_strategy.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/244058/20130902_UK_5_year_AMR_strategy.pdf)

# GAINING SUPPORT

- 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**

- “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.





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# 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.

# RESOURCES DEVELOPMENT

- 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.

BECOME AN ANTIBIOTIC GUARDIAN  
CHOOSE YOUR PLEDGE NOW!

I AM A

HEALTHCARE  
PROFESSIONAL  
OR LEADER  
Select from the list below

MEMBER OF  
THE PUBLIC  
Select from the list below  
  
Adults  
Families  
Farmers  
Pet/Horse Owners

STUDENT OR  
EDUCATOR  
Select from the list below

- A personalised pledge is then generated, according to your sector.
- This makes it easier for the pledge taker to uphold their promise.

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](http://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.

TITLE / FULL NAME\*

Mr Antibiotic Guardian

EMAIL\*

antibiotic@guardian.com



“This year there was a 10,000 pledge target for the public and health professional (human and veterinary) which has been exceeded.”

- The “UK 5 Year Antimicrobial Resistance Strategy 2013–2018: Annual progress report and implementation plan, 2014”, on increasing public awareness

- 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.



The screenshot shows the Antibiotic Guardian website. At the top, a navigation bar includes links for 'CHOOSE YOUR PLEDGE', 'RESOURCES', 'PATIENT STORIES', 'MEETINGS & EVENTS', 'AWARDS', and 'NEWS'. Below this, a purple banner displays 'CURRENT PLEDGES: 32039'. The main content area features the Antibiotic Guardian logo, which consists of two hands (one orange, one purple) holding a pill, next to the text 'ANTIBIOTIC GUARDIAN'. Below the logo is a video player with the title 'Will you be an Antibiotic Guardian?' and a play button. The video features Dr. Chris van Tulleken, an Infectious Diseases Doctor. To the right of the video, there is a section titled 'Antibiotic resistance is one of the biggest threats facing us today.' followed by two paragraphs of text.

**CHOOSE YOUR PLEDGE** **RESOURCES** **PATIENT STORIES** **MEETINGS & EVENTS** **AWARDS** **NEWS**

**CURRENT PLEDGES: 32039**

**ANTIBIOTIC GUARDIAN**

**Will you be an Antibiotic Guardian?**

**Dr Chris van Tulleken**  
Infectious Diseases Doctor

**Antibiotic resistance is one of the biggest threats facing us today.**

**Why it is relevant to you:** without effective antibiotics many routine treatments will become increasingly dangerous. Setting broken bones, basic operations, even chemotherapy and animal health all rely on access to antibiotics that work.

**What we want you to do:** To slow resistance we need to cut the unnecessary use of antibiotics. We invite the public, students and educators, farmers, the veterinary and medical communities and professional organisations, to become Antibiotic Guardians.



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**NuffieldHealth Leeds** @NHLeeds · 26 Nov 2014

Our Pharmacy team have pledge to be @PHE\_uk's Antibiotic Guardians. @DrDianeAshiru  
#AntibioticGuardians



ANTIBIOTIC GUARDIAN CERTIFICATE

I have pledged to be an  
**ANTIBIOTIC GUARDIAN**

You can become an Antibiotic Guardian too

[www.antibioticguardian.com](http://www.antibioticguardian.com)



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- 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.

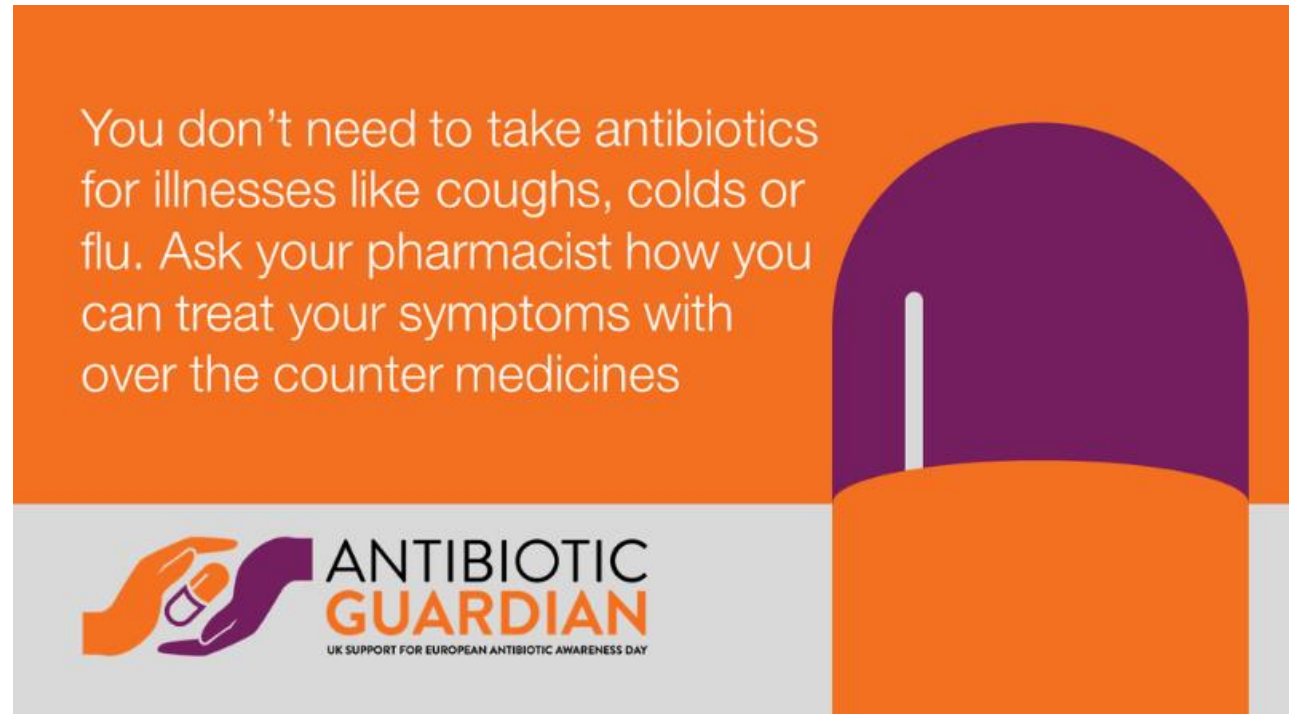
# EDUCATIONAL VIDEO

- 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



# SOCIAL MEDIA GRAPHICS

- Essential to connecting with the general public.
- Tweeted in conjunction with “#AntibioticGuardian” and a link to [antibioticguardian.com](http://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



Source: AMR Review



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



Source: AMR Review



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

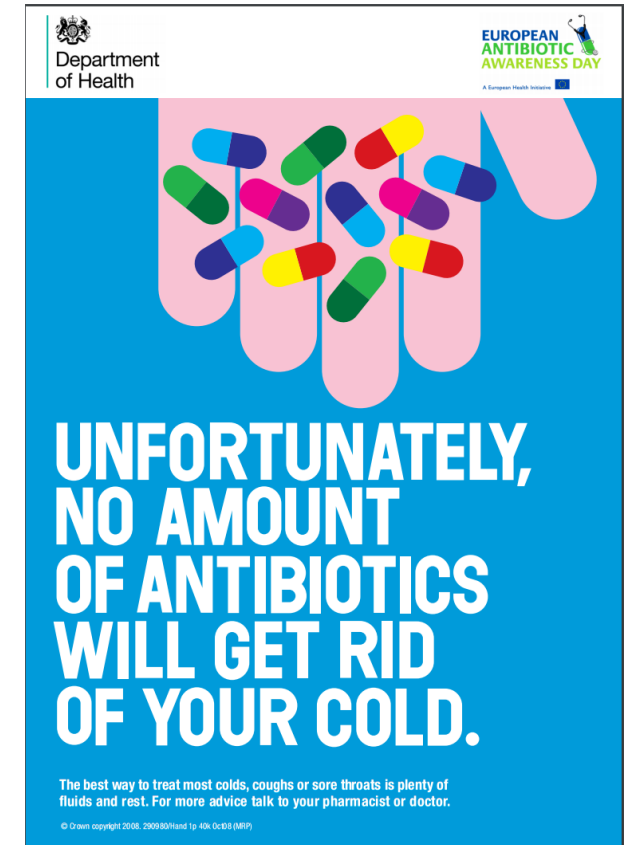
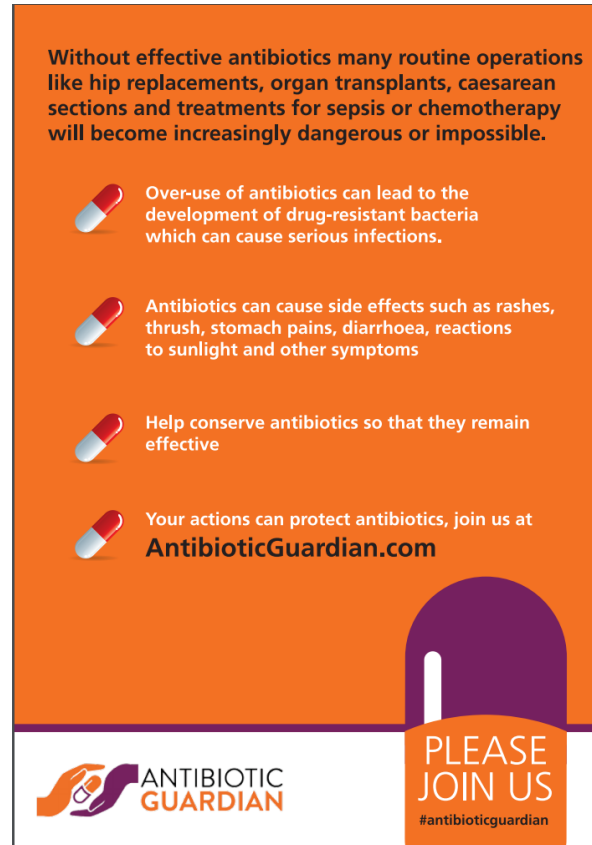


Think antibiotic resistance is a problem for future generations only? Drug-resistant infections are already killing hundreds of thousands of people, every year, across the world



Source: AMR Review

# POSTERS







## Antibiotic resistance in numbers

25k

The number of people who die each year across Europe from infections resistant to antibiotics

30 years

The period of time since a new class of antibiotics was last introduced despite the fact that growing numbers of bacterial and viral infections are resistant to antibiotics

40%

A recent study showed that the likelihood of GPs prescribing antibiotics for coughs and colds increased by 40% between 1999-2011

10%

Research has shown that only 10% of sore throats and 20% of acute sinusitis benefit from antibiotic treatment but the prescription rates are much higher than this

€1.5 billion

Annual EU wide cost of healthcare expenses and lost productivity due to antibiotic resistant bacteria



**Public Health England**

Public Health England (PHE) leads the co-ordination of Antibiotic Awareness activities in England in collaboration with the Veterinary Medicines Directorate (VMD) of the Department for Environment, Food and Rural Affairs (DEFRA), the Department of Health, devolved administrations, and other professional organisations.

PHE established the Antibiotic Guardian campaign to help protect antibiotics and improve knowledge about antibiotic resistance.

**You are invited to become an Antibiotic Guardian**

As an Antibiotic Guardian, encourage others to join you in protecting antibiotics against the growing threat of antibiotic resistance at [antibioticguardian.com](http://antibioticguardian.com)

Please share on social media using [#AntibioticGuardian](https://twitter.com/AntibioticGuardian)

Resources and promotional materials for Antibiotic Guardian and EAAD are available via <http://bit.ly/eaad-resources>

Version 2 updated September 2015

Protect yourself, your family and friends against the spread of antibiotic resistance.

