A toolkit designed to support you or your organisation in engaging with members of the public on AMR
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What is the purpose of this toolkit?

The aim of this toolkit: to provide Public Health England centres and voluntary organisations with a compilation of resources to improve public engagement on antimicrobial resistance (AMR).

The toolkit contains: key messages on AMR, frequently asked questions (FAQs), resources and examples of AMR related public engagement activities.

Resources include: posters, leaflets, quizzes and worksheets. Either written information or images are displayed on each of the slides, with a link to the website provided in the “resources” box on each of the slides. You can click on each of the links to access the resource.

How you could use sections of the resource (depending on the audience) within your organisation:

- Exhibit resources at public events
- Distribute to members of the public and organisations via e-mail, bulletins, newsletters
- Promote resources and key messages via social media i.e. on Facebook and Twitter
- Send resources to relevant groups i.e. e-Bug resources to young people’s organisations and children’s centres
- Distribute to GP Patient Participation Groups
- Display posters and leaflets in public libraries
Key messages on AMR
What is antibiotic resistance?

Antimicrobial resistance happens when microorganisms (such as bacteria, fungi, viruses, and parasites) change when they are exposed to antimicrobial drugs (such as antibiotics, antifungals, antivirals, antimalarials, and anthelmintics). Microorganisms that develop antimicrobial resistance are sometimes referred to as “superbugs”.

Antibiotic resistance refers specifically to the resistance to antibiotics that occurs in common bacteria that cause infections.

Resource: click below to access the resource
Health Matters: antimicrobial resistance
WHO: Antimicrobial Resistance
What is antibiotic resistance, and why should we care?
What do we need to know?

- Antibiotics are essential medicines for treating bacterial infections in both humans and animals.

- Antibiotics are losing their effectiveness at an increasing rate.

- Bacteria can adapt and find ways to survive the effects of an antibiotic. They become ‘antibiotic resistant’ so that the antibiotic no longer works. The more you use an antibiotic, the more bacteria become resistant to it.

- Antibiotics should be taken as prescribed, never saved for later or shared with others; it is important we use antibiotics in the right way, the right drug, at the right dose, at the right time for the right duration. Appropriate use of antibiotics will slow down the development of antibiotic resistance.

- There are very few new antibiotics in the development pipeline, which is why it is important we use our existing antibiotics wisely and make sure these life-saving medicines continue to stay effective for ourselves our children and grandchildren.

- Many antibiotics are prescribed and used for mild infections when they don’t need to be. All colds and most coughs, sinusitis, otitis media (earache) and sore throats get better without antibiotics.

- Community pharmacists are well placed to help provide advice on over the counter medicines to treat symptoms and help with self-care.

Resource: click below to access the resource

Antibiotic Awareness Key Messages
NHS Choices- Antibiotics
Impact of AMR nationally and locally

1 in 3 patients in hospitals in England are on an antibiotic at any one time.

1 in 3 individuals in England takes at least one course of antibiotics each year.

25,000 people die each year in Europe as a result of hospital infections caused by 5 key resistant bacteria.

GLOBAL: A failure to address the problem of antibiotic resistance could result in:

10m deaths by 2050

Costing £66 trillion

Resource: click below to access the resource

Health Matters: Antimicrobial Resistance
There are a number of reasons why antibiotic resistance occurs:

1. Over-prescribing of antibiotics
2. Patients not finishing their treatment
3. Over-use of antibiotics in livestock and fish farming
4. Poor infection control in hospitals and clinics
5. Lack of hygiene and poor sanitation
6. Lack of new antibiotics being developed
Read the blog to find out more about why you should be worried about antibiotic resistance

9. We have to save our surgery
None of us want to think about getting ill or having a serious operation but we all understand that surgery can save lives. But complex surgery brings with it the risk of infection. Take heart bypass operations or joint replacements for instance – if we don’t have antibiotics these procedures designed to help people and ease suffering could actually lead to many more deaths caused by bacterial infections.

