

Additional file 4. Communication tools

1. Antibiotic Free Prescription
2. Poster in Consultation Room or Leaflet: Viruses or Bacteria: What Made you Sick?
3. Urinary Tract Infections: A Leaflet for Older Adults and Their Families
4. Poster: 5 Myths about Urinary Tract Infections in Nursing Home Residents
5. Checklist for Pharmacists: What you Need to Know if You Have Been Prescribed an Antibiotic
6. Information cards about Antimicrobial Resistance and the Use of Antibiotics

Patient name: _____

Infection	Most people get better by	Most common symptoms
<input type="checkbox"/> COVID-19	1 - 3 weeks	Fever, headache, loss of taste and/or smell
<input type="checkbox"/> Common cold	1 - 2 weeks	Runny nose, congestion, sore throat, dry cough
<input type="checkbox"/> Flu	1 - 2 weeks	Fever, shivering, muscle pain, cough
<input type="checkbox"/> Laryngitis	1 - 2 weeks	Dysphonia (hoarseness), sore throat, dry cough
<input type="checkbox"/> Pharyngitis / Tonsilitis	1 week	Fever, sore throat symptoms: pain while swallowing, enlarged and painful glands
<input type="checkbox"/> Acute bronchitis	2 - 4 weeks	Wheezing, cough with or without phlegm
<input type="checkbox"/> Sinusitis	1 - 2 weeks	Facial pain, fever, runny nose, congestion
<input type="checkbox"/> Acute middle ear infection	< 1 week	Ear pain, fever
<input type="checkbox"/> Exacerbation of COPD	1 - 2 weeks	Worsening of symptoms of COPD

You probably have a self-limiting infection and that is why you have not been prescribed an antibiotic. Antibiotics are not effective in treating viral infections. If given when not needed, antibiotics can be harmful as they lead to antimicrobial resistance. This means that antibiotics become ineffective and infections become increasingly difficult to treat.

When you have an infection, it is very important to get plenty of rest and give your body time to fight it off. If you follow these instructions, you should feel better soon:

- ☐ Get plenty of rest and consider staying at home to prevent the spread of infection
- ☐ Remember to drink a sufficient amount of fluids to avoid dehydration
- ☐ Wash your hands frequently
- ☐ You can take over-the-counter medication to alleviate your symptoms as recommended below by your healthcare provider

To alleviate symptoms

- ☐ For fever and aches _____
- ☐ For sore throat _____
- ☐ For nasal congestion _____
- ☐ Other: _____

Please, return to your healthcare provider if:

- ☐ Your symptoms get worse / do not improve in _____ day(s)
- ☐ You develop a high fever
- ☐ Other: _____

The Prescriber

CONTACT: _____



Viruses or bacteria

What caused your infection?

Infection	Most people get better by	Common cause			Are antibiotics recommended?
		Virus	Virus or bacteria	Bacteria	
COVID -19	1-3 weeks	✓			NO
Common cold	1-2 weeks	✓			NO
Flu	1-2 weeks	✓			NO
Laryngitis	1-2 weeks	✓			NO
Acute bronchitis / Bronchiolitis	2-4 weeks	✓			NO
Tonsilitis / Pharyngitis	1 week		✓		SOMETIMES
Sinusitis	1-2 weeks		✓		SOMETIMES
Acute middle ear infection	<1 week		✓		SOMETIMES
Exacerbation of COPD	1-2 weeks		✓		SOMETIMES
Pneumonia	1-2 weeks			✓	YES
Urinary tract infection	2-3 days			✓	YES



Antibiotics are only needed to treat certain infections caused by bacteria. Viral infections should not be treated with antibiotics. Use of antibiotics can lead to antimicrobial resistance. This means that antibiotics become ineffective and infections become increasingly difficult to treat.

