

GOMUN 2026 OFFICIAL DOCUMENT

Study Guide

World Health Organization

Eliška Bastařová & Amálie Plecitá

Released October 2026, 1st Edition

COMMITTEE INTRODUCTION

The World Health Organization is a specialized agency within the United Nations that focuses on public health issues, such as disease outbreaks and other emergencies.

Its core mission is to successfully lead emergency responses, help to improve access to essential medical care in various nations, and create global rules for disease prevention, food safety, and medicine.

It was formed on 7th of April, shortly after a Chinese representative spoke about the lack of mental health organizations in the world. Its headquarters are in Geneva, Switzerland, and it has 150 field offices worldwide and 6 regional offices.

It is the largest intergovernmental health organization at the international level.

First Topic: Discussing the issue of aging populations in first-world countries.

Eliška Bastařová

TOPIC INTRODUCTION

Population aging is a process in which older people make up an increasingly larger share of the total population. By the year 2080, people aged 65 and over will outnumber children under 18. It is projected that the number of older people (aged 65 and over) will reach 2.2 billion and therefore surpass the number of children (under 18).

The world is aging rapidly. Between the years 1974 and 2024 the worldwide population of people aged 65 almost doubled, increasing from around 5.5% to around 10.3%. It is estimated that between the years 2024, and 2074 this number will double again, increasing to around 20.6%. During the same period of time, the number of people aged 80 and above will more than triple. Today, more than 60% of the entire world's population lives in countries with a total fertility rate below the "replacement level".

It is not only a demographic issue, it challenges the country in economic, social, healthcare, and even human-rights sectors. Countries need to cooperate and come up with responses, which will help to create affordable healthcare, support families, adapt better economic systems suited for this type of population, and protect older people from discrimination and poverty.

KEY TERMS

Aging Population – A global demographic shift where the proportion of older adults increases, while the share of younger people and children declines.

Old-Age Dependency Ratio (OADR) – Measures the number of elderly individuals (aged 65 and older) per 100 people of working age.

Total Fertility Rate (TFR) – Average number of children that a hypothetical group of women would bear over their reproductive lifetime.

Super-Aged Society – A country where more than 20% (or 21% in some definitions) of the population is aged 65 or older.

Pension Crisis/ Pension Gap – Refers to the growing shortfall between the money people need for comfortable retirement and the actual funds available from state and private savings.

Labor Force Participation Rate – The percentage of the working-age population that is either working or actively looking for work.

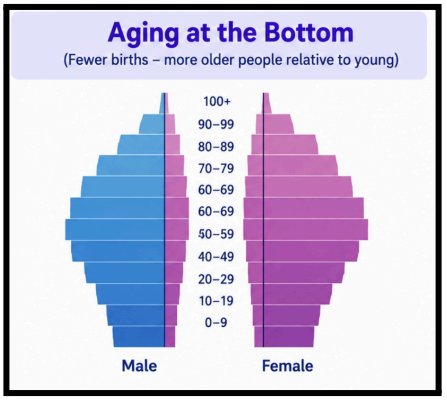
Silver Economy – The sum of all economic activity, products, and services designed to meet the needs of adults aged 50 and older.

Aging/ Aging-In-Place – Living independently, safely, and comfortably in your own home and community as you grow older, rather than moving to a nursing home or assisted living facility.

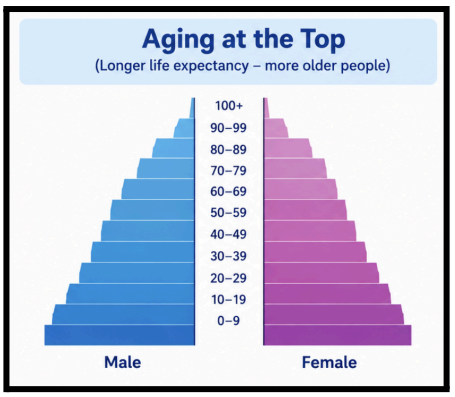
Dependency Ratio – A demographic measure that compares the number of non-working-age dependents to the working-age population.

Replacement Level – The average number of children, per woman, needed to replace the parents and keep the population.

Aging at the bottom – When fewer babies and children are born, the younger part of the population becomes smaller, which creates a narrower base of the population pyramid.



Aging at the top – As more people survive to older ages, the older population becomes larger, which creates a wider top of the population pyramid.



Active Aging Framework – A public policy model designed to optimize opportunities for health, participation, and security in order to enhance the quality of life for people as they age.