Resource: click below to access the resource
- 10 reasons why you should care about antibiotic resistance
- 7 more reasons why you should care about antibiotic resistance
### Why do we need to educate different groups on AMR?

| Women          | • Women are 27% more likely than men to receive an antibiotic in their lifetime  
|                | • The amount of antibiotics prescribed to women was 36% higher than prescribed for men in the 16 to 34 years ago group and 40% greater in the 35 to 54 years age group  
|                | • Women consult their general practitioners more frequently than men  
|                | • Urinary tract infections (UTIs) are more common in women than in men |
| Parents and Children | A significant number of prescriptions for antibiotics are obtained by parents for their children  
|                | In 2008, it was noted that in the UK, there are around 6 million antibiotic prescriptions for children each year |
| The elderly    | A higher use of antibiotics in the elderly population has been documented |
| Cancer patients | Cancer treatments increase the risk of getting an infection, so antibiotics are an essential part of treating cancer patients.  
- Many cancer patients need antibiotics during all stages of their treatment (surgery, radiotherapy, chemotherapy) |
| People with cystic fibrosis | People with cystic fibrosis are more likely to get chest infections, which can result in complications and even death. For this reason, antibiotics are an essential part of looking after cystic fibrosis patients |
| People with diabetes | Diabetes can increase the risk of infection, so antibiotics are an essential part of caring for diabetes patients |
| People with urinary tract infections (UTIs) |  
- Urinary tract infections can cause serious problems, so antibiotics are an essential part of treatment  
- If left untreated, UTIs can lead to complications such as blood poisoning and kidney failure  
- More and more bacteria that cause UTIs are resistant to the most commonly used “first-line” antibiotics. Infection by resistant bacteria can result in serious illness, leading to longer hospital stays and more complex treatments with more harmful side-effects |
| Black and Minority Ethnic communities | • History of travel (particularly to the Indian subcontinent) is correlated with a higher risk of colonisation with antibiotic-resistant bacteria  
• There is some evidence that ethnic variation in diet could influence the risk of developing an antimicrobial-resistant infection |
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Young people</td>
<td>Research has shown that a significant number of 15-24yr olds take antibiotics that are obtained without prescription (given to them by other people, previously unfinished courses, purchased abroad etc.)</td>
</tr>
<tr>
<td>Pet owners</td>
<td>Antibiotics are vital to treat disease in animals as well as humans. Pets can also fall victim to antibiotic-resistant superbugs like MRSA, and for the same reasons (i.e. misuse and overuse of antibiotics)</td>
</tr>
</tbody>
</table>
For further information on national and global efforts to tackle AMR, have a read of one of the reports below:

**Resource: click below to access the resource**

UK 5 Year Antimicrobial Resistance Strategy 2013-18

The Review on Antimicrobial Resistance
Infection prevention and control
Did you know that you could prevent infections by taking some very simple steps?

Washing hands helps to fight superbugs

Friday May 4 2012

A national hand hygiene campaign “cut superbug infections,” according to BBC News. The BBC and other news outlets have reported the success of a hand-washing campaign in cutting infection rates in hospitals.

The headlines stem from a study of hand-washing practices at 187 NHS trusts in England and Wales between 2004 and 2008. The Clean Your Hands campaign was introduced in 2004 and this study looked at its effects.

Levels of MRSA and C. difficile infections in hospitals have fallen

NICE highlights how hand washing can save lives

Thursday April 17 2014

“Doctors and nurses should do more to stop hospital patients developing infections, an NHS watchdog says,” BBC News reports.

The National Institute for Health and Care Excellence (NICE) has highlighted how basic hygiene protocols, such as hand washing, may be overlooked by some health professionals, which may threaten patient safety.

Hand washing can help prevent the spread of infection

Resource: click below to access the resource

Your Role in Infection Prevention

Infection Prevention, Patients and Public Role

Infection prevention and control is commonly described as everyone’s responsibility. NHS members work across health and social care to make sure the right practices take place at the right time to keep patients, visitors and staff safe. As a patient or member of the public it’s important to make sure you’re aware of information that is available to you, to exemplify your local hospital, or the role you can play in infection prevention and control.

This information might cover the following important topics (note this list is not exhaustive):

Hand Hygiene

Hand hygiene at the right times is essential for safety – find out more about hand hygiene and the role you can play.

Visiting Hospital

Hospitals provide advice to the public on visiting during outbreaks and/or when you yourself may be suffering from certain infections – check your local hospital advice or contact relatives or loved ones if you are at all unsure.

Admission to Hospital

Before going into hospital you may be provided with advice and information on infection control; you can ask your local hospital.
Stay Well All Year Round

Flu - Prevention

Overview Clinical trials
Seasonal flu Symptoms Treatment Complications Prevention

Preventing flu
There are three main ways of preventing flu: the flu vaccination, good hygiene (such as handwashing and cleaning) and antiviral medication.

The flu vaccine
The annual flu vaccine can help reduce your risk of getting flu each year, although it's not 100% effective because it doesn't work against every possible type of flu virus.