Become an



**ANTIBIOTIC GUARDIAN**

[www.antibioticguardian.com](http://www.antibioticguardian.com)



## What is antibiotic resistance?

THE PROBLEM

Antibiotics treat infections by killing bacteria, but now the bacteria are fighting back. Our medicines are becoming less effective which means more deaths and more complications for people receiving treatment in hospital. We have to tackle this problem before it gets worse.

HOW THIS HAPPENED

There are many reasons why antibiotics lose their effectiveness, but here are two key ones:

Firstly, we take medicines that we don't need. Antibiotics don't help most colds or coughs get better but we still request antibiotics for them.

Secondly, we make things worse when we don't take antibiotics exactly as prescribed for instance, missing doses. Never save antibiotics for future use or give them to someone else.

WHAT CAN WE DO?

Antibiotic resistance is one of the biggest threats facing us today but you can help. Please visit [www.antibioticguardian.com](http://www.antibioticguardian.com) and find out about simple steps you can take to save our antibiotics.



## A world without antibiotics

PRE-ANTIBIOTIC AGE

In a world before antibiotics, as recently as the 1930s, people often died from infections like pneumonia or meningitis. Simple medical procedures/operations were risky due to the chance of infection. Antibiotics changed that.

ANTIBIOTIC AGE

Since the 1940s our antibiotics have allowed us to fight infections and save millions of lives. But they are becoming ineffective against many infections because we aren't using them properly.

POST-ANTIBIOTIC AGE

If bacteria become 'resistant' to our antibiotics many routine treatments will again become increasingly dangerous. Setting broken bones, basic operations, even chemotherapy all rely on access to antibiotics that work. Antibiotic resistance is one of the biggest threats facing us today but we have a chance to fight back. Find out how at: [www.antibioticguardian.com](http://www.antibioticguardian.com)



## Antibiotic resistance What can I do?

BE AN ANTIBIOTIC GUARDIAN

Antibiotics are some of our most precious medicines, used to treat both humans and animals. The Antibiotic Guardian campaign was launched to kick-start collective action from both healthcare professionals and members of the public to work together to slow the spread of antibiotic resistance. By pledging to become an Antibiotic Guardian you choose to perform a simple action which protects antibiotics against the threat of antibiotic resistance.

TAKE THESE SIMPLE ACTIONS

- Don't ask for antibiotics, treat your cold and flu symptoms with pharmacist advice and over the counter medicines
- Take antibiotics exactly as prescribed, never save them for later, never share them with others
- Spread the word, tell your friends and family about antibiotic resistance

SIGN UP AND LEARN MORE

Rally together at [antibioticguardian.com](http://antibioticguardian.com) and choose a pledge that feels right for you. Remember that your actions protect antibiotics.

## A4 INFORMATION LEAFLET

All Antibiotic Guardian resources can be found here: <https://www.gov.uk/government/publications/european-antibiotic-awareness-day-and-antibiotic-guardian-posters-and-leaflets>.

A social graphic pack can also be obtained by emailing [socialmedia@phe.gov.uk](mailto:socialmedia@phe.gov.uk).



## 无须使用抗生素而能早日康复

这份小册解释我们需要采用正确的治疗来医治一些普通疾病，例如伤风和咳嗽，而不会助长对抗生素的抗药性。

### 我应怎样治疗伤风？

治疗大多数伤风、咳嗽或喉咙痛的最好方法，是饮大量液体和休息。伤风可能会持续两周左右，并最后会有咳嗽和有痰。市面上有很多成药可以舒缓这些症状 - 例如‘扑热息痛’镇痛药 (paracetamol)。你可以请教药剂师。如果伤风持续超过三周，或你变得气喘或胸口痛，或已有肺部毛病，就要去看医生。

### 我的子女时常都有咳嗽和患伤风，又应怎样做呢？

儿童咳嗽和患伤风是非常普遍的，尤其是当他们在上学时接触到其它同学时。你可以请教药剂师。如果症状持续和令你担忧，就去看医生，但不要预期医生会给你抗生素的处方。

### 抗生素是什么？

抗生素 (antibiotics) 是用来治疗由细菌引起的感染的重要药物。细菌能够适应和找到在抗生素药力中生存的方法。它们变成对这生素有‘抗药性’，以致这生素失去效力。我们愈常服同一种抗生素，细菌就愈有可能对该生素产生抗药性。有些在医院引起感染的细菌，例如 MRSA，是会对好几种生素有抗药性的。

### 为何不应用生素来治疗咳嗽和伤风呢？

所有伤风和大多数咳嗽及喉咙痛都是由病毒引起的。生素对由病毒引起的感染例如伤风并无效力，而病毒感染比细菌感染更为普遍。

### 为什么不可以用各种不同的生素呢？

虽然是可行的，但它们未必同样有效，并可能会有较多副作用。况且，细菌最终亦会对它们产生抗药性。我们无法确定必定能找到新的生素去代替旧的生素。在最近几年，研发出的新生素种类较少。

### 怎样可以避免对生素产生抗药性呢？

只要我们少些使用生素，就可减慢抗药性的发展。我们无法完全阻止抗药性的发展，但将它减慢可以防止它传开，并可争取时间去研发新的生素种类。

### 怎样可以防止抗药性的形成？

方法是只在适当的情况下才使用生素。我们现在知道即使不使用生素，大多数咳嗽和伤风都会同样迅速地痊愈。当医生给了你生素处方时，你就必须服完整个疗程才能完全消灭细菌。如不服完整个疗程，就可能仍有细菌存在以致产生抗药性。

### 那么医生会在什么情况下开生素处方？

医生只会在你需要生素时才开这处方，例如，肾脏感染或肺炎。对一些例如脑膜炎等的感染，生素亦可拯救生命。只要避免不必要的使用，生素就更能在我们有需要时发挥功效。

欲知详情，请浏览网址：  
[www.nhs.uk/antibiotics](http://www.nhs.uk/antibiotics)

# “GET WELL SOON WITHOUT ANTIBIOTICS” LEAFLET

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





**Elizabeth Beech** @elizabethbeech · 20 Nov 2015  
Bath Uni Pharmacy students are #antibioticguardian s @PharmUnivBath



**Susan Hopkins** @SMHopkins · 19 Nov 2015  
@RoyalFree NHS #CMO #AntibioticGuardian. Royal free pharmacy staff out campaigning.



**RUH Bath** @RUHBath · 20 Nov 2015  
Our staff are pledging to each be an #AntibioticGuardian. Anyone can sign up: antibioticguardian.com



**Leicester City CCG** @NHSLeicester · 20 Nov 2015  
Our Leicester GPs support the #AntibioticGuardian campaign. Find out why and sign up too! [ow.ly/UQDJ1](http://ow.ly/UQDJ1)



**Benenden Hospital** @benenden\_trust · Mar 10  
@benenden\_trust has joined #AntibioticGuardian aimed at tackling antibiotic resistance. [ow.ly/ZinVo](http://ow.ly/ZinVo)



**Joanne Bosanquet MBE** @MrsBosanquet ·  
#antibioticguardian right there in his #BookV loves his badge! @DrDianeAshiru @KarenS



**DH Media Centre** @DeptHealthPress · 18 Nov 2014  
Read about Prof Dame Sally Davies becoming an #AntibioticGuardian [bit.ly/1xztszt](http://bit.ly/1xztszt) #AntibioticDay



**WePharmacists** @WePharmacists · 18 Nov 2014  
#weph RT @alybrown. Our commitment @RPSSScotland #EAAD #AntibioticGuardian



**Antibiotic awareness** @ESuPPharmacist · 25 Nov 2014  
#CPPEAntibac @cpeengland Great support for #AntibioticGuardian #EAAD14 @SWBnhs by MDT, Drs & nurses. Thanks all!



"Antibiotics are becoming less effective and people dying unnecessarily of infections that can be treated effectively today. Antibiotic resistance is accelerated by the misuse and overuse of antibiotics, and we are all responsible for their preservation".  
Ireti Blankson  
Pharmacist

**Medway NHS FT** @Medway\_NHS\_FT · 19 Nov 2015  
"We are all responsible for their preservation". [bit.ly/1QWpLTX](http://bit.ly/1QWpLTX) #AntibioticResistance #AntibioticGuardian



**Norouz Bazaar London** @NorouzBazaar · 23 Nov 2015  
More pledges @royalmarsden #EAAD #AntibioticGuardian @patcp66 #charity #health #wellbeing



**Infection Prevention** @IPCT\_SFHT · 18 Nov 2015  
@SFHT pharmacy at Sherwood Forest Hospital encouraging responsible antibiotic use. #antibioticguardian



In reply to Diane Ashiru, PhD  
**nicole vd Sandt** @Nicoleevdsandt · 26 Nov 2015  
@DrDianeAshiru look at all the @SMUClinPharm #AntibioticGuardian that pledged! @NSchellack @quina75 @ycombrinck1

Examples of #AntibioticGuardian engagement on Twitter from organisations all over the UK including: hospitals, community pharmacies, universities



# ANTIBIOTIC GUARDIAN AWARDS 2016

- 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?



**Joel Paul**  
@drjoelpaul



Follow

At the Antibiotic Guardian Award - Birmingham



7:45 PM - 12 May 2016



**BVA**  
@BritishVets



Follow

Great to see @BEVA\_news have been highly commended at the Antibiotic Guardian Awards [ow.ly/COdu300mnOe](http://ow.ly/COdu300mnOe) #AMR



RETWEET  
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2



1:00 PM - 19 May 2016



1



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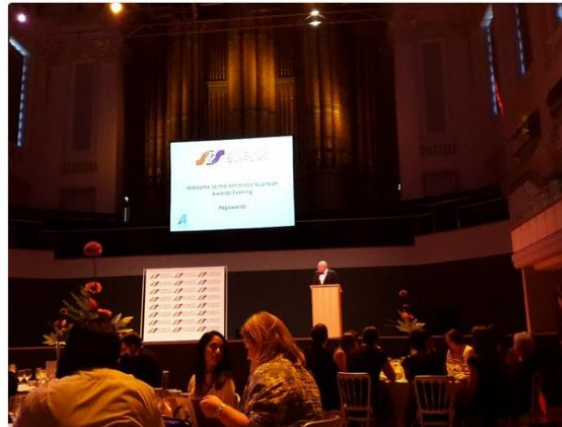


**David Shukla**  
@DavidShukla



Follow

At the Antibiotic Guardian Awards Ceremony representing @DudleyCCG #agawards @mineshparbat1 @Duncanjenkins



RETWEETS  
3

LIKES  
4



7:42 PM - 12 May 2016



3



4



**Debra Moore**  
@debjmoore1985



Follow

Enjoying the antibiotic guardian awards this evening #agawards



RETWEET  
1



8:45 PM - 12 May 2016

📍 Birmingham, England



1





Public Health  
England

**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.”*



# ANTIBIOTIC GUARDIAN ROADSHOW

- 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



## Blog

### Public health matters

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**Taking the Antibiotic Guardian campaign on the road**

Diane Ashiru-Oredope, 24 May 2016 — Antimicrobial resistance





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The official blog of Public Health England, providing expert insight on the organisation's work and all aspects of public health. [More about this blog.](#)

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# ANTIBIOTIC GUARDIAN ROADSHOW

- 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.








