



# Antimicrobial Resistance



## Why is it such a problem?

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# Introductions

- Welcome / Registration / Housekeeping
- Intro to the IPC team
- Presentation / Activities
- Evaluation forms





# Objectives

- Intro to Antimicrobial resistance (AMR)
- Causes of AMR?
- How does AMR spread?
- AMR- the problem?
- Prevention and control
- What can we do to help?



# Introduction to AMR

According to the World Health Organisation (WHO),

antibiotic resistance is rising to dangerously high levels

in all parts of the world as new resistance mechanisms

are emerging and spreading globally.

Once bacteria become resistant against antibiotics, it becomes much more difficult to get an infection under control.

- <https://youtu.be/oMnU6g2djm4>

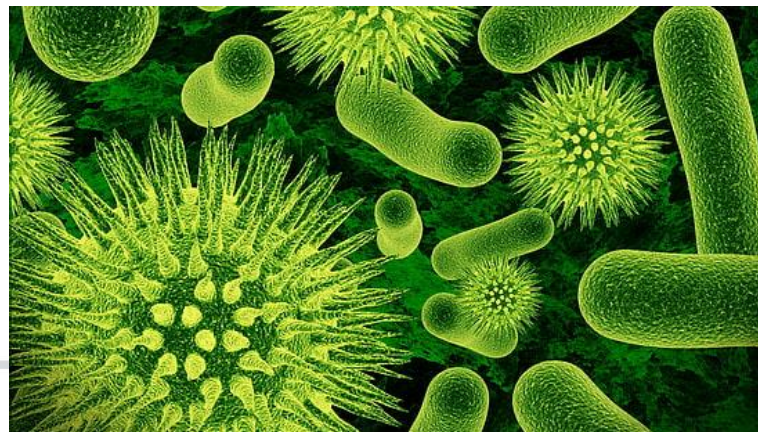


# Microbes

Microbes are living things that have only one cell in their entire body



Microbes are found virtually everywhere, they live in water, soil, and on the skin and in the digestive tracts of animals



# What are Useful Microbes?

Microbes produce waste products, and it is these waste products that can either be beneficial or harmful to humans.



# Good microbes

V's

# harmful microbes

GOOD  
BACTERIA

BAD  
BACTERIA

Probiotics help to restore the natural balance of bacteria in your gut when it's been disrupted by an illness or treatment.

Microorganisms are also known as 'germs'. 'Germ' is a nickname that is used for those microbes that make us feel unwell such as flu viruses and salmonella bacteria.

# History of ABX – It's not new



The thoughtless person playing with penicillin treatment is morally responsible for the death of the man who succumbs to infection with the penicillin-resistant organism.





# Causes

## CAUSES OF ANTIBIOTIC RESISTANCE



Antibiotic resistance happens when bacteria change and become resistant to the antibiotics used to treat the infections they cause.



Over-prescribing of antibiotics



Patients not finishing their treatment



Over-use of antibiotics in livestock and fish farming



Poor infection control in hospitals and clinics



Lack of hygiene and poor sanitation



Lack of new antibiotics being developed

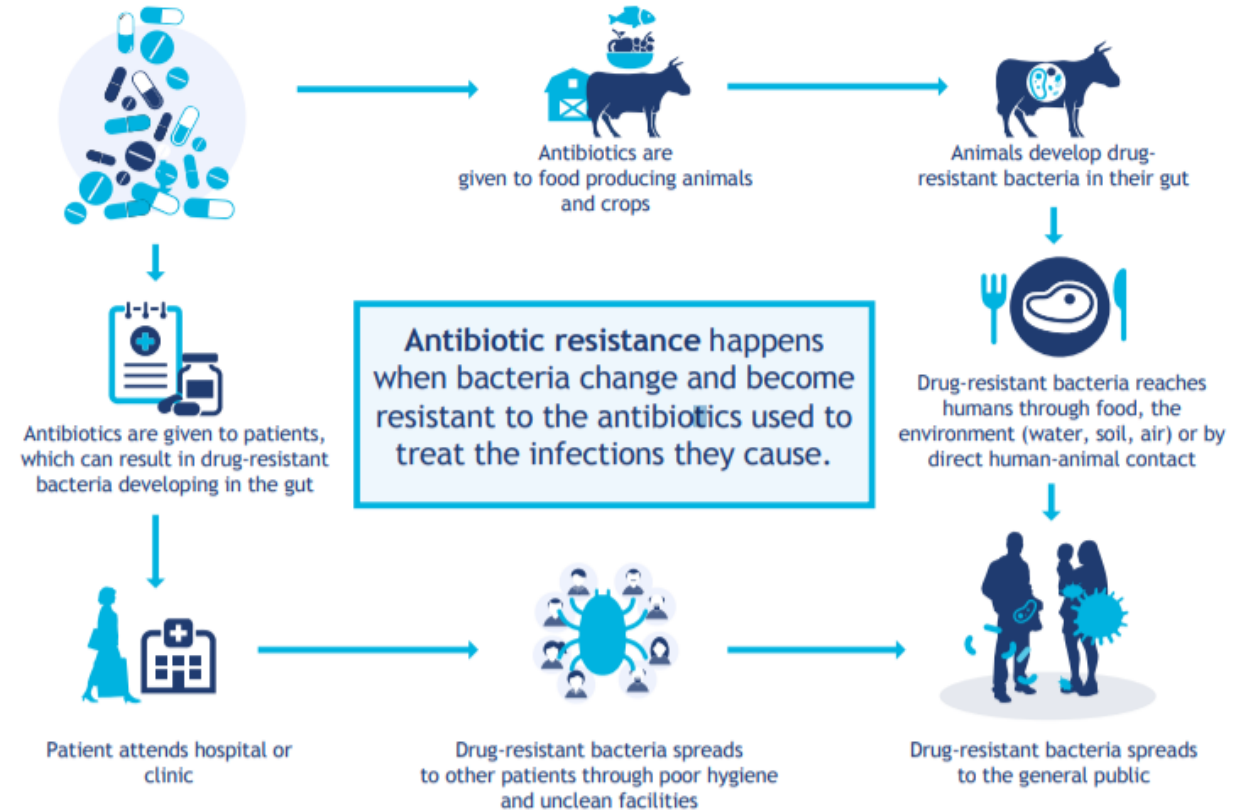
[www.who.int/drugresistance](http://www.who.int/drugresistance)