OVERVIEW OF THE TOPIC

An aging population in first-world countries describes the phenomenon where the average age of the population is rising, and a growing share of people are older adults, rather than younger kids. The first main cause is lower birth rates. Families are having fewer children, often below the replacement level of 2.1 children per woman. This is called “aging at the bottom” of the population pyramid. The second main cause is higher life expectancy. Nowadays, people are living longer because of improved healthcare and sanitation, nutrition, cleaner water, and further advances in medicine. Therefore, many people are able to live longer, even to their eighties or beyond. Due to this, the number of older people increases, creating “aging at the top” of the population pyramid. In summary, our society consists of fewer younger people and more of those surviving to an older age.

This event affects our world in many different ways. One of those is economic pressure. The working-age population generates tax revenues that finance social transfers and public goods, including health care, specialized social services, and pensions. However, when the demographic shifts leading to a shrinking labor force alongside a growing elderly population, the old-age dependency ratio increases. Meaning that an individual worker has to support a larger group of older dependent people. Governments may respond by increasing taxes, where the working class has to send more money to these systems. Or by raising the retirement age, where older people still have to work. Another response from the government could be changing the pension benefits to which an individual is eligible. However, many of these solutions showed that they are not ideal in resolving this issue, delegates should therefore try to negotiate better and more effective solutions.

Another impact is pressure on healthcare systems. Older people are most prone to needing treatment for long-term illnesses, such as cancer, diabetes, heart disease, or dementia. They also require regular or even daily check-ups from either hospitals or nursing homes. Therefore, countries may need to spend more money on hospitals, care homes, doctors, and similar systems.

Population ageing may also lead to labor shortages. If fewer people enter the workforce, there might not be enough workers to fill important jobs. This issue can affect any sector ranging from healthcare to agriculture to education.

One of many other factors is also the creation of social and family pressure. Working adults might have to take care of elderly parents, while also focusing on raising their own children. This can cause financial, physical, and emotional stress on the individual.

TIMELINE OF THE TOPIC

1950 – No country had more than 11% of its population aged 65 years or older. The phenomenon of an aging population had begun mainly in developed countries because birth rates had started to decline.

1975-2000 – The global fraction of people aged 65 and older passed 6%. By 2000, Italy, the country with the highest share of older adults at that time, had reached approximately 18%.

2023 – The worldwide population passed 8 billion, and the number of people aged 65 and more is approximately 1.2 billion.

2025 – Population aging continued. Populations are older and older, especially in high-income countries. In Japan, people aged 65 and older now make up more than ¼ of the total country's population.

Mid-2030s – The number of people aged 80 and older is expected to reach approximately 265 million. It is projected that this older population will become larger than the number of infants.

PAST ACTIONS

Vienna International Plan of Action on Aging (1982) – The first major international plan created to respond to population aging. It aimed to strengthen the capacities of governments and civil society and to address dependency needs of older people.

United Nations Principles for Older Persons (1991) – The UN adopted 18 principles supporting care, participation, independence, dignity, and self-fulfillment for older people. Because the number of elderly people was increasing, many of them faced poverty, poor healthcare, isolation, or abuse.

International Year of Older Persons (1999) – The UN created this international year to raise awareness of the contribution of older people and the challenges they face. It encouraged governments, communities, and organisations to discuss this issue and form policies that support older people.

Madrid International Plan of Action on Ageing (2002) – This was one of the most important international actions regarding combating this issue. It aimed to help countries manage the opportunities and challenges created by population aging. It provided more than 100 recommendations in three areas. First, recognizing older people's contribution to development. Second, improving their healthcare and well-being. Third, creating safe and supportive communities. Specific actions included, for example, protecting pensions, improving housing and transport, or preventing diseases.

WHO Global Strategy and Action Plan on Ageing and Health (2016-2020) – The World Health Organisation encouraged countries to provide better healthcare, long-term care, and age-friendly communities. Its main goal was to help people maintain their functional ability, meaning that they would be able to move on their own, make decisions, build relationships, and manage everyday activities on their own.

UN Decade of Healthy Aging (2021-2030) – The UN and WHO established this decade to improve the lives of older people, their families, and their communities. Its goals include reducing ageism, improving access to long-term care, and creating supportive communities.

COUNTRY POSITIONS

Japan

Japan's population is one of the oldest in the world, with around ¼ of its population being 65 or older. It faces many issues such as low birth rates, a shrinking workforce, high pension costs, and increasing demand for health and elderly care. Japan's response lies in the newest technology, meaning robots, and automation, but also support for healthy ageing.