**Lisa Jamieson**  
 @joggerjamieson





Really interesting day at [#AntibioticGuardian](#) Roadshow in Leeds. Not just healthcare that needs to work on AB overuse. [#Onehealth](#)


RETWEETS 3

LIKES 2







3:11 PM - 29 Oct 2015


 3
  2
 



**Julie Wilkinson**  
 @Julie\_oh

Learning more about the affect of antibiotic use in agriculture on resistance [#AntibioticGuardian](#) roadshow



RETWEETS 3


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1:21 PM - 18 Nov 2015


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**Sarah Golding**  
 @SarahEGolding



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

7:04 PM - 24 Feb 2016






**Lisa Jamieson**  
 @joggerjamieson





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

RETWEETS 2

LIKES 2

5:14 PM - 29 Oct 2015


 2
  2
 



**Wakefield Meds Opt**  
 @WakeMedsOpt




Very informative & interesting [#AntibioticGuardian](#) Roadshow in Leeds. Lots to take away. Highly recommend it if you can catch it elsewhere

RETWEETS 2




4:16 PM - 29 Oct 2015

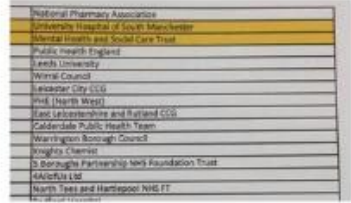

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**Wakefield Meds Opt**  
 @WakeMedsOpt




Attending the [#AntibioticGuardian](#) roadshow. Good mix of people with one aim....to reduce antimicrobial resistance





**[#AntibioticGuardian](#) Roadshow: Leeds**

RETWEET 1

LIKE 1




10:37 AM - 29 Oct 2015


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# PUBLIC DEBATES

- 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



**Debra Moore**  
@debjmoore1985



Follow

Great to be at 'Antibiotic Resistance and You!'  
Let's hope for in interesting public debate  
#AntibioticGuardian



RETWEET 1 LIKE 1



6:03 PM - 24 Feb 2016

London, England



**Terry Ng**  
@TinWaiNg



Following

So good to see @School\_Pharmacy students  
at #AntibioticGuardian evening&being part of  
debate!Great Ques to the panel from1of our  
Yr3! #proud

RETWEET 1 LIKE 1



8:16 PM - 24 Feb 2016



**Diane Ashiru, PhD**  
@DrDianeAshiru



Following

Panel discussion at #antibioticresistance and  
you #AntibioticGuardian public event



RETWEET 1 LIKES 3



9:11 PM - 24 Feb 2016

Reena Barai, Esmita Charani, Fran Husson and 3 others



**Reena Barai**  
@REENABARAI



Follow

@DrDianeAshiru takes to the stand to  
encourage everyone to become a  
#AntibioticGuardian



RETWEETS 6 LIKES 8



7:54 PM - 24 Feb 2016





# 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 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 lanyards!

This pharmacy-led inter-professional campaign also included undergraduate volunteers from the School of Pharmacy.

## Related Posts

- NICE launches Obesity e-learning tool
- Manchester ranked as one of the top universities for Pharmacy studies
- Students lead Madagascan Medical Expedition
- Manchester Pharmacy School research associate receives Young Investigator Award
- WATCH: Europe in union to make falls prevention flash

Antibiotic Guardian has attracted support from many different organisations

Home > Scottish Antimicrobial Prescribing Group (SAPG) > European Antibiotic Awareness Day > European Antibiotic Awareness Day (EAAD)

About the Scottish Antimicrobial Prescribing Group (SAPG)
News
Education
European Antibiotic Awareness Day
Publications and presentations
Events
Surveillance and informatics
Primary care

## European Antibiotic Awareness Day (EAAD)

The Antibiotic Guardian campaign led by Public Health England (PHE) was first launched in 2014 in support of EAAD and was a great success, with over 10,000 individuals (members of the public and healthcare professionals) making a pledge about how they will personally use antibiotics more prudently, and becoming Antibiotic Guardians.

This year, PHE’s goal is to reach 100,000 registered antibiotic guardians by 31 March 2016 and we will be utilising NHS Scotland versions of the Antibiotic Guardian resources throughout health and care settings across Scotland to support this aim. This goal would be possible if one in every 25 NHS clinical staff, one in every 100 NHS non-clinical staff, and one in every 1000 of the population across the UK registered to become Antibiotic Guardians.

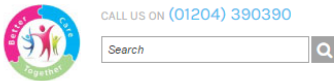
In Scotland we have rebadged the very useful PHE Antibiotic Guardian Leaflet link below.

Antibiotic guardian leaflet 2015.pdf.

There is also a very useful short but informative film that could be used on Board public information televisions <https://www.youtube.com/watch?v=Hn5uItN7JaM>

Quantities of the leaflet will be sent out to the Health Boards. If you would like a small extra amount for a stand or campaign please e-mail [susan.paton2@nhs.net](mailto:susan.paton2@nhs.net).

- As well as the Antibiotic Guardian campaign we are also promoting the use of other resources:
- Community Pharmacy leaflet. Self Care Leaflet for Community Pharmacy
  - Out of Hours Leaflet. Out of Hours Treat your infection leaflet
  - e-bug materials for school children <http://www.hps.scot.nhs.uk/haic/ic/index.aspx>
  - TARGET antibiotics toolkit available on the RCGP website to improve prescribing practice.
  - Nursing in Stewardship Workbook Antimicrobial Stewardship - an Educational Workbook for Nurses and Midwives
- Materials from 2014 and leaflets in other languages are also still available. You can find the link here [EAAD materials from 2014](#)



## NEWS

### LATEST NEWS

- CANCELLATION OF SOME OUTPATIENT APPOINTMENTS
- NOROVIRUS IN THE COMMUNITY
- PHYSIOTHERAPY WORK EXPERIENCE DAY
- BUDDING BOLTON RESEARCHER WINS STUDENTSHIP
- NURSING RECRUITMENT OPEN DAY SAT 23RD JULY

### NEWS ARCHIVES

JULY 2016

## Please become an antibiotic guardian

Antibiotic resistance is one of the biggest threats facing us today and the overuse or misuse of antibiotics is making the problem worse. Without effective antibiotics many routine treatments will become increasingly dangerous. Setting broken bones, basic operations, transplants, even chemotherapy all rely on access to antibiotics that work. To slow resistance we need to cut the use of unnecessary antibiotics.

Antibiotic Guardian is a campaign run by Public Health England and a range of partners. Health professionals, patients, health leaders and those who work with, own or treat animals are being encouraged to visit [www.antibioticguardian.com](http://www.antibioticguardian.com) and choose a pledge that they can fulfil and play their part in protecting some of our most precious medicines.



You are here: Home > News > 2015 > 11 > Become an Antibiotic Guardian to protect precious medicines

## Become an Antibiotic Guardian to protect precious medicines

Health experts in Cornwall are backing a campaign to stop the overuse and misuse of antibiotics which is leading to many bacteria becoming resistant to these essential medicines. The call comes ahead of European Antibiotic Awareness Day on Wednesday, November 18.



Antibiotics help treat infections like pneumonia, meningitis and tuberculosis and are used to prevent infections during cancer treatments, caesarean sections and much surgery.

Kathryn Wisner, Pharmaceutical Adviser at NHS Kernow – the GP-led body responsible for planning and buying healthcare for the local population – said: “Antibiotic resistance is one of the biggest threats facing us today.

Antibiotics are really important medicines for treating infections, but they’re losing their effectiveness at an increasing rate because bacteria have found ways to adapt and survive. This resistance can also be passed between types of bacteria.

By only using antibiotics when needed, we can slow down the development of resistance and buy time to develop new types of antibiotics. By not using them unnecessarily, they are more likely to work when we need them.



**NHS**  
North Kirklees  
Clinical Commissioning Group

## Summer 2015



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**

News



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### Signing up to the Antibiotic Guardian pledge

We are in the process of encouraging our practices to sign up to become 'Antibiotic Guardians'. Without effective antibiotics many routine treatments will

become increasingly dangerous. Setting broken bones, basic operations, even chemotherapy all rely on access to antibiotics that work. To slow resistance we need to cut the use of unnecessary antibiotics.

November 18th is European Antibiotic Awareness Day and as part of this everyone in the UK, including both the the public and the medical community, are being encouraged to become Antibiotic Guardians. We will be launching a public campaign later in the year. Further information can be found [here](#).

A CCG newsletter featuring a section on Antibiotic Guardian



BBC Doctors Crash Bang Pow (18th November 2015)



BBC Doctors

Subscribe 145

66 views



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England

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 Resistance



## Only global action will save modern medicine

This year marks the first ever Antibiotics Awareness Week. The fact that the WHO has now recognised this as a global week of action is further evidence of how important and serious the issue of antimicrobial resistance has become.



## Why is there such a focus on antibiotic resistance at the moment?

It is because many of these precious medicines have lost their effectiveness to treat the bacteria causing common infections such as pneumonia, skin and kidney infections, gonorrhoea, and tuberculosis.



## The collective power of action in tackling antimicrobial resistance

Antimicrobial resistance (AMR) places unprecedented threats on global health, a fact both evidenced and undisputed.



## On the spot test key to reduce inappropriate antibiotic prescribing

A simple finger-prick blood test taken in GP surgeries or pharmacies could cut antibiotic prescriptions by up to 42 per cent, saving the NHS

## Antibiotic Resistance

Antibiotics treat infections by killing bacteria, but now the bacteria are fighting back. Our medicines are becoming less effective which means more deaths and more complications for people receiving treatment in hospital. We have to tackle this problem before it gets worse.



Global Health Action ► Antibiotic Resistance ► Why is there such a focus on antibiotic resistance at the moment?

# Why is there such a focus on antibiotic resistance at the moment?

**ANTIBIOTIC RESISTANCE** It is because many of these precious medicines have lost their effectiveness to treat the bacteria causing common infections such as pneumonia, skin and kidney infections, gonorrhoea, and tuberculosis.



**Dr Diane Ashiru-Oredope**  
Pharmacist Lead for Antimicrobial Resistance and Lead for the UK Antibiotic Guardian Campaign

42 SHARES // SHARE THIS PAGE



## MORE ARTICLES



Only global action will save modern medicine



The collective power of action in tackling antimicrobial resistance

Antibiotic Guardian participated in this media campaign, providing a supplement in an independent newspaper on the 18<sup>th</sup> November 2015



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# INITIAL PROCESS EVALUATION (AUGUST 2014 – JANUARY 2015)

# INITIAL PROCESS EVALUATION (AUG 2014 – JAN 2015)

- “A process evaluation of the UK-wide Antibiotic Guardian campaign: developing engagement on antimicrobial resistance” was published in the Journal of Public Health on 22 July 2016.
- Data was collected from AntibioticGuardian.com and Google analytics between August 2014 and January 2015.