Good hygiene
To reduce your risk of getting flu or spreading it to other people, you should always:

- make sure you wash your hands regularly with soap and warm water
- clean surfaces such as your keyboard, telephone and door handles regularly to get rid of germs
- use tissues to cover your mouth and nose when you cough or sneeze
- put used tissues in a bin as soon as possible

Read more about preventing the spread of germs.

Resource: click below to access the resource

Flu Prevention
10 Winter Illnesses
Learn how to protect yourself from gastroenteritis

Diarrhoea and vomiting (gastroenteritis)

Gastroenteritis is a very common condition that causes diarrhoea and vomiting. It's usually caused by a bacterial or viral tummy bug. It affects people of all ages, but is particularly common in young children.

Most cases in children are caused by a virus called rotavirus. Cases in adults are usually caused by norovirus (the "winter vomiting bug") or bacterial food poisoning.

Gastroenteritis can be very unpleasant, but it usually clears up by itself within a week. You can normally look after yourself or your child at home until you're feeling better.

What to do if you have gastroenteritis

If you experience sudden diarrhoea and vomiting, the best thing to do is stay at home until you're feeling better. There's not always a specific treatment, so you have to let the illness run its course.

You don't usually need to get medical advice, unless your symptoms don't improve or there's a risk of a more serious problem (see When to get medical advice).

To help ease your symptoms:

- **Drink plenty of fluids to avoid dehydration**—You need to drink more than usual to replace the fluids lost from vomiting and diarrhoea. Water is best, but you could also try fruit juice and soup.
- **Take paracetamol** for any fever or aches and pains.
- **Get plenty of rest**
- **If you feel like eating**, try small amounts of plain foods, such as soup, rice, pasta and bread.
- **Use special rehydration drinks**—if you have signs of dehydration, such as a dry mouth or dark urine — read about treating dehydration.
- **Take anti-vomiting medication** (such as metoclopramide) and/or antidiarrhoeal medication (such as loperamide) if you need to — some types are available from pharmacies, but check the leaflet that

Symptoms of gastroenteritis

The main symptoms of gastroenteritis are:

- sudden, watery diarrhoea
- feeling sick
- vomiting, which can be projectile
- a mild fever

Resource: click below to access the resource

Diarrhoea and vomiting (gastroenteritis)
The importance of vaccinations

Who should have the flu jab?

Flu is an unpredictable virus that can cause mild or unpleasant illness in most people. It can cause severe illness and even death among vulnerable groups including older people, pregnant women and people with an underlying health condition.

Certain people are more likely to develop potentially serious complications of flu, such as bronchitis and pneumonia. These people are advised to have a flu jab each year.

For otherwise healthy people, flu can be very unpleasant. Most people will recover from flu within a week or two.

Resource: click below to access the resource

10 myths about flu and the flu vaccine

Health matters: giving every child the best start in life
Find out more about how you can prevent Urinary Tract Infections (UTIs)

Dehydration - Prevention

Preventing dehydration

You should drink plenty of fluids to avoid becoming dehydrated.

Most of the time, you can prevent dehydration by drinking water regularly throughout the day. Be guided by your thirst, but be aware that in hot weather, when exercising and during illness, you should drink more.

Mild dehydration can be relieved by drinking more water and diluted fruit squash. If necessary, you can purchase oral rehydration solutions (ORS) from a pharmacy. As a guide, passing pale or clear-coloured urine (wee) is a good sign that you’re well hydrated.

Preventing UTIs

If you get UTIs frequently, there are some things you can try that may stop it coming back. However, it’s not clear how effective most of these measures are.

These measures include:

- avoiding perfumed bubble bath, soap or talcum powder around your genitals – use plain, unperfumed varieties, and have a shower rather than a bath
- going to the toilet as soon as you need to pee and always emptying your bladder fully
- staying well hydrated
- wiping your bottom from front to back when you go to the toilet
- emptying your bladder as soon as possible after having sex
- not using a contraceptive diaphragm or condoms with spermicidal lubricant on them – you may wish to use another method of contraception instead
- wearing underwear made from cotton, rather than synthetic material such as nylon, and avoiding tight jeans and trousers
Did you know that an infection can be prevented simply by breaking up one of the links?

The chain of infection
Click to learn more about each link in the chain of infection.

Susceptible person
Source of germs: people, food, pets
Way in: mouth, nose, eye, cuts
Way out: feces, saliva, cough, sneeze
Spread of germs: hands, surfaces, clothing

If you remove one link in the chain then spread of infection can’t happen.