Germany

Germany has a large elderly population and a shrinking working-age population. The country needs more workers in healthcare, social care, and engineering. Its response lies in later retirement and immigration.

Italy

Italy is also one of the countries with the highest proportion of older people, where more than 20% of its population is aged 65 or older. It is a perfect example of population aging in Europe caused by low fertility and long life expectancy. It faces pressures regarding pensions, healthcare, and the size of its workforce.

China

China's entire population isn't only aging, it is also declining. The previous one-child policy contributed to a smaller younger generation, and the longer life expectancy only increased the number of older people.

Sweden

Sweden is one of the countries that is considered successful in adapting to an aging population. Their policies include not only strong social welfare systems, but also support for families, healthcare services, and opportunities for the elderly.

The United States of America

The United States is also among the countries with a large, growing older population. It has to balance the management of costs of healthcare and retirement, while also using immigration to support its workforce growth and therefore its population.

Russia

Russia faces massive demographic challenges driven by decades of low birth rates, low male life expectancy, and decreasing working-age population. This places a huge strain on their health care services and overall sustainable economic growth. Russia's primary strategy includes pro-natalist incentives, such as financial grants, alongside increases of the retirement age.

France

France maintains a slightly higher fertility than many of its neighboring states, yet has over 20% of its population aged 65 or older. This also increases financial pressure on its healthcare and pension systems. Their policies primarily focus on state reforms, such as increasing the legal retirement age or extensive family support programs to encourage high birth rates.

United Kingdom

In the UK around one in five people is aged 65 or older, indicating that this country faces a rapidly ageing population. The country also struggles with labor shortages and increasing financial pressure on their healthcare systems and adult services. To combat this issue, the UK relies on migration to boost their working-age populations, while also implementing different structural reforms to their healthcare and social systems.

QUESTIONS A RESOLUTION SHOULD ANSWER

- How can countries reduce the economic pressure on individuals and on the country's systems, caused by the rapid aging population?
- How can countries cooperate internationally to share successful policies, technology, financial support and healthcare knowledge to combat this global issue?
- How can the government protect the elderly population from poverty, neglect, discrimination and abuse?
- What policies should countries implement to fight against labor shortages caused by a decreasing working-age population?
- How can countries support families and individuals who have to look after their older family members?
- What action should countries undertake to provide accessible and affordable healthcare and long-term care for the elderly?

CONCLUSION

In conclusion, the aging population is a pressing issue affecting many sectors of a country's system, including the economy, healthcare, and social services. In global cooperation, the Member States can come up with specific responses to tackle or at least minimise the impacts of this problem. Otherwise, these issues will only persist and will continue to plague our world.

BIBLIOGRAPHY / REFERENCES

1. https://www.britannica.com/topic/World-Health-Organization
2. https://www.oecd.org/en/data/indicators/old-age-dependency-ratio.html
3. https://www.who.int/news-room/questions-and-answers/item/population-ageing
4. https://www.who.int/data/gho/indicator-metadata-registry/imr-details/123
5. https://www.weforum.org/stories/global-risks/super-ageing-and-youthful-populations-global-risks-report/

6. https://www.insuranceeurope.eu/pension-gap
7. https://www.stlouisfed.org/open-vault/2020/august/labor-force-participation-rate-explained
8. https://bidlab.org/en/blog/silver-economy-three-pillars-more-productive-longevity
9. https://www.sciencedirect.com/topics/social-sciences/aging-in-place
10. https://onemoneyway.com/en/dictionary/dependency-ratio/
11. https://www.who.int/initiatives/decade-of-healthy-ageing
12. https://extranet.who.int/agefriendlyworld/active-ageing-a-policy-framework/
13. https://www.statista.com/statistics/1034075/fertility-rate-world-continents-1950-2020/?srsltid=AU7gw4WNhg9rsRxKawSjKsR5taFKXu4Vg67qCvKjTXCZ3V11E-dLUOOy
14. https://www.unfpa.org/ageing
15. https://www.who.int/news-room/fact-sheets/detail/ageing-and-health
16. https://www.un.org/en/global-issues/ageing
17. https://www.thinka.ai/en-HK/AP-Advanced-Placement/AP-Human-Geography/Population-Composition-and-Dynamics
18. https://populationconnection.org/reference/glossary/
19. https://link.springer.com/chapter/10.1007/978-1-4020-8356-3_3
20. https://www.un.org/en/observances/older-persons-day
21. https://www.helpage.org/news/population-ageing-navigating-the-demographic-shift/
22. https://www.un.org/development/desa/ageing/%20resources/vienna-international-plan-of-action.html
23. https://www.pnas.org/doi/10.1073/pnas.1806260115
24. https://scorecard.prb.org/aging