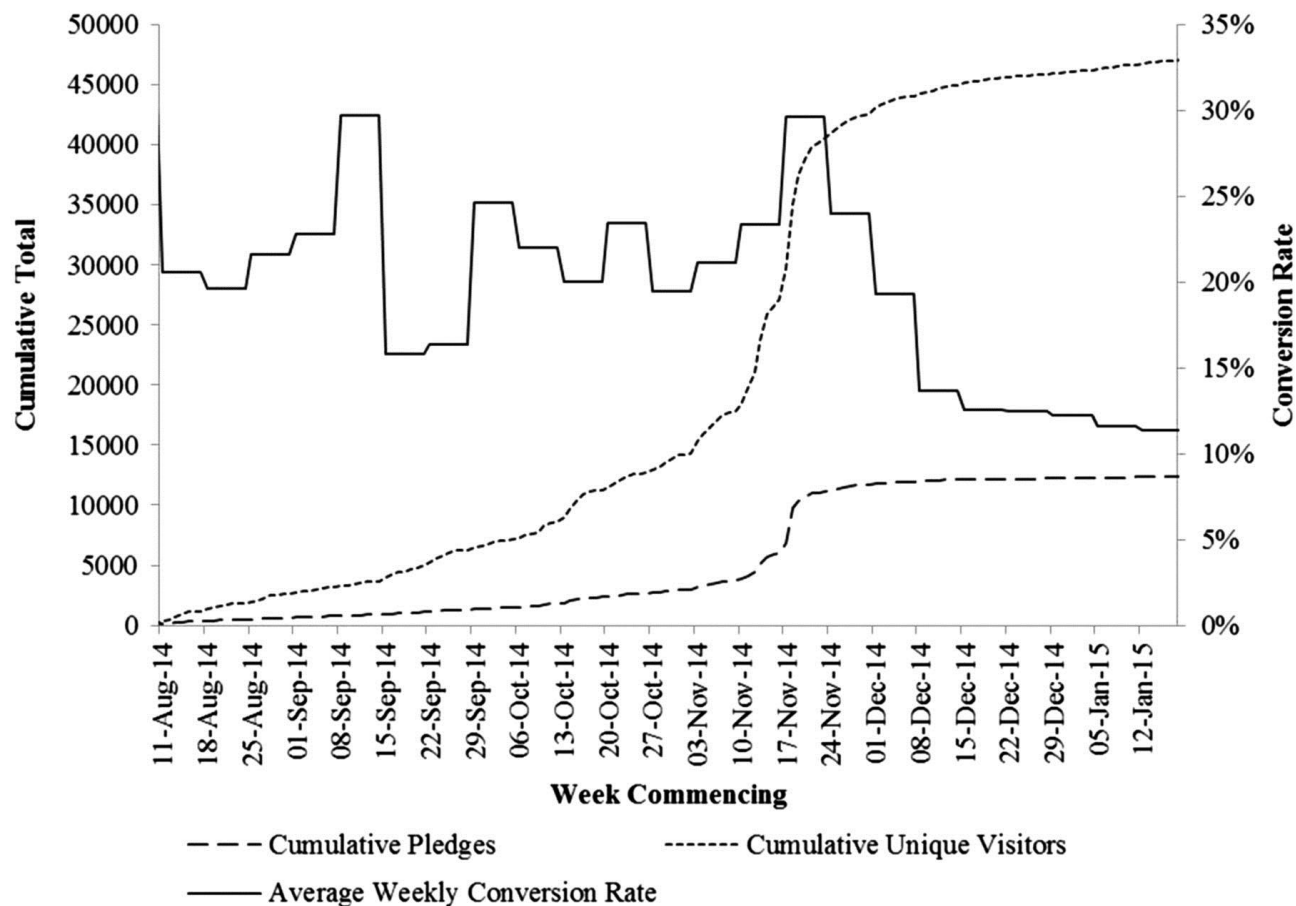
The screenshot displays the Oxford Journals website interface. At the top, the 'Journal of Public Health' logo is visible. Below the header, navigation links include 'ABOUT THIS JOURNAL', 'CONTACT THIS JOURNAL', 'SUBSCRIPTIONS', 'CURRENT ISSUE', 'ARCHIVE', and 'SEARCH'. The main content area features the article title 'A process evaluation of the UK-wide Antibiotic Guardian campaign: developing engagement on antimicrobial resistance' by Alex Bhattacharya, Susan Hopkins, Anna Sallis, Emma L. Budd, and Diane Ashiru-Oredope. The article is dated July 22, 2016, with a DOI of 10.1093/pubmed/fdw059. The right sidebar contains a search bar, a 'Current Issue' section for June 2016, and a 'The Journal' section with links to 'About this journal', 'Publishers' Books for Review', 'Rights & Permissions', 'Dispatch date of the next issue', 'Journals Career Network', and 'Published on behalf of'. The bottom of the page shows the date 11/16/2016 and the page number 38.

## 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.



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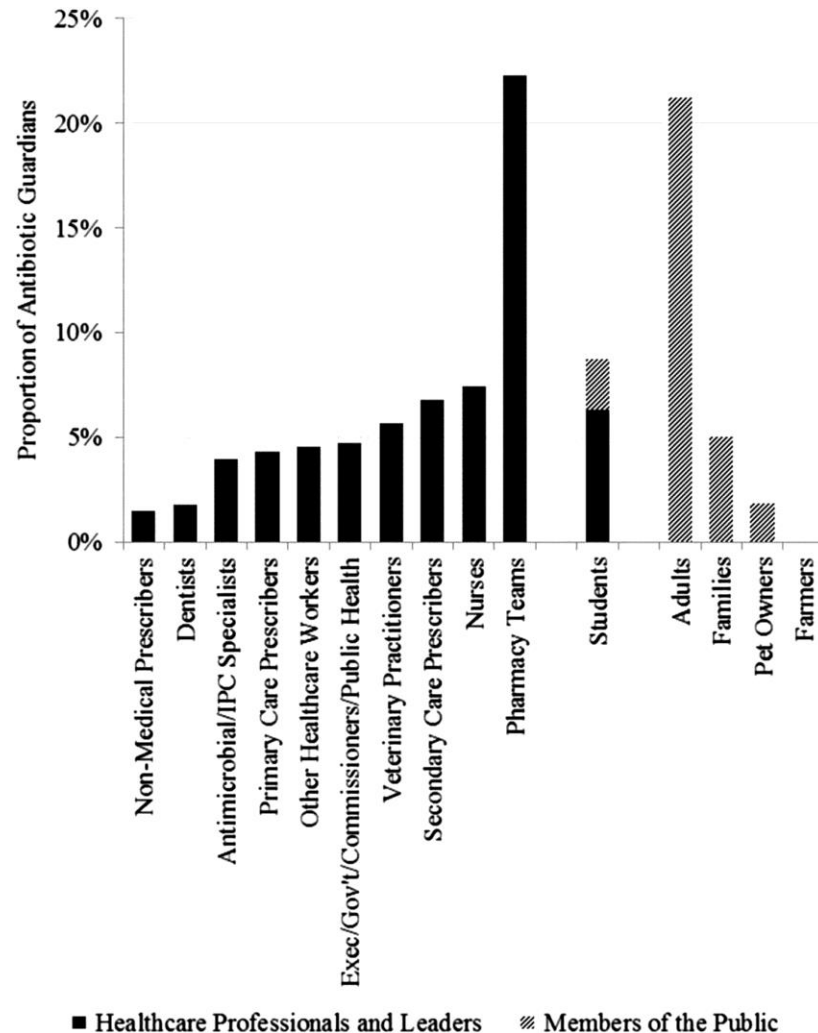


- Average weekly conversion rates on AntibioticGuardian.com of unique visitors compared to pledges.
- The bimodal peaks in conversion rates align the launch of the YouTube video (w/c 8 September) and EAAD (w/c 17 November).



# PROCESS EVALUATION: FURTHER FACTS AND FIGURES

- 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



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- 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.



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# PROCESS EVALUATION (2014-2016)

## Measurable Key Process Outcomes from 2011-2013 (EAAD)

	2011	2012	2013
Professional Organisations	30	36	43
Publications	11	11	37
Bulletins	3	7	36
Website Page Views: 04 Oct – 31 Dec of each year			
DH Resources	2,230	2,221	23,793
e-Bug.eu	143,642	227,052	222,698
NHS Choices	9,040	13,589	18,821



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

	2014	2015	To July 2016
Professional Organisations	193	306	
Publications	47	47	42
Bulletins/Newsletters	34	65	9
Web Articles	40	195	59
International Mentions	3	29	8



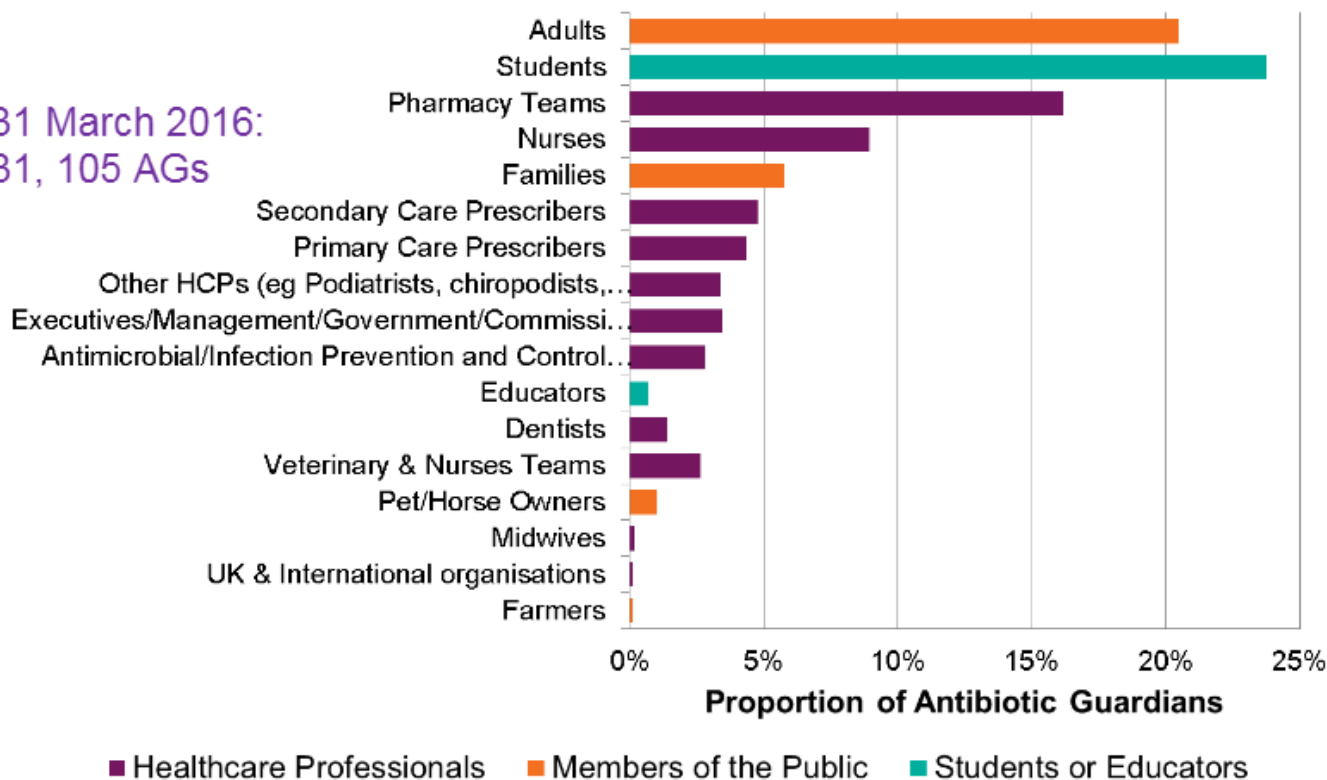
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Professional Organisations	193	306	
Publications	47	47	42
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International Mentions	3	29	8