“Every infection prevented means fewer antibiotics used”

Resource: click below to access the resource
Breaking the Chain of Infection: Preventing Spread of Infection in Home and Everyday Life

Beating E.coli- what are you doing to break the chain of infection?

Antimicrobial Resistance: Resource Handbook
Preventing infections with food hygiene

How to prepare and cook food safely

Studies show that the kitchen contains the most germs in the home. One study found that the kitchen sink contains 100,000 times more germs than the bathroom.

Washing hands

Our hands are one of the main ways that germs are spread, so it’s important to wash them thoroughly with soap and warm water before cooking, after touching the bin, going to the toilet, and before and after touching raw food.

Resource: click below to access the resource

How to prepare and cook food safely

10 ways to prevent food poisoning
Leaflets and posters
There are a number of leaflets available for healthcare professionals to share with patients in order to improve their confidence to self care.

These could be shared to improve people’s knowledge and understanding of the duration of symptoms, as well when to visit the GP.

Available in:
Albanian, Arabic, Bengali, Cantonese, French, Greek, Gujarati, Hindi, Hungarian, Mandarin, Polish, Romanian, Somali, Spanish, Turkish, Urdu, Welsh.
Managing your infection

A step by step guide on how to manage your infection

Self-care steps
Step 1: How to help make yourself better
Step 2: Check how long your symptoms last
Step 3: Look out for serious symptoms
Step 4: Where to get help

Step 1: How to help make yourself better
Whatever your infection, you can do the following to help:
- Paracetamol can be taken to help reduce a fever. Always follow instructions.
- Get plenty of rest until you feel better.
- Use tissues when you sneeze to help stop infections spreading.
- Wash hands to help stop infections spreading.
- Ask your pharmacist for advice on reducing your symptoms.
- Drink enough fluids to avoid feeling thirsty.

Step 2: Check how long your symptoms last

An ear ache usually lasts 4 days

<table>
<thead>
<tr>
<th>Day</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<tr>
<td>Days</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<td>7</td>
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A sore throat usually lasts 7 days

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<thead>
<tr>
<th>Day</th>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<tr>
<td>Days</td>
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<td>3</td>
<td>4</td>
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<td>6</td>
<td>7</td>
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A cold usually lasts 10 days

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<thead>
<tr>
<th>Day</th>
<th>1</th>
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<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<tbody>
<tr>
<td>Days</td>
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<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
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</table>

A cough usually lasts 21 days

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<thead>
<tr>
<th>Day</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
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<tbody>
<tr>
<td>Days</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
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</tbody>
</table>

If you are not starting to improve a little by the time given above then seek advice from your GP practice.
If you are feeling a lot worse phone NHS 111, NHS Direct Wales or NHS 24.

Step 3: Look out for serious symptoms
If you have an infection and develop any of the below symptoms then you should be assessed urgently by a doctor. Ring your GP practice or call NHS 111, NHS Direct Wales or NHS 24.

Severe headache
Skin is very cold
Trouble breathing

Feel confused
Chest pain

Problems swallowing
Coughing blood
Feeling a lot worse

If you have an emergency call 999 immediately.

Step 4: Where to get help

For more information visit the NAO Choices website: www.nhs.uk/
Visit summer illnesses get better without antibiotics. Find out how you can make better use of antibiotics by visiting www.antibiotics.com/

Resource: click below to access the resource
e-Bug: Managing Your Infection
Why not spread the word by displaying these posters and sending them to your networks?

Available in:
Arabic, Bengali, Simplified Chinese, Hindi, Polish, Portuguese, Punjabi, Slovak, Somali, Urdu

Resource: click below to access the resource

Get Well Soon Without Antibiotics

No Amount of Antibiotics
The campaign calls on everyone in the UK to become Antibiotic Guardians by simply choosing a pledge. Evaluation of the campaign has shown that it is effective for changing behaviour and increasing knowledge (self reported).

Have you signed up to become an Antibiotic Guardian?

How many people can you sign up to become an Antibiotic Guardian?

Resource: click below to access the resource

Antibiotic Guardian
Once you have printed out your Antibiotic Guardian certificate after signing up, you can print it and display it in a place of your choice.
You can also display posters at your workplace or in the community to promote the campaign.