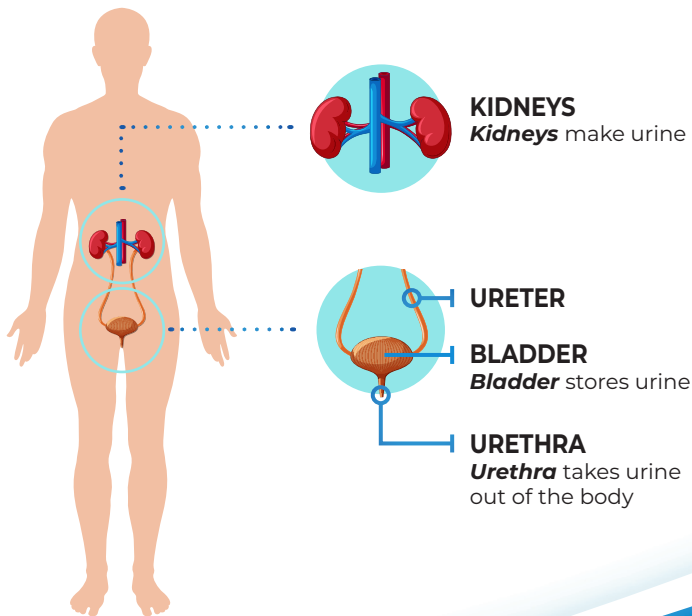


URINARY TRACT INFECTIONS

A leaflet for older adults and their families

WHAT IS A URINARY TRACT INFECTION?

A urinary tract infection occurs when bacteria enter the urinary tract and cause symptoms. The bacteria involved in a urinary tract infection come from your own gastrointestinal tract, where they normally exist.



WHAT ARE THE TYPICAL **SYMPTOMS** OF A URINARY TRACT INFECTION?



Frequent urination
or urge



Burning sensation or
pain when urinating

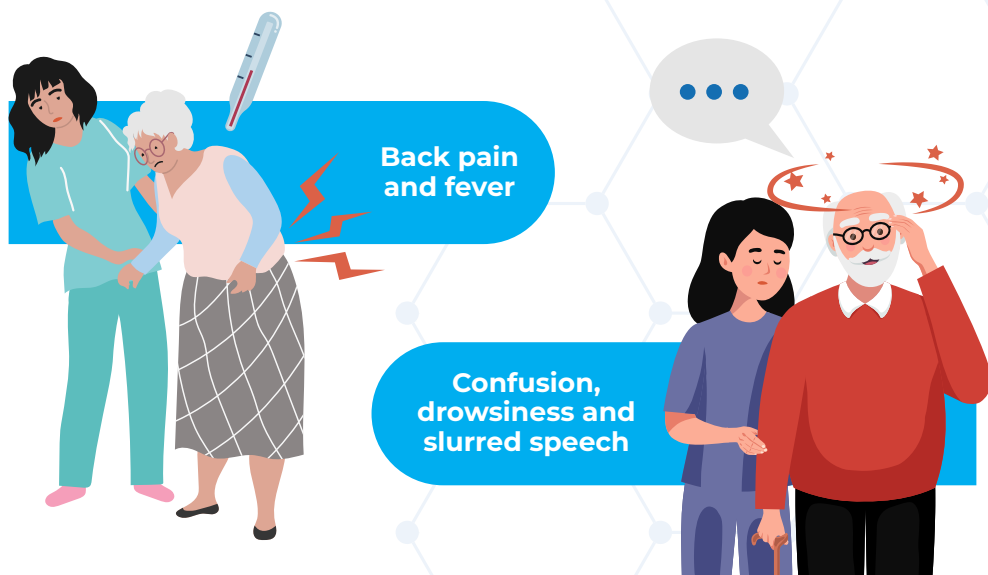


Blood in urine

- If you have some of these symptoms, you may have a urinary tract infection and you should contact a nurse or a medical doctor.
- If your symptoms do not improve within a couple of days after starting antibiotics, contact your doctor/nurse.

WHAT ARE THE **SYMPTOMS** OF A SERIOUS INFECTION?

If the symptoms above are followed by symptoms below, it may be due to a possibly serious infection or complication and you should contact a healthcare professional urgently:



ANTIBIOTICS FOR URINARY TRACT INFECTIONS: PROS AND CONS



Antibiotics shorten the duration of urinary symptoms and are life saving by preventing serious complications such as pyelonephritis and septicemia.



Antibiotics can come with side effects. Among the most common ones are rashes, vomiting, diarrhea, and increased risk of yeast infections.



Taking antibiotics increases the risk of resistant bacteria. Bacteria resistant to antibiotics do not respond well to treatment.

WHAT CAN YOU DO TO PREVENT A URINARY TRACT INFECTION?



Wipe genitals from front to back after using the toilet to avoid that bacteria enter the urinary tract.



Change pads and clean genitals if soiled.