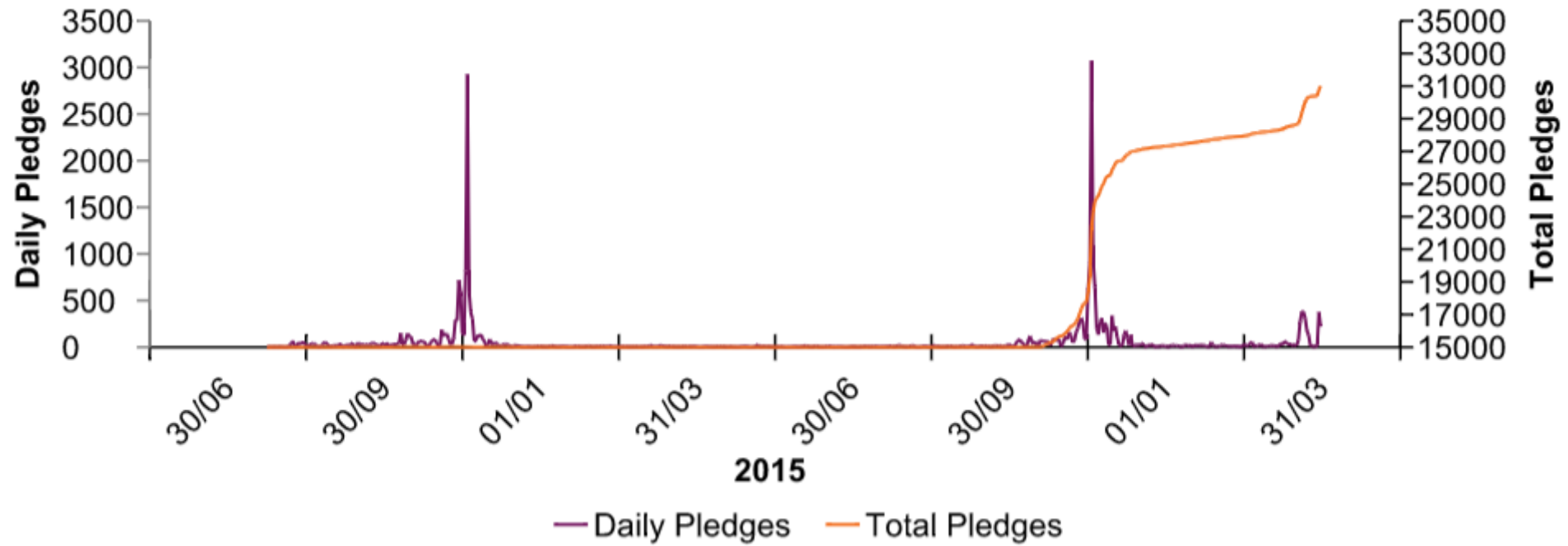


# ANTIBIOTIC GUARDIAN DEMOGRAPHICS

31 March 2016:  
31, 105 AGs



As of 17 Jun 2016,  
there were 31,847  
Antibiotic Guardians  
in total.

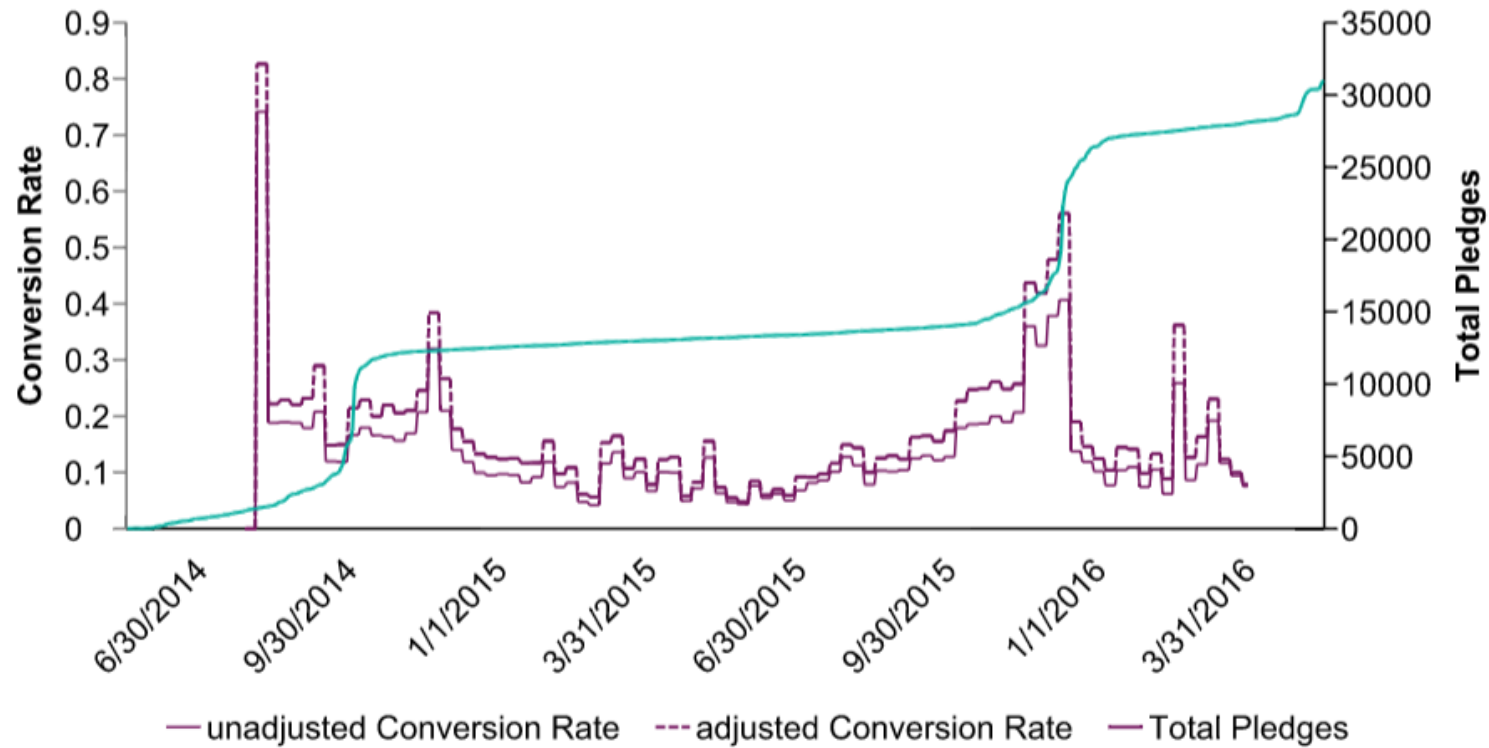


## GRAPH SHOWING DAILY PLEDGES AND TOTAL PLEDGES

Activity on the website was concentrated around WAAW. 40% of pledges were made during WAAW.

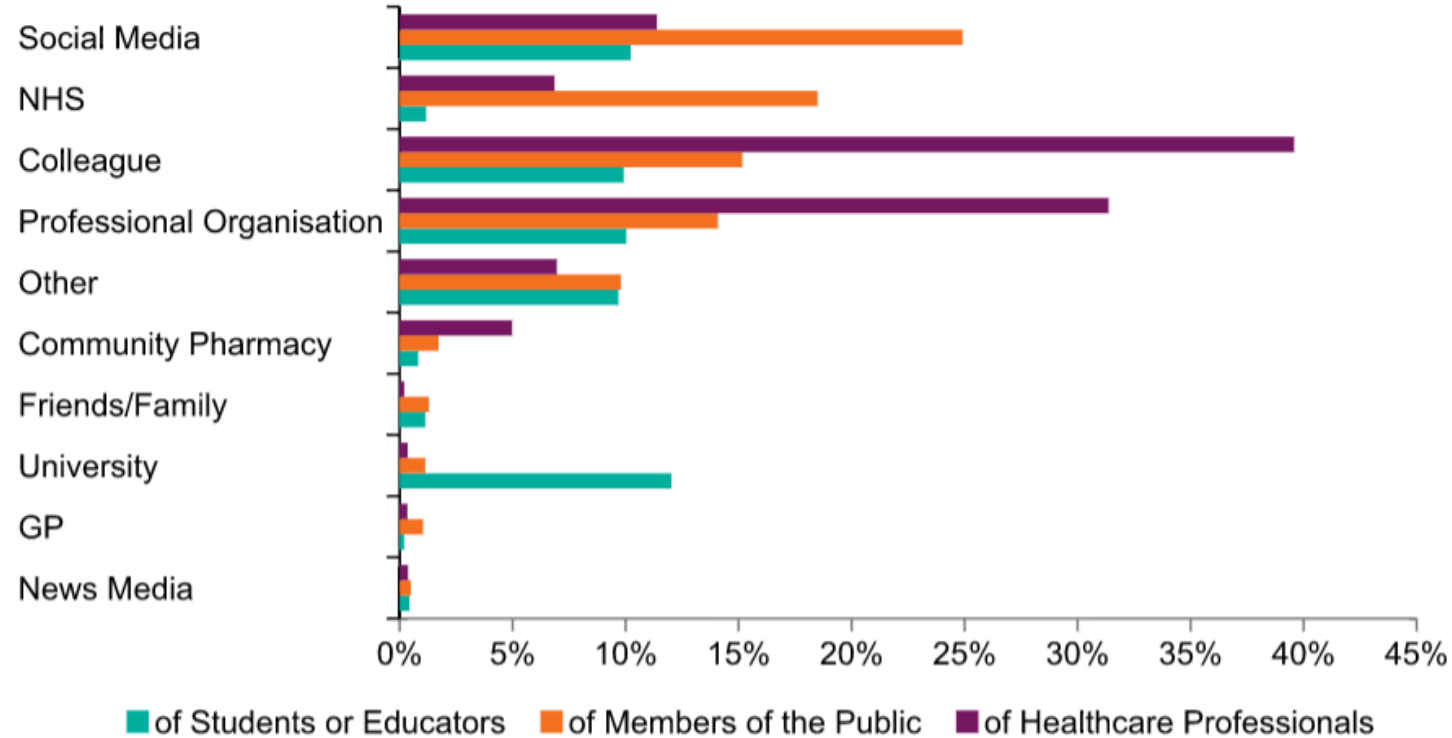
# PAID FOR FACEBOOK ADVERTISING

- 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.

## SELECT A PLEDGE MESSAGE\*

*Messages will display below*

- 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

51.8%

24.2%

11.9%

12.1%

0.0%

## PLEDGE UPTAKE:ADULTS

Public Pledges Year 2 Adults: n= 3,122

2014 –2016: 7,080 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](http://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.

21.3%

15.4%

5.8%

29.9%

27.6%



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## PLEDGE UPTAKE: FAMILIES

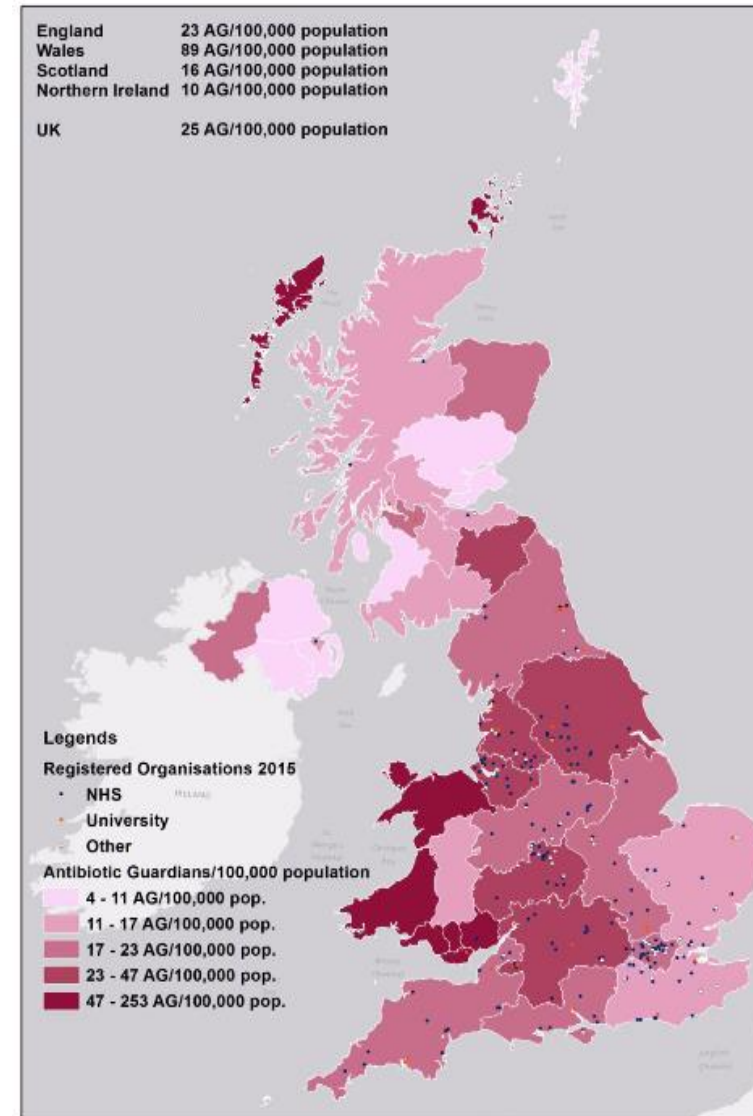
Public pledges (Year 2) - Families: n=1,309