Resource: click below to access the resource
Antibiotic Awareness Resources: Posters and Leaflets
You can test your antibiotics knowledge by completing a crossword or a quiz.
Resources for University Healthcare Students

Healthcare Students – Antibiotic Guardian Champion Badge

Become an Antibiotic Guardian Champion

As part of UK’s activities for World Antibiotic Awareness Week (WAAW) (14 – 20 November 2016) and European Antibiotic Awareness Day (18 November) we are inviting healthcare students and pre-registration professionals to become Antibiotic Guardian Champions. Earn your badge by completing the tasks via Open Badge Academy and sharing your evidence. You can add your badge to your LinkedIn account.

We also encourage you to share actively via social media using #AntibioticGuardian

University healthcare and pre-registration students can now earn virtual badges to add to their LinkedIn accounts

Resource: click below to access the resource
Healthcare Students: Antibiotic Guardian badge
The e-Bug website contains a number of games and activities that children can complete to improve their knowledge on antibiotics and preventing infections. e-Bug also has resources for teachers to use in classrooms.

Resource: click below to access the resource

e-Bug

e-Bug lesson packs
Junior pre and post questionnaires: to give to children before and after teaching them about AMR using the lesson packs

<table>
<thead>
<tr>
<th>Questionnaire 1</th>
<th>Student Name: First name.......................... Surname.......................... Class .......................</th>
</tr>
</thead>
</table>

**Tick whether you think each statement is true, false or don’t know**

<table>
<thead>
<tr>
<th>Microbe Mania</th>
<th>True</th>
<th>False</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>All microbes are bad/harmful</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bacteria and Viruses are the same thing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bread Mould is a type of microbe</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>All microbes are the same size</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Microbes only live in dirty places</td>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Horrid Hands</th>
<th>True</th>
<th>False</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washing hands with soap and water removes more microbes than water alone</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Washing hands can prevent the spread of disease</td>
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<tr>
<td>Microbes can spread onto your hand by just touching something</td>
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<td></td>
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<tr>
<td>Washing your hands in cold water is just as good as washing in warm water</td>
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<table>
<thead>
<tr>
<th>Super Sneezes</th>
<th>True</th>
<th>False</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>All sneezes contain microbes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Microbes in a sneeze can travel the length of a bus</td>
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<tr>
<td>Catching a sneeze with a tissue will stop the spread of microbes</td>
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<tr>
<td>There is no need to wash your hands after sneezing into them because microbes don’t live very long outside of the body</td>
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<table>
<thead>
<tr>
<th>Kitchen Mayhem</th>
<th>True</th>
<th>False</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>There can be harmful microbes on raw food</td>
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<tr>
<td>Meat is the only raw food to carry harmful microbes</td>
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<tr>
<td>Cooking food quickly is the best way to destroy harmful microbes</td>
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<tr>
<td>You only need to clean kitchen surfaces when they look dirty</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Meat and vegetables should be cut on different chopping boards</td>
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<table>
<thead>
<tr>
<th>Antibiotics</th>
<th>True</th>
<th>False</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antibiotics:</td>
<td>kill bacteria</td>
<td>kill viruses</td>
<td></td>
</tr>
<tr>
<td>The flu is caused by bacteria</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Most coughs and colds get better without antibiotics</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Bacteria are becoming resistant to antibiotics</td>
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<tr>
<td>You should keep any leftover antibiotics to treat infections in the future</td>
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<tr>
<td>Antibiotics also kill our good bacteria</td>
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<table>
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<tr>
<th>School</th>
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</table>
Senior pre and post questionnaires: to give to older children before and after teaching them about AMR using the lesson packs.