[#AntibioticResistance](https://twitter.com/AntibioticResistance)



# Spread

## ANTIBIOTIC RESISTANCE HOW IT SPREADS



[www.who.int/drugresistance](http://www.who.int/drugresistance)

#AntibioticResistance



# Why is AMR a problem



# UK 2019-2024 plan

- The plan focuses on three key ways of tackling AMR:
  - reducing need for, and unintentional exposure to, antimicrobials
  - optimising use of antimicrobials
  - investing in innovation, supply and access.
- 
- Ref: Department of Health (2019) *Tackling antimicrobial resistance 2019-2024*. Available from [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/784894/UK\\_AMR\\_5\\_year\\_national\\_action\\_plan.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/784894/UK_AMR_5_year_national_action_plan.pdf) [accessed on 01 May 2019]



# Factors increasing AMR

## Inappropriate prescribing

- 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.
- Overuse and misuse of antibiotics leads to bacteria developing resistance to antibiotics.
- Did you know???
- Antibiotics are no longer routinely used to treat chest infections, ear infections and sore throats in children.





of all antibiotic prescriptions in primary care are inappropriate



cases of *E. coli* Blood Stream Infections reported in 2017



decrease in human antibiotic use from 2014 to 2017\*



decrease in sales of veterinary antibiotics from 2013 to 2017\*\*



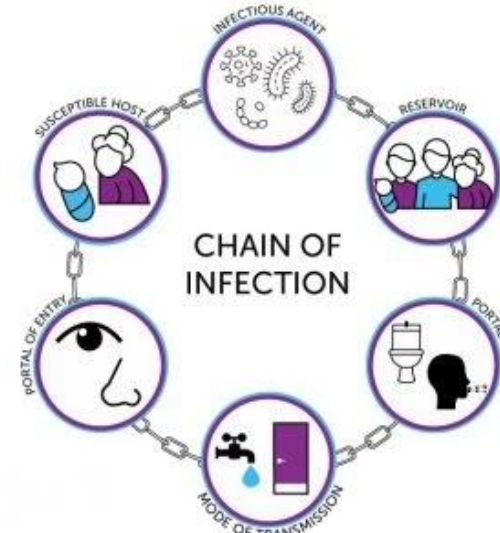
spent since 2013 by UK on AMR research, awareness and development activities

\*from 23.4 to 21.70 defined daily doses per 1000 inhabitants per day

\*\*from 62mg/kg to 37mg/kg



# What can We Do



**ANTIBIOTIC RESISTANCE**  
**WHAT HEALTH WORKERS**  
**CAN DO**

HANDLE ANTIBIOTICS WITH CARE

Antibiotic resistance happens when bacteria change and become resistant to the antibiotics used to treat the infections they cause.

- 1 Prevent infections by ensuring your hands, instruments and environment are clean
- 2 Keep your patients' vaccinations up to date
- 3 If you think a patient might need antibiotics, where possible, test to confirm and find out which one
- 4 Only prescribe and dispense antibiotics when they are truly needed
- 5 Prescribe and dispense the right antibiotic at the right dose for the right duration