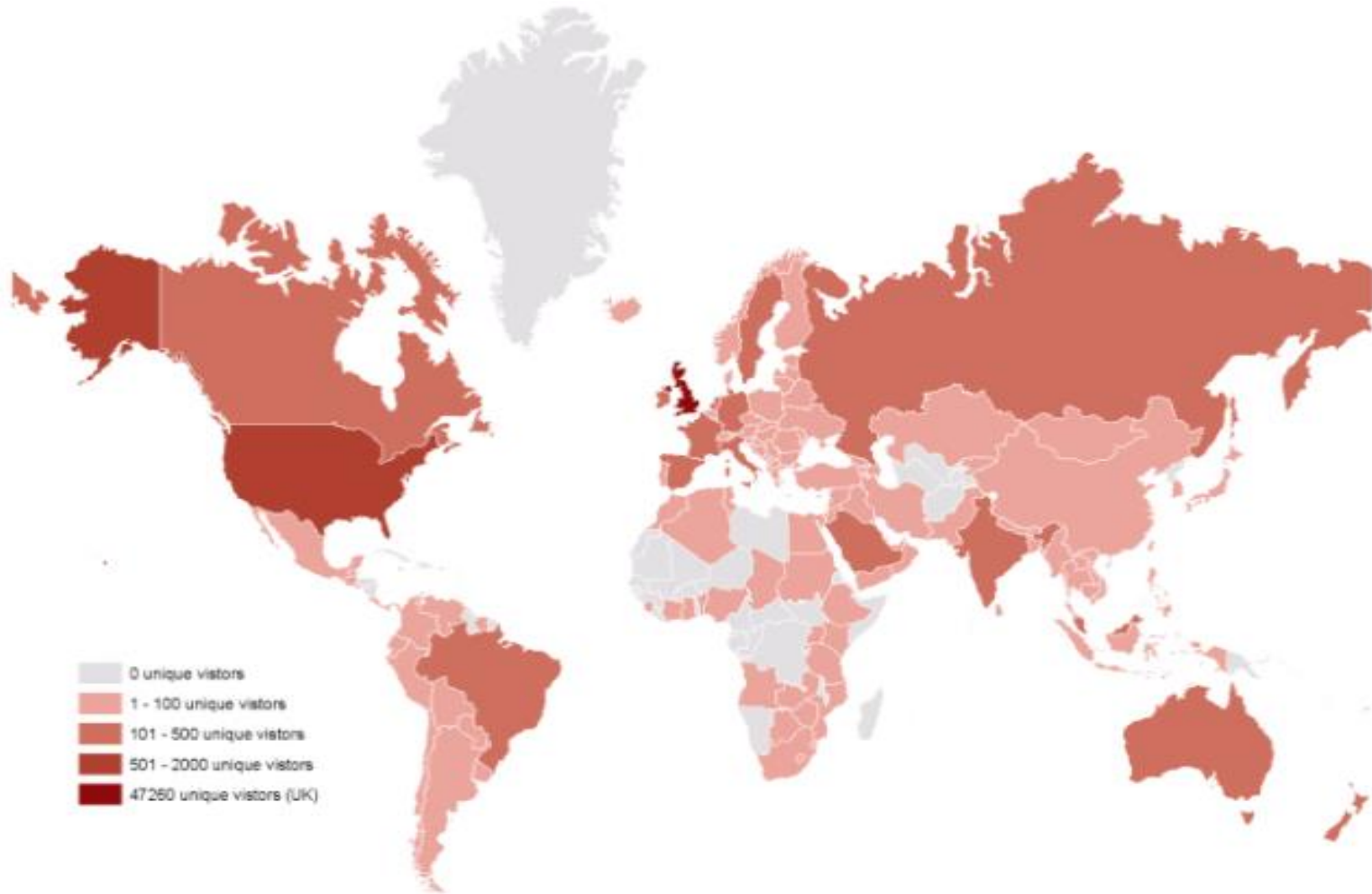
Oct 2014 to 31 March 2016 : 1,997 pledges

# 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.



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# IMPACT OF ANTIBIOTIC GUARDIAN



RESEARCH ARTICLE

Open Access



## Impact of a United Kingdom-wide campaign to tackle antimicrobial resistance on self-reported knowledge and behaviour change

Katerina Chaintaril<sup>1,2\*</sup>, Suzanne M. Ingle<sup>2</sup>, Alex Bhattacharya<sup>3</sup>, Diane Ashiru-Oredope<sup>3</sup>, Isabel Oliver<sup>1,2</sup> and Maya Gobin<sup>1,2</sup>

### Abstract

**Background:** As part of the 2014 European Antibiotic Awareness Day plans, a new campaign called Antibiotic Guardian (AG) was launched in the United Kingdom, including an online pledge system to increase commitment from healthcare professionals and members of the public to reduce antimicrobial resistance (AMR). The aim of this evaluation was to determine the impact of the campaign on self-reported knowledge and behaviour around AMR.

**Methods:** An online survey was sent to 9016 Antibiotic Guardians (AGs) to assess changes in self-reported knowledge and behaviour (outcomes) following the campaign. 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.

**Results:** 2478 AGs responded to the survey (27.5 % response rate) of whom 1696 (68.4 %) pledged as healthcare professionals and 782 (31.6 %) as members of public (similar proportions to the total number of AGs). 96.3 % of all AGs who responded had prior knowledge of AMR. 73.5 % of participants were female and participants were most commonly between 45 and 54 years old.

Two thirds (63.4 %) of participants reported always acting according to their pledge. Members of the public were more likely to act in line with their pledge than professionals (Odds Ratio (OR) =3.60, 95 % Confidence Interval (CI): 2.88-4.51). Approximately half of participants (44.5 %) (both healthcare professionals and members of public) reported that they acquired more knowledge about AMR post-campaign. People that were confused about AMR prior to the campaign acquired more knowledge after the campaign (OR = 3.10, 95 % CI: 1.36-7.09). 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.

**Conclusion:** This study demonstrated that the campaign increased commitment to tackling AMR in both healthcare professional and member of the public, increased self-reported knowledge and changed self-reported behaviour particularly among people with prior AMR awareness. 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.

**Keywords:** Public health, Campaign evaluation, Behavioral medicine, Pledge scheme, Behaviour change, Health promotion, Health campaign, Implementation intentions, Antibiotic resistance

\* Correspondence: katerinachaintaril@gmail.com

<sup>1</sup>Field Epidemiology Service, Public Health England, Bristol, UK

<sup>2</sup>Health Protection Research Unit in Evaluation of Interventions, School of

Social and Community Medicine, University of Bristol, Bristol, UK

Full list of author information is available at the end of the article



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- 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)

## Evaluation of the Antibiotic Guardian Campaign 2014

### Welcome

Thank you for choosing a pledge on [www.antibioticguardian.com](http://www.antibioticguardian.com) and becoming an Antibiotic Guardian. There are now over 12,500 Antibiotic Guardians.

We are inviting Antibiotic Guardians to complete this survey. Your answers will help us understand better what people think about the campaign and antibiotics and will help us improve our understanding in helping make it easier for you to meet your pledges.

Antibiotic Guardian is a year-round campaign; your feedback will help us improve the campaign. The publication of the evaluation will be shared with the Antibiotic Guardians.

We would be most grateful if you would complete the questionnaire in one sitting. It takes approximately 10 min to be completed. The information that we collect will be treated with the strictest confidence and is securely kept.

Thank you for taking the time to complete this questionnaire.

We would be grateful if you could complete the questionnaire by Tuesday 10th February.

European Antibiotic Awareness Day (EAAD) Planning Group  
Antibiotic Guardian Campaign 2014  
Public Health England

### Antibiotic Guardian Pledge

1. Did you pledge as a:\*

- ☐ Healthcare professional
- ☐ Member of the public

2. Specifically, did you pledge as a:

Please tick one

- ☐ Primary Care Prescriber
- ☐ Secondary Care Prescriber
- ☐ Antimicrobial/Infection Prevention and Control Specialist
- ☐ Nurse
- ☐ Pharmacy Team
- ☐ Dentist
- ☐ Non-Medical Prescriber
- ☐ Other Healthcare Worker (e.g. Podiatrists, chiropodists, radiographers, therapists, social workers)
- ☐ Veterinary Practitioner
- ☐ Executive/Management/Government/Commissioner/Public Health
- ☐ Student

3. Specifically, did you pledge as:

Please tick one

- ☐ Adult
- ☐ Family
- ☐ Pet owner
- ☐ Farmer
- ☐ Student

# QUESTIONNAIRE RESULTS

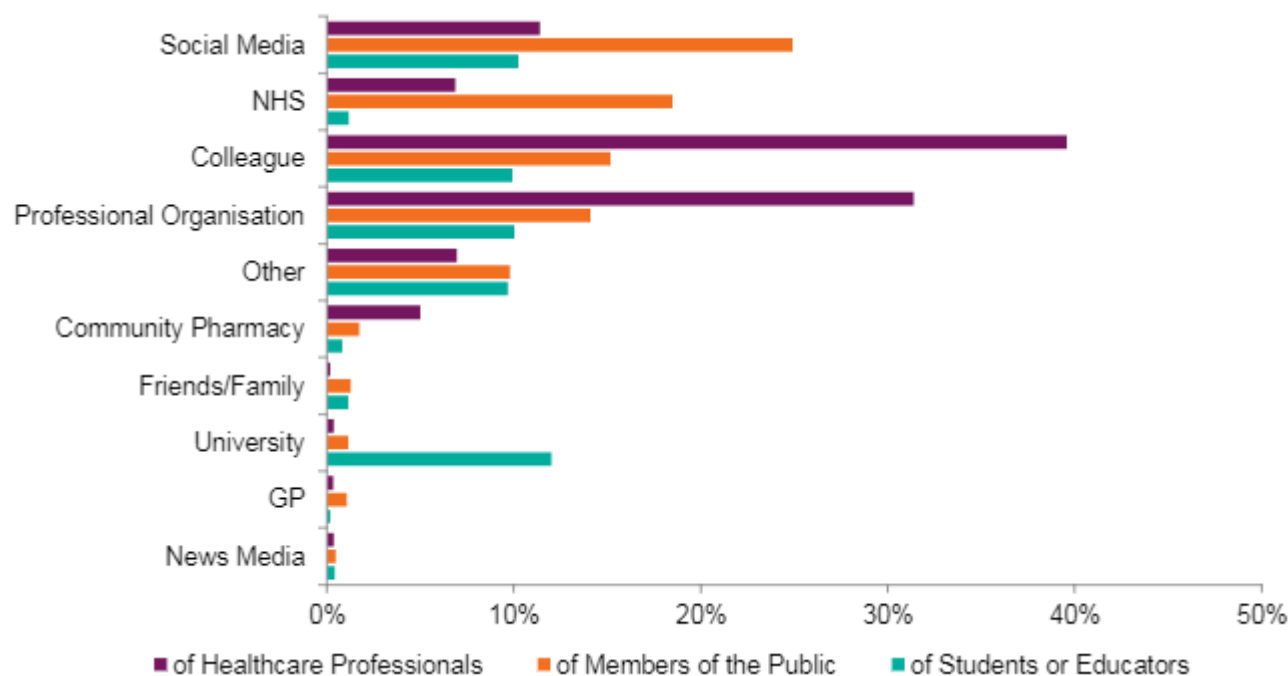
- 2,478 Antibiotic Guardians responded – a 21% response rate.
  - 1,696 pledged as healthcare professionals (68%)
  - 782 pledged as members of public (32%)
- These proportions are similar to that of the total population of 11,833 Antibiotic Guardians.
- 76.9% were connected to the healthcare system.
- 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.