<table>
<thead>
<tr>
<th>Antibiotics</th>
<th>Kitchen Mayhem</th>
<th>Super Sneeze</th>
<th>Horrid Hands</th>
<th>Microbe Mania</th>
</tr>
</thead>
<tbody>
<tr>
<td>To treat coughs and colds we should:</td>
<td>The best way to destroy harmful microbes on food is:</td>
<td>Sneeze can travel:</td>
<td>We pick up microbes on our hands from:</td>
<td>The smallest microbe is:</td>
</tr>
<tr>
<td>Rest and take fluids</td>
<td>Cook food thoroughly</td>
<td>Only as far as we need to</td>
<td>Wash hands with warm water</td>
<td></td>
</tr>
<tr>
<td>Take antibiotics</td>
<td>To make sure food is cooked as possible</td>
<td>All the above</td>
<td>It doesn't matter which</td>
<td></td>
</tr>
<tr>
<td>Go to the hospital</td>
<td>To make sure food is warm before we eat it</td>
<td>All of the above</td>
<td>Objects that we touch</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Surfaces that we touch</td>
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<td>Other people</td>
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<td></td>
<td>All of the above</td>
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<tbody>
<tr>
<td>When taking antibiotics you should:</td>
<td>Harmful microbes can be found on:</td>
<td>Sneeze contains:</td>
<td>We pick up microbes on our hands from:</td>
<td>The smallest microbe is:</td>
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<tr>
<td>Stop when you feel better</td>
<td>Fruit and vegetables</td>
<td>Harmful microbes</td>
<td>Wash hands with warm water</td>
<td></td>
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<tr>
<td>Take the full course</td>
<td>All of the above</td>
<td>Useful microbes</td>
<td>It doesn't matter which</td>
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<td></td>
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<td>Objects that we touch</td>
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<td>Surfaces that we touch</td>
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<td>Other people</td>
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<td>All of the above</td>
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<thead>
<tr>
<th>Antibiotics</th>
<th>Kitchen Mayhem</th>
<th>Super Sneeze</th>
<th>Horrid Hands</th>
<th>Microbe Mania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bacterial resistance is caused by:</td>
<td>Yeast is used to make bread. Yeast is a:</td>
<td>Sneeze is used to make sneeze. Sneeze is a:</td>
<td>We pick up microbes on our hands from:</td>
<td>The smallest microbe is:</td>
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<td>Hospitals</td>
<td>Bacteria</td>
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<td>Wash hands with warm water</td>
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<td>Vaccinations</td>
<td>Fungi</td>
<td>All of the above</td>
<td>It doesn't matter which</td>
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<tbody>
<tr>
<td>Meat and vegetables should be:</td>
<td>The best way to stop microbes spreading is:</td>
<td>After we sneeze into our hands:</td>
<td>You need to wash your hands:</td>
<td>Most microbes are:</td>
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<td></td>
<td></td>
<td></td>
<td>To get rid of good microbes:</td>
<td>Can be seen:</td>
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<td>To use a tissue to cover your sneeze</td>
<td>Only with a microscope</td>
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<td>to take your sneeze</td>
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<td>to take your sneeze</td>
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</tr>
</thead>
<tbody>
<tr>
<td>Antacid</td>
<td>The best way to remove microbes is for:</td>
<td>We pick up microbes on our hands from:</td>
<td>The best way to remove microbes is for:</td>
<td>Most microbes can be seen:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Only with a microscope</td>
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<td>With the naked eye</td>
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<td>Never, they are invisible</td>
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</tbody>
</table>

**Questionnaire 1**

Please tick ONE answer for each question.

**Student name:**

**Surname:**

**Class:**

**Group:**

**Date:**

**Sign:**

**_Health England_**

**_Forest of Dean_**
Junior and Family Antibiotic Guardian

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.

Task 2 | I am a Junior Antibiotic Guardian

For this task, produce either a poster, presentation or video showcasing your knowledge on Antibiotics and Antibiotic resistance. Use the resources below to gather information for your piece of work. Once you have completed your research and poster/presentation/video, upload it as badge evidence. The title of your poster, presentation or video should be I am a Junior Antibiotic Guardian.

Take a look at some resources to help you along the way.

Senior Antibiotic Revision Guide

Extension challenge opportunity for task 2 - if you have had a session with your school nurse, include a comment, film with the School Nurse, highlight, image etc.

Family Antibiotic Guardian

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

Task 3 | Encourage 2 to 5 members of your family or family friends to become Antibiotic Guardians

For this task, watch the Antibiotic Guardian video with your parents/careers, grandparents, older siblings, uncles, aunts, family friends (you can also send them website names so they can watch from anywhere including their mobile devices). Encourage them to choose a pledge (promise) on the website and sign up to become Antibiotic Guardians.

Tell them to choose Junior/Family AG in the “how did you hear about us” section of the website.

For evidence, in the box below tell us how many adults you watched the video with or send links to and who they are.

For example: I watched the video with 3 adults - my mum, grandparents and older sister and I sent the link to 5 of my uncles and aunts/parents friends.

For additional evidence you can upload photographs of the adults holding their certificates, screenshots/printed picture.

Resource: click below to access the resource

Junior and Family Antibiotic Guardian
Resources for animal keepers
The Bella Moss Foundation provides an advice helpline for owners and clinicians, as well as educational resources for the public, including quizzes, hygiene tips and a new #BeatTheBugs video for families.