www.who.int/drugresistance  
**AntibioticResistance**

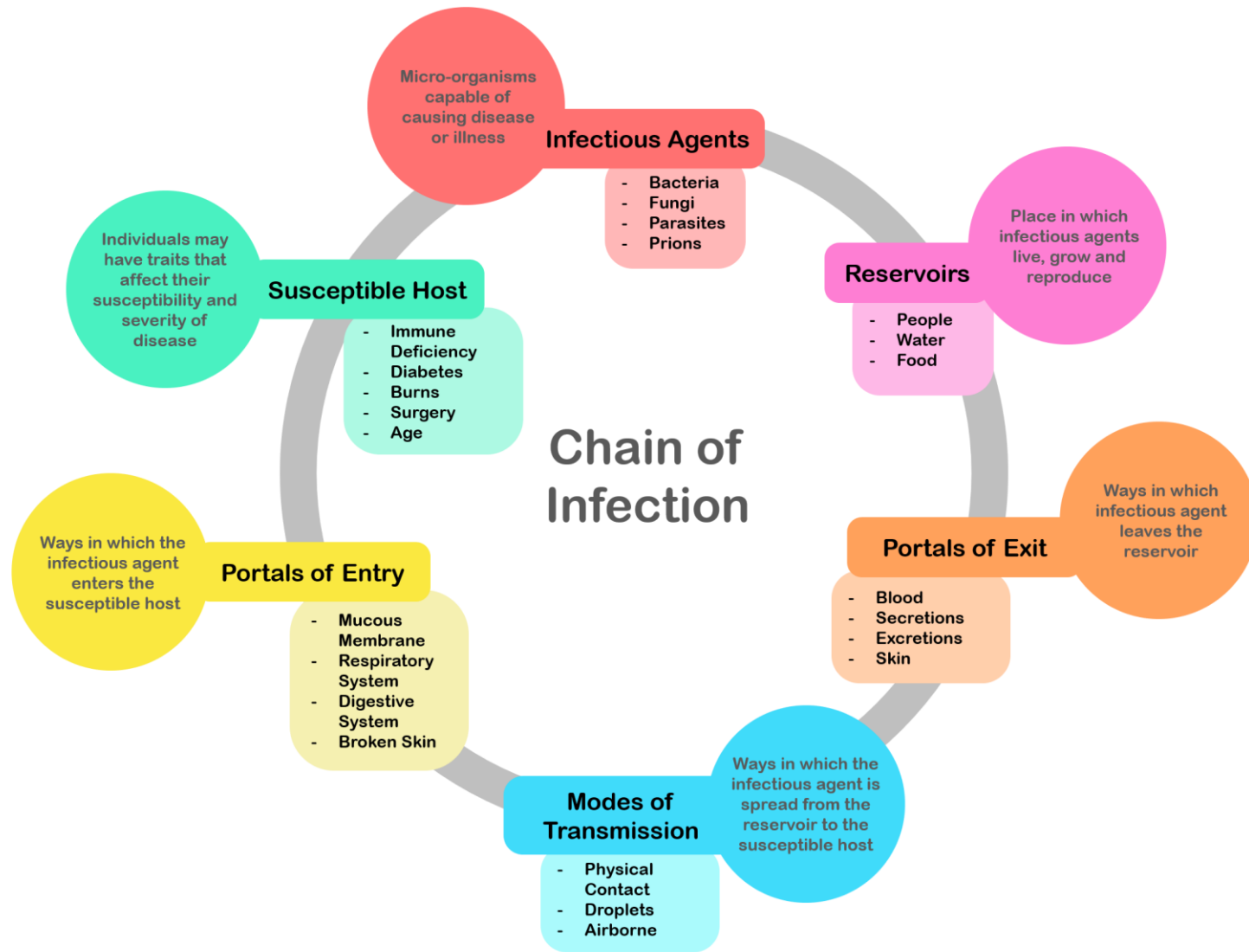
World Health Organization



# Chain of Infection Game







# Hand Hygiene Break the Chain of infection



1. Before touching a patient/service user- before giving care

2. Before a clean procedure

3. After body fluid exposure risk

4. After contact with a patient/service user- after providing care

5. After touching patient/service users surroundings.



# What can we do ?



**BECOME AN  
ANTIBIOTIC GUARDIAN**

Keep  Working

[Antibiotic Guardian – Pledge to be an Antibiotic Guardian](#)



# What can we do

**A**lways finish the full course of antibiotics prescribed.

**M**ake sure you don't take left over antibiotics.

**R**emember to only take antibiotics that are prescribed for you by your GP/health professional.

[Antibiotic resistance advert - keep antibiotics working and take your doctor's advice - Bing video](#)



# RIGHT or Wrong





### **Wrong**

Most common infections that cause coughing and sneezing are caused by viruses, and will get better by themselves

with bed rest and fluid intake. Antibiotics are not effective against viruses.

### **Right**

Antibiotics should be taken exactly as advised by your healthcare professional.



### **Wrong**

You must not use other people's or any leftover antibiotics.

### **Right**

Most common infections that cause coughing and sneezing are caused by viruses, and will get better by themselves with bed rest and fluid intake. Antibiotics are not effective against viruses.



**Wrong**

Antibiotics can help severe bacterial infections such as pneumonia or kidney/ urine infections.

**Wrong**

Antibiotics should be taken exactly as advised by your healthcare professional.





### **Wrong**

Antibiotics are not effective against headaches or viruses, such as the one that causes flu.

### **Right**

If you over-use antibiotics they might not work when you really need them for a severe infection.

# Amalas's Story

- <https://www.youtube.com/watch?v=Y9WEERSH5G0>



Amy  
Questions



# AMR forum evaluation form

QR CODE  
FOR  
FEEDBACK

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