Keep the genital area **clean** and **dry**.



Drink **plenty** of water.



Try to **move around** as much as possible

HAPPY PATIENT

Grant Agreement number 900024



Co-funded by
the Health Programme
of the European Union

This project is funded by the
European Union's Health Programme (2014-2020)

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5 myths about urinary tract infections (UTI) in nursing home residents

MYTH #1

A positive test (dipstick/culture) in the elderly always means presence of a UTI...



No, a substantial number of nursing home residents have bacteriuria and finding bacteria in the urine does not necessarily mean that the patient has a UTI.

MYTH #2

Antimicrobial resistance is not a problem in nursing homes...



There is a high prevalence of resistant bacteria in nursing homes and it may reduce the efficacy of antibiotic treatments.

MYTH #3

A single urinary symptom indicates high probability of UTI...



No. Only about half of patients with a single urinary symptom do have a UTI and to diagnose a UTI the urine should always be examined.

MYTH #4

Cognitive changes, agitation and confusion indicate high probability of UTI...



There are several possible causes of cognitive changes in the elderly, but UTI is not the most frequent one. Explore all possible causes, such as dehydration, pain, constipation, UTI, etc.

MYTH #5

When unsure of whether to prescribe an antibiotic or not ("better be safe than sorry"), the benefits of prescribing outweigh the harms of exposure to antibiotics...

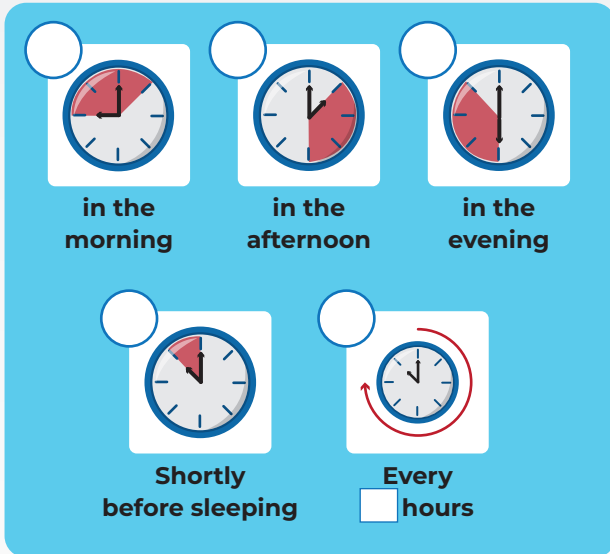
All antibiotics have side effects and may cause more harm than benefit particularly in the elderly people.

Additionally, all use of antibiotics can lead to antimicrobial resistance. This means that antibiotics become ineffective and infections become increasingly difficult to treat.



What you need to know if you have been prescribed an antibiotic

When to take your antibiotic:



How to take your antibiotic:



- **Duration of antibiotic treatment:**

You should stop your antibiotic treatment after days.

- **Possible side effects include:**

Diarrhoea, nausea and vomiting, abdominal pain, loss of appetite, skin rashes, headache, dizziness, fungal infections (candida).

- **Possible food and drug interactions:**

- ▶ Combining the use of antibiotics with other medications or alcohol can modify the efficacy and increase the risk of adverse reactions.
- ▶ Ask your pharmacist or healthcare provider for any potential food and drug interactions.



**Most side effects are mild and temporary.
If side effects become severe, you should contact a
healthcare professional**

● Please remember:

- ▶ Antibiotics are only needed to treat certain infections caused by bacteria. Use of antibiotics can lead to antimicrobial resistance. This is why we need to use antibiotics only when necessary.
- ▶ Take the prescribed antibiotic treatment according to the prescription from the doctor.
- ▶ Don't share antibiotics with your family members, friends, or animals.
- ▶ Return any unused antibiotics to the pharmacy.
- ▶ Contact your healthcare provider if your symptoms get worse.
- ▶ Inform your healthcare provider and/or your pharmacist about any allergies you may have.
- ▶ If you are pregnant, breastfeeding, or planning to get pregnant, make sure that your healthcare provider and/or pharmacist is aware of it, to ensure safe use of the medication.

● When to contact a pharmacist:

- ▶ For any questions about the medication you use.
- ▶ For information about relief of symptoms or side effects.
- ▶ If you are unsure about any of the information you have received.
- ▶ If you are unsure about how or when to take your medication.