25. https://www.insee.fr/en/statistiques/9006071
26. https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/nationalpopulationprojections/2024based
27. https://szru.gov.ua/en/news-media/news/russia-is-rapidly-aging-by-2040-the-country-will-turn-into-a-society-of-pensioners

Second Topic: Addressing the antibiotics resistance crisis.

Amálie Plecitá

TOPIC INTRODUCTION

Antibiotics are key features of modern medicine that enable the treatment of bacterial infections, therefore making them a part of countless procedures and saving millions of lives. They stop contagious bacterial diseases, cure severe life-threatening conditions, as well as prevent infections during high-risk situations like surgeries.

Because antibiotics are used in so many different medical procedures, they are sometimes used inappropriately, such as to treat viral infections, which cannot be cured by them. This widespread misuse is one of the main factors driving antibiotic resistance (ABR), in which bacteria changes to become resistant to the antibiotics that used to treat them. As bacteria become increasingly resistant, antibiotics stop working, forcing doctors to rely on alternative treatments that may be more expensive, time consuming and less effective.

ABR has become one of the most pressing issues in the world. According to WHO, in 2023 one in six laboratory-confirmed bacterial infections were resistant to antibiotic treatments. With antibiotic resistance threatening the effectiveness of essential medical treatments and continuing to affect populations worldwide, the WHO committee must address this urgent matter that requires cooperation and international action.

KEY TERMS

Antibiotics – Medicines that fight bacterial infections in people and animals by killing bacteria or stopping them from reproducing. They treat illnesses caused by bacteria, such as strep throat, urinary diseases or skin infections. Antibiotics are complex chemical compounds that are naturally found in, fungi, yeasts or plants.

Antimicrobial resistance (AMR) – Occurs when bacteria, viruses, fungi and parasites adapt and no longer respond to antimicrobial medicines, which include antibiotics, antivirals, antifungals and antiparasitics. Infections, therefore, become difficult or impossible to treat, increasing the risk of disease spread or severe illness.

Multidrug-resistant organisms (MDROs) – Bacteria that are resistant to at least three families of antibiotics, making them one of the hardest bacteria to treat.

Superbug – Informal term for MDROs; it is any kind of infection that is hard to get rid of due to its resistance to available treatment.

Selective pressure – In relation to antibiotic resistance, selective pressure is caused by antibiotics killing susceptible bacteria, allowing antibiotic resistant bacteria to survive and multiply in easier conditions where there is less competition for food and space. Generally, it can be described as the force that causes a particular organism to evolve in a certain way.

Horizontal gene transfer – Movement of genetic material between organisms other than by parent-to-offspring reproduction. This spread of drug resistance genes is one of the main factors fueling multidrug resistance.

One Health framework – Approach that recognizes that the health of humans, domestic and wild animals, plants and the environment are closely linked and interdependent, helping to address the full spectrum of disease control.

Bioaerosols – Tiny, airborne particles that are composed of or derived from living organisms.

OVERVIEW OF THE TOPIC

a) How does antibiotic resistance develop?

When a person is prescribed antimicrobial medicine to treat an infection, the medication is absorbed into the bloodstream and transported to the affected area of the body. There it works by targeting and eliminating the bacteria responsible for the infection, like by interfering with different processes they need for survival.

Most bacteria die, however some may possess genetic mutations that allow them to survive or be less susceptible and develop resistance against the antibiotic. This resistance develops either through random DNA mutations during reproduction, or acquiring resistance genes from other bacteria through horizontal gene transfer. The resistant bacterium can reproduce, growing its population as the antibiotic creates selective pressure that favors their development.

With increased exposure to antibiotics, bacteria have more opportunities to create resistance, creating a challenging issue for medical staff. Infections that were once easy to treat become difficult as antibiotics become a less reliable solution.

b) What drives antibiotic resistance?

Between 2018 and 2023 antibiotic resistance rose by over 40%, with an average annual increase of 5-15%. This gradual increase is caused by multiple factors from human medicine to agriculture and the environment.

