



Public Health
England

Antimicrobial Resistance

Helen McAuslane
Consultant in Health Protection
Yorkshire and the Humber Health Protection Team



Public Health
England

Quick Quiz

1. In 2013 what percentage of working days in the UK were lost per year due to infectious diseases?

A) 1%

B) 12%

C) 21%

Answer: 21% or 27 million days

(Source: NICE Guideline NG 63 Antimicrobial stewardship: changing risk related behaviours in the general population)



Public Health
England

2. How many people are estimated to die from resistant infections each year globally?
- A) 75,000
 - B) 700,000
 - c) 7,000,000

Answer: B

(Source: O Neill Review 2016)



Public Health
England

3. What percentage of people think that antibiotics kill viruses?

A) 20%

B) 30%

C) 40%

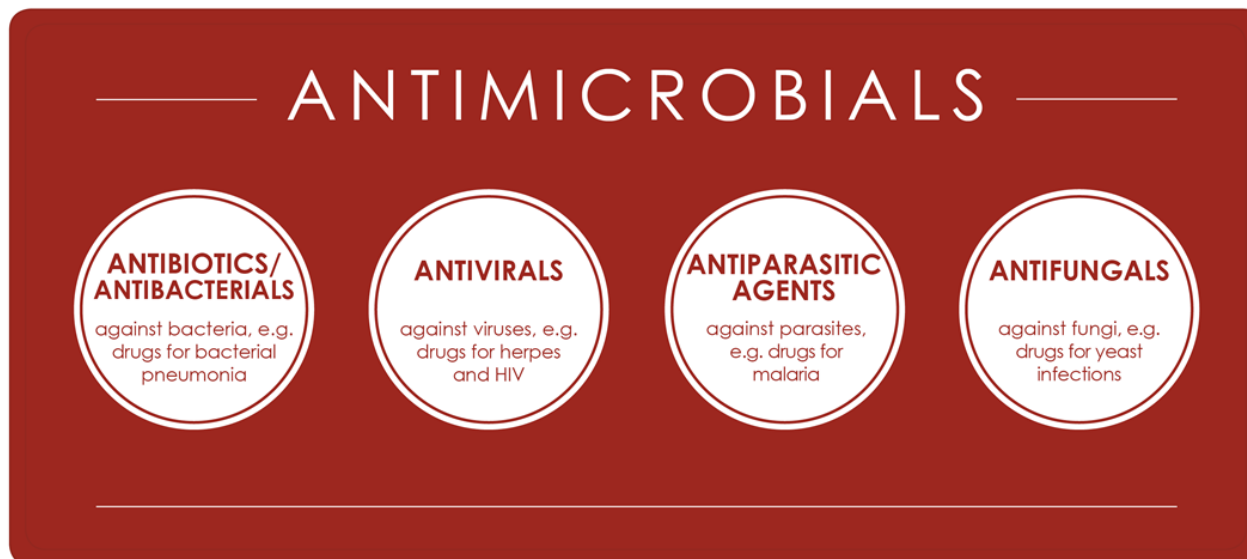
Answer: C

(Source: NICE Guideline NG 63 Antimicrobial stewardship: changing risk related behaviours in the general population)



What is antimicrobial resistance (AMR)?

- Antimicrobial resistance is the ability of a bug to resist being killed by a drug used to treat it.
- Occurs naturally over time, usually through genetic changes but misuse and overuse of antimicrobials is accelerating process.
- Poor infection control, inadequate sanitary conditions and inappropriate food-handling encourage the spread of resistant organisms.



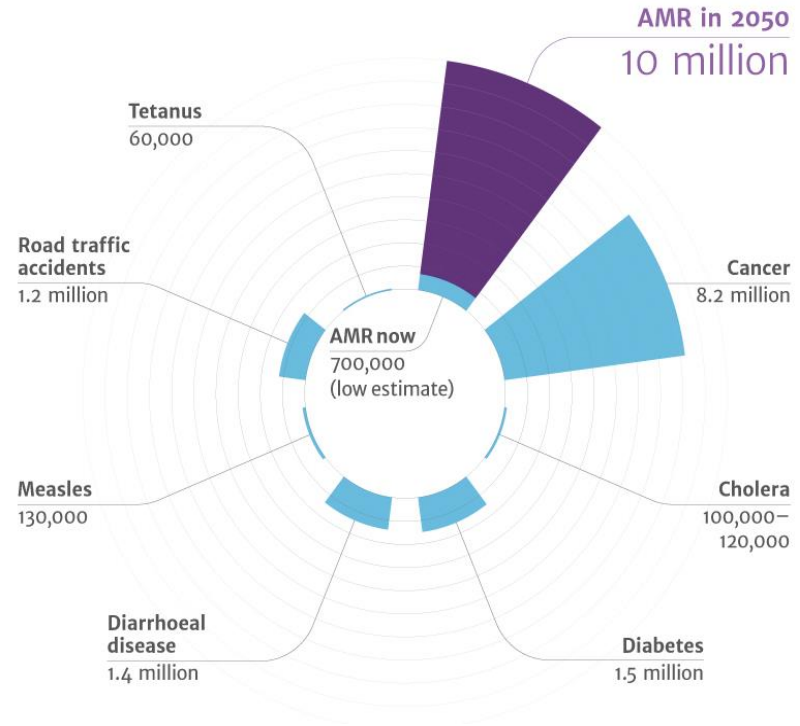


Why is AMR important?