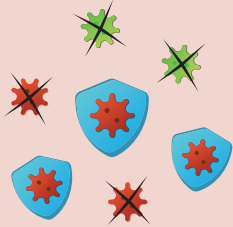
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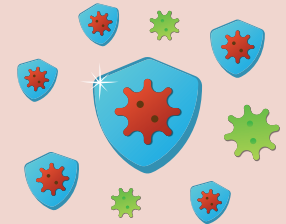
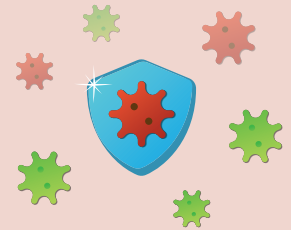
HOW DOES ANTIMICROBIAL RESISTANCE OCCUR?

There is usually a small number of bacteria that mutate and become resistant to antibiotics.



When we take antibiotics, they kill all susceptible bacteria, including the “good” bacteria that protect the body from infection. The drug-resistant bacteria survive and multiply.

Eventually, the drug-resistant bacteria become dominant and antibiotics stop working.

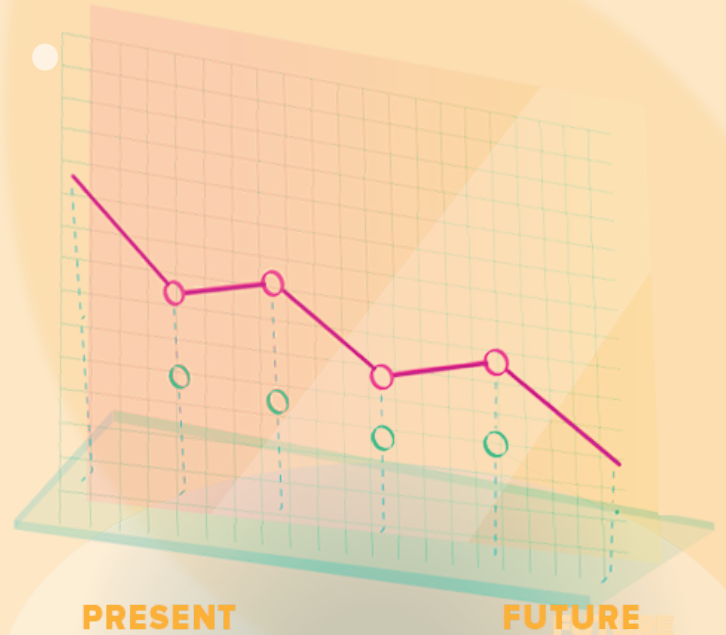


INAPPROPRIATE USE OF ANTIBIOTICS LEADS TO ANTIMICROBIAL RESISTANCE

This is a serious global challenge. That means that the antibiotics we have today will be less effective in the future in treating life-threatening infections.

Currently antimicrobial resistance is affecting millions of people worldwide and kills more than 1 million people per year.

EFFECTIVENESS



ANTIMICROBIAL RESISTANCE IS A GLOBAL PROBLEM



**Everybody
can contribute
to the problem of
antimicrobial resistance.
Resistant bacteria
do not respect
borders.**



SCAN ME

**Do you want
to know your own
contribution
to antimicrobial
resistance?**

WE NEED TO PROTECT AND PRESERVE OUR CURRENT ANTIBIOTICS

The problem of antimicrobial resistance will not be solved with new antibiotics.

Bacteria are smarter than humans and they become resistant to antibiotics shortly after using them.



ANTIBIOTICS WON'T TREAT YOUR COLD OR FLU

Cold and flu are caused by viruses.
Antibiotics are only effective against
infections caused by bacteria,
therefore they do not help
against cold and flu.



ANTIBIOTICS HAVE SIDE EFFECTS

Common
side
effects
of antibiotics



YEAST INFECTION



DIZZINESS



NAUSEA



RASH



DIARRHEA

NEVER TAKE LEFTOVER ANTIBIOTICS OR SHARE ANTIBIOTICS WITH FAMILY & FRIENDS

The pharmacist can assess your symptoms, give you advice, recommend over-the-counter medication or tell you to contact a doctor.



MORE INFORMATION ABOUT HAPPY PATIENT



TRAINING HEALTHCARE PROFESSIONALS AND EMPOWERING THE PATIENT

SCAN ME

and access our website and material



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