These guys might look cute - but antibiotic resistance is very real and very deadly.

Together we can #BeatTheBugs

Resource: click below to access the resource
Bella Moss Foundation
The Bella Moss Foundation- Survey for pet owners on antibiotic use
Leaflets on antibiotic use in animals

Make sure your antibiotics are working for you

To ensure the best possible outcome for your pet, it is really important that antibiotics are given correctly. Follow the simple tips below to make sure your pet's antibiotics work effectively and help your pet make a swift and full recovery:

- **Give the correct amount**
  As directed by your vet

- **Give at the correct time**
  If medication is to be given twice daily, give it at as close to 12-hourly intervals as you can, not at breakfast and tea time. Similarly, for three times daily, give at 8-hourly intervals.

- **Give for the correct length of time**
  Even if your pet seems to be better, don't stop before the end of the prescribed course.

- **Follow any specific instructions**
  For example, whether medication should be given with or without food.

- **Always go back to your vet for any scheduled recheck appointments**
  Your vet may wish to prescribe a longer course of antibiotics if the infection has not fully cleared.

Used incorrectly, antibiotics may contribute to the spread of antibiotic resistance.

For more information about antibiotic resistance go to [www.itisinfectious.co.uk](http://www.itisinfectious.co.uk) and for support with pet health visit [www.thebellamossfoundation.com](http://www.thebellamossfoundation.com)

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Hand washing guidelines

It's very important that you wash your hands thoroughly after touching pets.

- Washing your hands protects you, your family, and pets from unwanted bugs.

1. Wet your hands
2. Put on the soap – into your cupped hands if it’s a liquid
3. Clean them for 15 to 20 seconds
   - Palm to palm
   - Back of hands
   - Between the fingers
   - Finger tips
   - Thumbs and wrists
   - Nails
4. Rinse your hands thoroughly using running water
5. Dry using a clean towel or disposable paper one.

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Resource: click below to access the resource
Bella Moss Foundation: Posters and Surveys for Your Practice
Guidance for farmers on antibiotic use in farm animals

Resource: click below to access the resource
British Veterinary Association: Antimicrobials
Public engagement activities
Examples of public engagement activities to promote AMR

Ilfracombe Mums tums campaign targets overuse of antibiotics

An innovative new campaign has been launched in Ilfracombe which aims to help increase confidence in mums that they’re providing the right care for their children when they’re suffering from common illnesses such as cough and colds.

The Listen to Your Gut campaign has been developed for parents by parents in conjunction with Devon County Council’s Public Health Team and MyStart Children’s Centre in Ilfracombe, which is run by Action for Children.

The campaign aims to increase parents’ confidence in caring for a child with common illnesses such as a cold, cough, sore throat or ear ache. It includes a social media animation and guide on caring for an ill child.

The goal is to increase knowledge and understanding of how to care for an ill child and develop an understanding of antibiotics and their side effects, reducing demand for unnecessary antibiotics.

According to a review of GP practices in North Devon covering 63,000 patients, a quarter of patients received at least one prescription for antibiotics in the previous twelve months.

The review also showed that 25% of children under 10 were

Resource: click below to access the resource

Healthwatch Torbay Science Café

Mums tums campaign targets overuse of antibiotics

Listen to Your Gut video
Beat the Bugs is a six week community hygiene course aiming to increase awareness and change behaviour around antibiotic use. The course comprises of six sessions covering an Introduction to Microbes, Hand and Respiratory hygiene, Food hygiene, Oral hygiene, Antibiotics and a final session on self-care and action planning for the future.

Resource: click below to access the resource
E-Bug: Beat the Bugs Course
Frequently asked questions
FAQs

Q: What is antimicrobial resistance?

Antimicrobial resistance occurs when microorganisms such as bacteria, viruses, fungi and parasites change in ways that render the medications used to cure the infections they cause ineffective. When the microorganisms become resistant to most antimicrobials they are often referred to as "superbugs". This is a major concern because a resistant infection may kill, can spread to others, and imposes huge costs to individuals and society.

Antimicrobial resistance is the broader term for resistance in different types of microorganisms and encompasses resistance to antibacterial, antiviral, antiparasitic and antifungal drugs.

Antimicrobial resistance is facilitated by the inappropriate use of medicines, for example, when taking substandard doses or not finishing a prescribed course of treatment. Low-quality medicines, wrong prescriptions and poor infection prevention and control also encourage the development and spread of drug resistance. Lack of government commitment to address these issues, poor surveillance and a diminishing arsenal of tools to diagnose, treat and prevent also hinder the control of antimicrobial drug resistance.¹

Q: What is the difference between antibiotic and antimicrobial resistance?