# QUESTIONNAIRE RESULTS

- 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.



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

How Antibiotic Guardians reported hearing of the AG  
campaign in season 2, n=12,821.

# 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



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# ANTIBIOTIC GUARDIAN TWITTER ANALYTICS

## The #AntibioticGuardian Influencers

### Top 10 by Mentions

	@phe_uk 9,645
	@drdianeashiru 3,135
	@rpharms 678
	@nhschoices 587
	@nhsengland 555
	@antibioticleeds 444
	@wenurses 315
	@sepsisuk 312
	@cppeengland 306
	@eaad_eu 300

### Top 10 by Tweets

	@drdianeashiru 2,066
	@4allofusclub 302
	@antibioticleeds 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
	@wenurses 810,610

## The Numbers

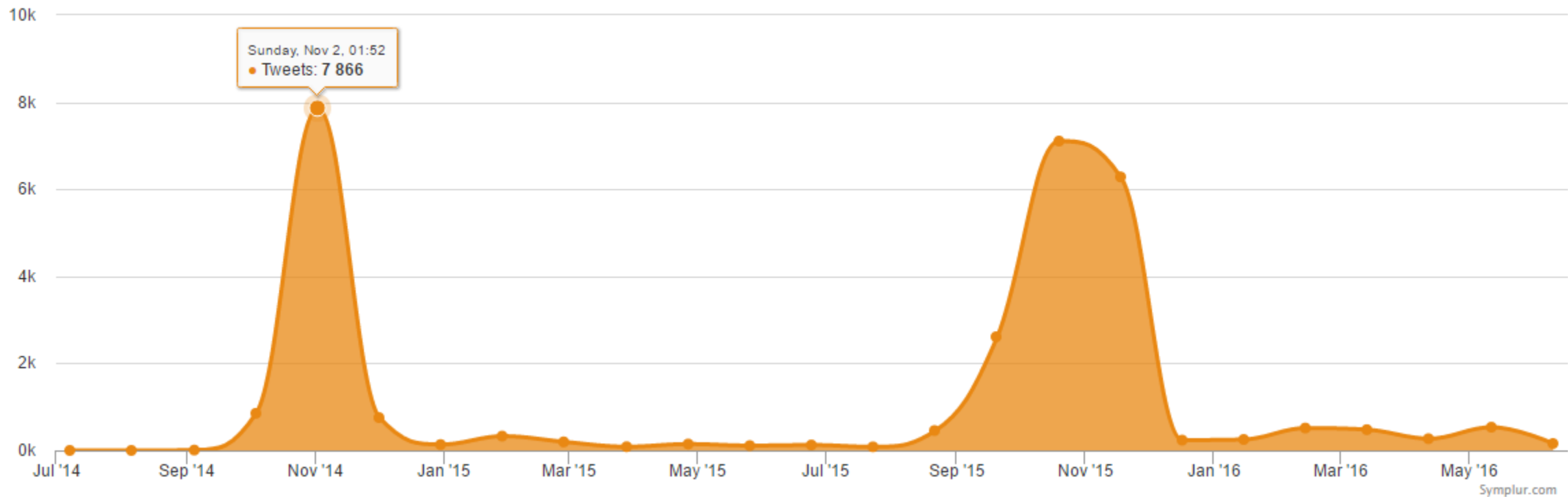
63,163,252 Impressions

29,590 Tweets

10,074 Participants

2 Avg Tweets/Hour

3 Avg Tweets/Participant



## 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

	@eaad_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 2,386,987
	@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

## The Numbers

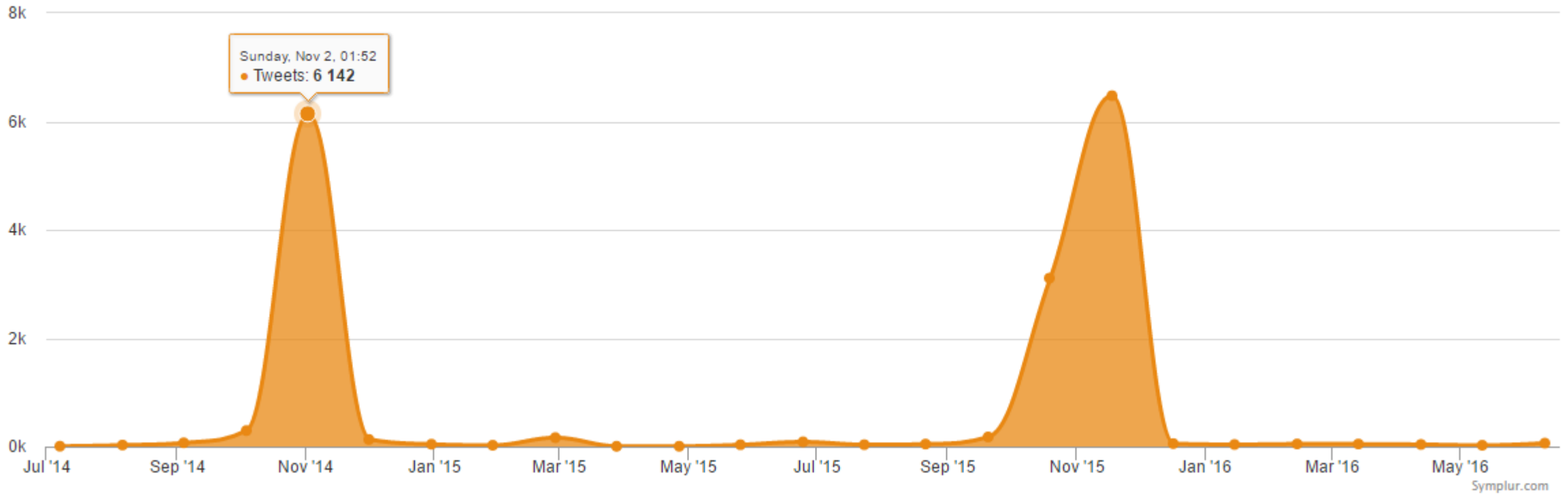
45,206,171 Impressions

17,193 Tweets

6,691 Participants

1 Avg Tweets/Hour

3 Avg Tweets/Participant




## TWEET ACTIVITY ON #EAAD

Efforts were again concentrated around November of each year to promote *World Antibiotic Awareness Week* and *European Antibiotic Awareness Day*.



**THUNDERCLAP**[CASE STUDIES](#)[START A THUNDERCLAP](#)

English  [Login / Register](#)

## Antibiotic Guardian

by **Optical Confed.** category: **Health**

**“Primary care optometrists are committed to safe prescribing-supporting #AntibioticGuardian <http://thndr.me/IIgLGK>”**



**Optical Confed.**

EMBED</>

SUPPORTERS  
**7 of 100**  
7% of goal supported

SOCIAL REACH  
**45,083**  
People

TIME LEFT  
**Complete**  
Ends Nov 30, 11:00 AM GMT

**COMPLETE**

This campaign ended on **November 30 at 11AM**



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- A thunderclap is a platform that helps to get a specific message out, creating a “wave of attention” at a predetermined time.

## INFLUENTIAL SOCIAL MEDIA SUPPORTERS:





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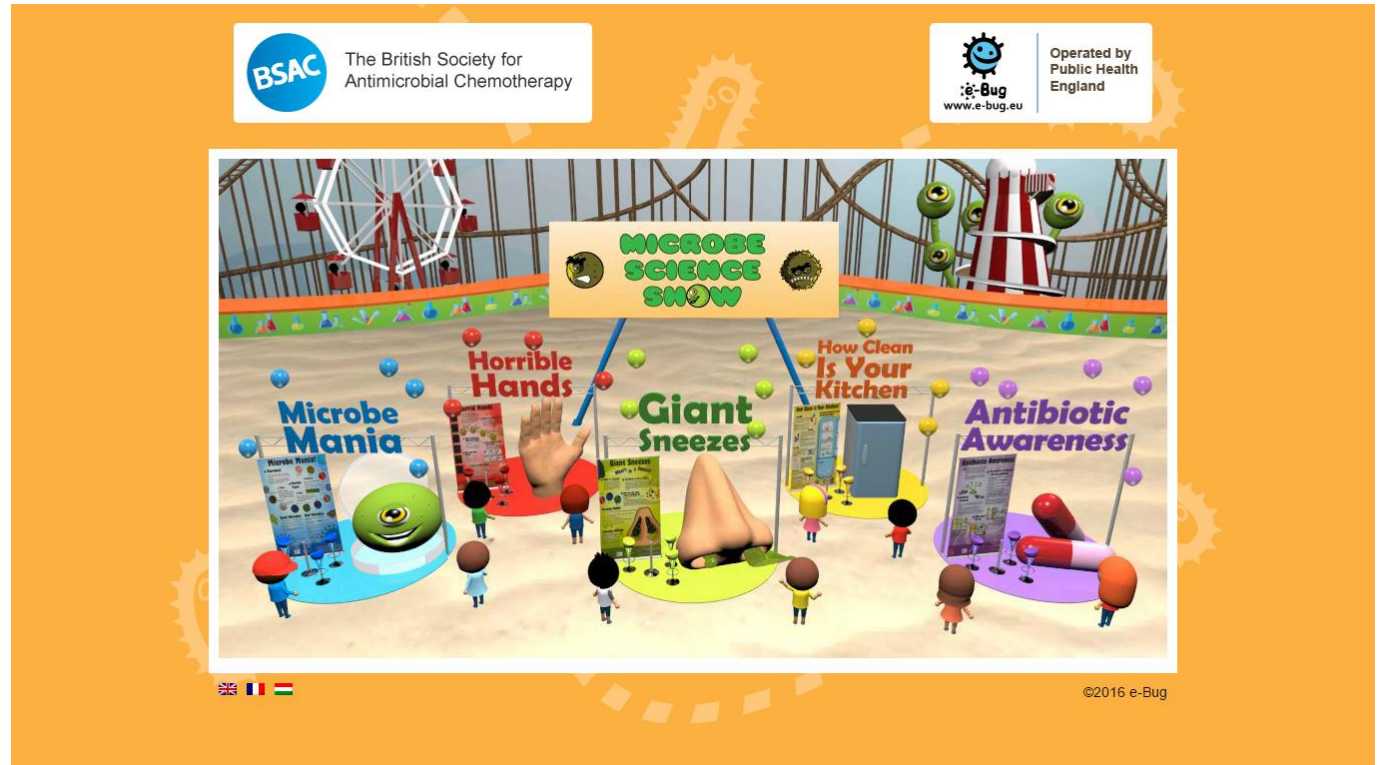
# FURTHER RESOURCES

# 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.



These include:

- ☆ Lesson plans
- ☆ Worksheets
- ☆ Presentations
- ☆ 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.