IF NOT TACKLED, RISING AMR COULD HAVE A DEVASTATING IMPACT



By 2050, the death toll could be a staggering **one person every three seconds** if AMR is not tackled now.



GLOBAL

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



10m
deaths
by 2050

Costing
£66
trillion

Infographics from:



We use a lot of antibiotics....



1 in 3

people in England takes at least one course of antibiotics each year.



Over **850 million** antibiotics **tablets or capsules** were prescribed in England in 2016.



Over **5 million bottles** of antibiotics were prescribed in England in 2016. These are usually given to young children, under 10 and more usually under 6.

- 81% of antibiotics prescribed in primary care.....
- Between 9% and 23% 'inappropriate'
- **But** without effective antibiotics 'routine' procedures become high risk:
 - chemotherapy, joint replacements, C sections etc...



How should we tackle it?

- **Prevent** Infections (vaccination, IPC, wider public health)
- **Protect** the antibiotics we have (increase appropriate prescribing and reduce demand)
- **Promote** the development of new drugs (at national and international level)

TACKLING ANTIMICROBIAL RESISTANCE ON TEN FRONTS



Public awareness



Sanitation and hygiene



Antibiotics in agriculture and the environment



Vaccines and alternatives



Surveillance



Rapid diagnostics



Human capital



Drugs



Global Innovation Fund



International coalition for action



Public Health
England

National Strategy and Vision....



HM Government

The UK's vision for antimicrobial resistance in 2040:

By 2040, our vision is of a world in which antimicrobial resistance (AMR) is effectively contained, controlled and mitigated.

Tackling antimicrobial resistance 2019–2024

The UK's five-year national action plan

Published 24 January 2019



NHS

The NHS Long Term Plan



5 year plan:

- halve healthcare associated Gram-negative blood stream infections;
- reduce the number of drug-resistant infections in people by 10% by 2025
- reduce UK antimicrobial use in humans by 15% by 2024
- reduce UK antibiotic use in food-producing animals by 25% between
- report on the % of prescriptions supported by a diagnostic test or decision support tool.
- System – wide approach



Public Health
England

National to local.....

- HCAI/ AMR surveillance and epidemiology
- Expert advice and support to partners on HCAI outbreaks
- Y&H multi – agency steering group
- Sharing best practice and evidence
- Collaboration with partners across North Region (NHSE and PHE)
- Working with local partners including LAs, primary care, acute trusts, dentists, Community IPC and ICSs to implement programmes
- Developing academic links to support local research



Public Health
England

Campaigns

Choose your pledge now at
www.AntibioticGuardian.com



WITHOUT ANTIBIOTICS

#antibioticguardian

Your actions can conserve antibiotics.
Join us at www.AntibioticGuardian.com and find out how

ANTIBIOTICS DON'T WORK FOR

- Colds
- Flu
- Vomiting
- Most coughs
- Most ear infections
- Most sore throats
- Most diarrhoea
- Most cystitis

Ask your pharmacist
for advice

ANTIBIOTICS ARE NEEDED FOR

- Serious bacterial infections including:
- Pneumonia
- Urinary tract infections
- Sexually transmitted infections like gonorrhoea
- Sepsis
- Meningococcal meningitis

Take your
doctor's advice

Public Health
England



ANTIBIOTICS DON'T WORK FOR A COLD OR FLU

Keep Working

Public Health
England



ANTIBIOTICS DON'T WORK FOR EVERYTHING

Keep Working





Public Health
England

Where do you fit in?

Professional

Personal

Everyone has a ROLE TO PLAY

You can help prevent antibiotic resistance

Preventing infection can reduce the use of antibiotics, and limit the spread of antibiotic resistance. Good basic hygiene is one of the most effective ways to reduce the risk of infection.

You can reduce the risk of infection by:



...washing your hands properly



...preparing food hygienically



...limiting close contact with others when you are sick



...practicing safer sex



...keeping your vaccinations up-to-date



...and, standing up for your right to safe water and sanitation

You can also reduce the spread of antibiotic resistance by:



...not sharing antibiotics with others



...and, always following the advice of a qualified health care professional when taking antibiotics



My actions protect antibiotics

BECOME AN ANTIBIOTIC GUARDIAN

Join me at antibioticguardian.com

Keep Antibiotics Working

<http://antibioticguardian.com/>