Antibiotic resistance occurs when bacteria change in response to the use of antibiotics used to treat bacterial infections (such as urinary tract infections, pneumonia, bloodstream infections) making them ineffective.

Antimicrobial resistance is a broader term, encompassing resistance to drugs that treat infections caused by other microbes as well, such as parasites (e.g. malaria or helminths), viruses (e.g. HIV) and fungi (e.g. Candida)¹.

Reference: click below to access the resource

Q: What is fuelling antibiotic resistance?

A third of the public believe that antibiotics will treat coughs and colds. 1 in 5 people expect antibiotics when they visit their doctor. GPs commonly express concerns that they feel pressurised by patients asking for antibiotics. For example, people asking on behalf of a child to treat infections that don't respond to the drugs.

Antibiotic prescribing and antibiotic resistance are inextricably linked. Areas with high levels of antibiotic prescribing also have high levels of resistance.

Q: Why is antimicrobial resistance a global concern?

New resistance mechanisms are emerging and spreading globally, threatening our ability to treat common infectious diseases, resulting in prolonged illness, disability, and death.

Without effective antimicrobials for prevention and treatment of infections, medical procedures such as organ transplantation, cancer chemotherapy, diabetes management and major surgery (for example, caesarean sections or hip replacements) become very high risk.

Antimicrobial resistance increases the cost of health care with lengthier stays in hospitals and more intensive care required.

Antimicrobial resistance is putting the gains of the Millennium Development Goals at risk and endangers achievement of the Sustainable Development Goals.

References: click below to access the resource


Q: Who is prescribing?

- 74% General practice
- 11% Hospital inpatients
- 7% Hospital outpatients
- 5% Dental practices
- 3% Other community settings

Q: Does stopping a course of antibiotics early lead to antibiotic resistance?

There has been a lot of research into how long antibiotic courses should be, to determine the shortest possible length of course needed to completely kill all bacteria.

If you are being treated for an infection, the kind of antibiotics your doctor prescribes and the length of the course should be based on the best evidence.

If you stop treatment early, there is a risk the antibiotics won’t have killed all the bacteria that made you sick and that it will mutate and become resistant. This will not happen to everyone – the problem is that we don’t know who can safely stop treatment early.

By taking the full course prescribed by your doctor, even if you start to feel better earlier, you increase the chances of killing all of the bacteria and reduce the risk of resistance.

References: click below to access the resource


Q: Why do we need to act now?

Antibiotics are a vital tool for modern medicine. Not only for the treatment of infections such as pneumonia, meningitis and tuberculosis. We also need them to avoid infections during chemotherapy, caesarean sections and other surgery.

A failure to address the problem of antibiotic resistance could result in:

• an estimated 10 million deaths every year globally by 2050
• a cost of £66 trillion in lost productivity to the global economy

Global concern about antibiotic resistance is compounded by the fact that the discovery of new classes of antibiotics is at an all-time low. It has been 30 years since a new class of antibiotics was last introduced.

Only 3 of the 41 antibiotics in development have the potential to act against the majority of the most resistant bacteria⁴.

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References: click below to access the resource

# Acknowledgements

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
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<tbody>
<tr>
<td>Aliya Rajah, Diane Ashiru-Oredope, Karen</td>
<td>Public Health England</td>
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<td>Shaw, Isabel Boyer (lay member), Vicki</td>
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<td>Young, Fran Husson (lay member), Jane</td>
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<td>Binyon (lay member)</td>
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<tr>
<td>Samir Jeraj</td>
<td>Race Equality Foundation</td>
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<tr>
<td>Sally Bloomfield</td>
<td>Home Hygiene</td>
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<tr>
<td>Elaine Pendlebury</td>
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<tr>
<td>Grace O’Gorman</td>
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<tr>
<td>Tessa Jelen</td>
<td>Breathe Easy</td>
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<tr>
<td>Bev Taylor</td>
<td>National Association for Voluntary and Community</td>
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<tr>
<td>Fay Sandler</td>
<td>Healthwatch Central West London</td>
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<tr>
<td>Rosie Garland</td>
<td>Faith Action</td>
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<tr>
<td>Magna Aidoo</td>
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<tr>
<td>Lisa Ackerly</td>
<td>International Scientific Forum on Home Hygiene</td>
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