These include:

- ☆ 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)



[www.e-bug.eu/beat-the-bugs](http://www.e-bug.eu/beat-the-bugs)

Follow us on  
twitter!  
@eBug\_UK





## The Antibiotic Guardian Quiz

Winter is coming...

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

- ☐ since these are mostly caused by viruses, which antibiotics do not work against
- ☐ but antibiotics sometimes work against viruses, so I should take them just in case
- ☐ however antibiotics work against everything

**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 are 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 older 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 Caesarean sections 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 done to see the answers!](#)

Done

[Antibiotic Guardian](#), led by Public Health England, is a UK-wide campaign to promote the prudent use of antimicrobials.

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](http://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](http://antibioticguardian.com).
- It won the “Community” section of the Antibiotic Guardian Awards 2016.

Devon County Council  News centre Pinpoint a to z help


## news centre

Home Business and Economy Community Education Environment Health and Wellbeing Politics 28 Jul 2016

### Listen to your Gut campaign launched to tackle antibiotic misuse


Posted on: 12 November 2015

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 Branton and Ilfracombe Children's centre, which saw the development of a social media campaign consisting of an animation of 'talking tums'. These tums 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 (CCG), the guides are designed to support people treating their children's minor



### Related news

- [Annual Public Health Report focuses on fairness, equality and justice](#)
- [Fair deal demanded for Devon on health spending](#)
- [Another successful year for team fighting domestic violence in Devon](#)
- [Buses upgraded on Service 309/310 in North Devon](#)
- [Antibiotic awareness campaign receives national award](#)

# 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!

[TAKE THE QUIZ](#)



Public Health  
England

- Contains information on unwanted side effects of antibiotics

This quiz could help your child. True or False?

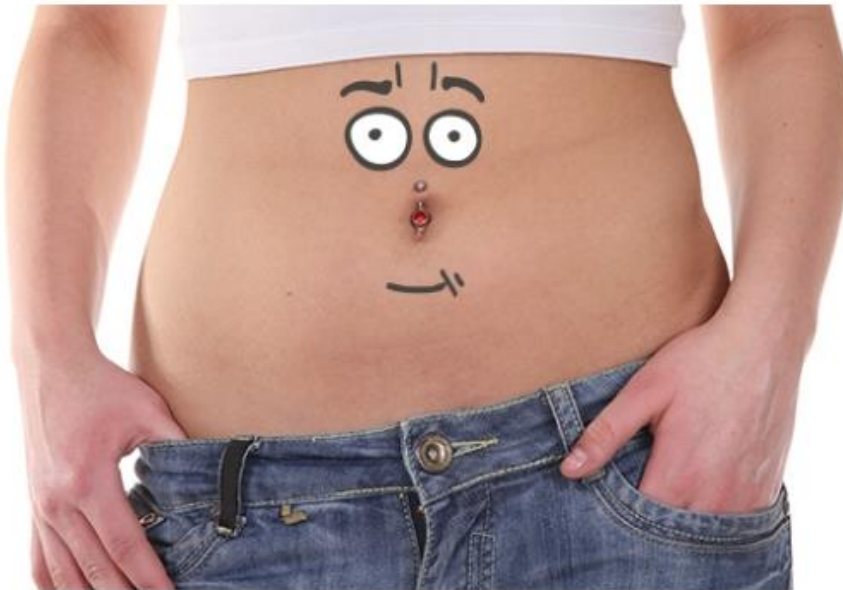
Get started



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!



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- The integrated quiz reinforces learned information in an interactive way

Menu ▾

## Guidance

### Antibiotic awareness resources: toolkit for healthcare professionals in England

From: Public Health England  
 First published: 3 November 2014  
 Last updated: 6 October 2015, [see all updates](#)  
 Part of: Antibiotic awareness resources: 2016 and Antimicrobial Resistance (AMR)

How to use antibiotic awareness resources to support the Antibiotic Guardian campaign and local initiatives.

## Documents

[EAAD: resources toolkit for healthcare professionals in England](#)

Ref: PHE gateway number 2014483  
 PDF, 2.95MB, 32 pages

This file may not be suitable for users of assistive technology. [Request an accessible format.](#)

[EAAD: NHS supply chain print ordering codes](#)

Ref: PHE gateway number 2014483  
 PDF, 1.57MB, 13 pages

This file may not be suitable for users of assistive technology. [Request an accessible format.](#)

## Detail

Guidance to help the NHS, local authorities and others support European Antibiotic Awareness Day and the Antibiotic Guardian campaign, to encourage responsible use of antibiotics. Use the NHS supply chain print codes to order printed copies of resources such as leaflets and checklists.

# RESOURCES FOR HEALTHCARE PROFESSIONALS

- 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>



Public Health  
England

# FUTURE PLANS

# EVENTS

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

## Upcoming Meetings

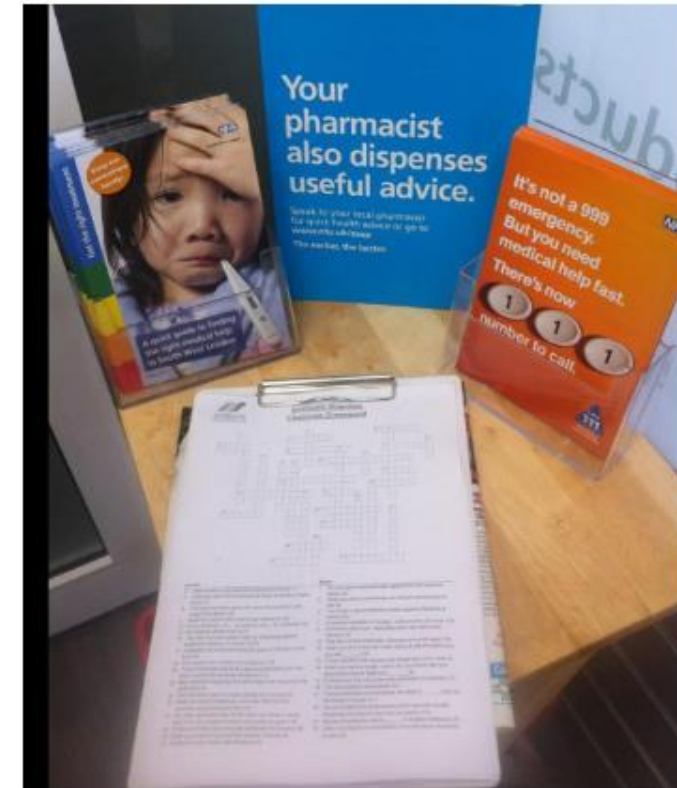
21 SEPTEMBER 2016	<b>Antibiotic Guardian, Leeds: Implementing local action plans to tackle antimicrobial resistance</b> <small>Antibiotic resistance is one of the biggest threats facing us today! European Antibiotic Awareness Day (EAAD) is part of the UK ... <a href="#">Continued</a></small>	>
28 SEPTEMBER 2016	<b>Antibiotic Resistance and You!</b> <small>University Place, University of Manchester, Oxford Road, M13 9PL Antibiotic resistance affects you, but do you know how? Come and join in the ... <a href="#">Continued</a></small>	>
23 NOVEMBER 2016	<b>Antibiotic Guardian, London: Implementing local action plans to tackle antimicrobial resistance</b> <small>Antibiotic resistance is one of the biggest threats facing us today! European Antibiotic Awareness Day (EAAD) is part of the UK ... <a href="#">Continued</a></small>	>

# 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.

# BADGE MISSIONS FOR HEALTHCARE STUDENTS AND YOUNG CHILDREN

- 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.makewav.es/badge/4163>

**makewaves** Join Badges Teacher Help Search Login



Start this badge mission

### Junior Antibiotic Guardian

To earn this badge and become a Junior Antibiotic Guardian; you need to showcase your knowledge of Antibiotics and Antibiotic Resistance. This is part of activities for WHO's World Antibiotic Awareness Week and European Antibiotic Awareness Day in November of each year

More by School Nurses

Tags for this badge

Age 7-11 Age 11-14  
Age 14-16  
Health & Wellbeing  
Age 4-7

Badge Mission Showcase

#### Task 1 | e-Bug Games or Debate Kit

For this task, you should either complete e-Bug games or host/participate in a debate using the e-Bug Antibiotic debate kit. You should upload your evidence as described in your age category.

Complete super fun e-Bug Games using the link below. To evidence your work you should collect 2 e-Bug bots by gaining at least 500 coins. Upload a screenshot of your coins or e-Bug bots.

Games for junior students (aged under 11) – [Click Here](#)

e-Bug Antibiotic debate kit for senior students (11+) [Click Here](#)

For this task, you should host or participate in a debate using the e-Bug Antibiotic debate kit – To evidence your work, take a photo or video of your debate.

# 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.makewav.es/badge/4164>

**makewaves** Join  Badges Teacher Help Search  Login



Start this badge mission

### Family Antibiotic Guardian

Take part in World Antibiotic Awareness Week and European Antibiotic Awareness Day activities by earning this Digital Badge as a family.

Badge Mission Showcase

#### Task 1 | How do germs spread?

Watch the [e-Bug video](#) and complete the e-Bug spread of germs activity in small groups. The spread of germs activity can be carried out with glitter, instead of the special gel used in the video.

Create a story on Makewaves that demonstrates what you learned and submit this as evidence.

Your story could include a video to help others understand how germs spread, informative text following your experiment or a series of photographs showing what you tested and what you discovered.

Adults download free [KS1](#) resources [here](#) and [KS2](#) resources [here](#).

If you would like to explore these resources further, you could take and earn your the [School Nurse Flu Fighters 1](#) badge

#### Task 2 | Washing Your Hands

# HEALTHCARE STUDENT CHAMPION

## ■ 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>



The screenshot shows the 'Antibiotic Guardian Champion' badge page. On the left is a dark blue sidebar with the OBA logo, 'Badge Library', 'Academies', a 'Login' button, a red 'Sign up' button, and links for 'Features & Updates', 'Support & Packages', and 'More Information'. The main content area has a 'Start' button, social media icons for Facebook, Twitter, and LinkedIn, and the badge's circular logo which features two hands holding a pill. To the right of the logo, it says 'Antibiotic Guardian Champion', 'Description Needed', and 'Issuer: Know Your Health'. Below this are tabs for 'Badge Mission' (selected) and 'Showcase'. Under 'Badge Mission', there is a section for 'Task 1 | Become an Antibiotic Guardian' with a 'Task' heading. The task description says 'Register to lead an activity during World Antibiotic Awareness Week. Examples include:' followed by a bulleted list of activities.

OBA

Badge Library

Academies

Login

Sign up

Features & Updates

Support & Packages

More Information

Start

Antibiotic Guardian Champion

Description Needed

Issuer: Know Your Health

Badge Mission

Showcase

Task 1 | Become an Antibiotic Guardian

Task

Register to lead an activity during World Antibiotic Awareness Week. Examples include:

- Setting up a stand (during fresher's fair)
- Showing the Antibiotic Guardian video and website pre-lectures and encouraging students to pledge (seek permission from lecturer first) – video is 2 minutes and pledging takes less than 4 minutes
- Giving a presentation (e.g. pre-lecture)
- Contact the school nurse in your local school and jointly educate children? OR interview the school nurse and Submit a video of your interview or joint activity; Record it as a podcast using the OBA App OR Write up the questions and answers with photos about what they said in the interview and what you learned about health services.
- Promoting their campaign (with presentation)

# 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](http://www.antibioticguardian.com).
- Inkling London ([www.inklinglondon.com](http://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.