Firstly, one of the features driving antibiotic resistance is overprescription and incorrect usage in medicine. Antibiotics are often prescribed for viral infections or diseases that do not require them, showing how medical workers have limited access to guidelines. Many healthcare facilities lack proper hygiene and sanitation, leading to the rapid spread of resistant bacteria.

This issue also exists within agriculture, as 50% of global antibiotic use is in food-producing animals, where it is used for growth promotion or disease prevention. The agriculture sector commonly struggles with unregulated sales, poor infrastructure, overuse and irrational use as well as the contamination of animal feed.

In the environment, antibiotic resistance is driven by wastewater and sewage, when human and animal excreta containing antibiotics enter municipal wastewater treatment plants which regularly do not fully remove them. In addition, some pharmaceutical manufacturers discharge antibiotic waste into local waterbodies, contaminating rivers, lakes and coastal waters.

As mentioned in the One Health framework, human health, animals, plants and the environment are closely linked and interconnected. This is why effective solutions are needed in all branches to ensure that the antibiotic resistance crisis can be thoroughly managed.

c) How is resistant bacteria spread?

Resistant bacteria are spread from animals and the environment to humans through several pathways, carrying resistant genes into human settings. One of the main routes is through the food chain, especially during processing when bacteria persist on the products. This is caused by inadequate hygiene, undercooking or cross contamination, which shows the need for safe food procedures. People who are in direct contact with animals, such as farmers or veterinarians, are exposed through skin contact, bites and scratches or during the transport of live animals, through bioaerosols.

Furthermore, when people go swimming or drink contaminated water, they can be endangered by resistant bacteria, which get in their bodies. This spread of resistant bacteria is currently more prevalent in developing countries, but it is an issue each country should tackle to protect the health of its citizens.

d) Impacts of antibiotic resistance

Non-usable antibiotics affect individuals, healthcare systems, and society as a whole. Patients may experience longer and more severe infections, while medical procedures carry a higher risk of complications. Antibiotic resistance also narrows treatment options, which is one of the reasons it is associated with higher mortality.

This whole process results in the need for more expensive and intensive care and longer hospital stays, increasing costs of ABR to national economies. For example, if current trends continue, total cost of the treatment of resistant bacterial infections alone is predicted to reach 412 billion dollars annually up to 2035 in the United States. Therefore, human productivity is reduced, as well as public trust in medicine and food security.

TIMELINE OF THE TOPIC

1928 – Alexander Fleming observes that a substance produced by a mold can inhibit bacterial growth, leading to the discovery of the first known antibiotic, penicillin.

1940s – Penicillin becomes known as the “Miracle drug” and therefore, is widely used for the treatment of bacterial infections. Allied troops fighting in Europe during World War 2 are treated by it, as the production is increasing. On the other hand, Fleming warns about the misuse and resistance of antibiotics, when receiving the Nobel Prize.

1948 – The use of antibiotics grows into the field of agriculture, where it is introduced into animal feed to promote growth.

1960 – Scientists develop a new antibiotic in the penicillin class that could work against patients struggling with antibiotic resistance, but throughout the year, bacteria eventually also develop resistance to it.

1950s - 1970s – Called the “Golden age of discovery” and about 20 new antibiotic classes are introduced.

1980s - 1990s – Resistance of bacteria to antibiotics is explicitly framed as a shared global problem, as people gain awareness of the danger during the spread of a stronger resistant strain to MRSA, which began sickening normal and healthy people.

2014 – Antibiotic resistance is declared an emergency, during the first global report on this issue, because 700 000 global deaths are associated with it per year.

2015 – McDonalds announced that it would phase out all meat sources that contained antibiotics, symbolizing the first major step of a fast-food company to protect public health and take action.

PAST ACTIONS

European Union ban on antibiotic growth promoters (2006) – EU prohibition of using antibiotics as growth promoters in animal feed, to reduce the amount of antibiotics used in agriculture.

WHO Global Action Plan on AMR (2015) – Global framework that urged Member States to develop national action plans to battle AMR that aligned with the five objectives, which included raising awareness, increase in research, infection prevention, appropriate antimicrobial use and increase in investment in new medicines.

World Antimicrobial Awareness Week (WAAW) – Held annually since 2015, this global campaign aims to raise awareness of antimicrobial resistance worldwide and encourage best practices among the general public, health workers and policy makers.

Global Antimicrobial Resistance and Use Surveillance System (GLASS) (2016) – Global system for collecting AMR related data. Its aim is to gather quality data on a national and international level and therefore show patterns and the quantity of antibiotics used, which helps to understand the extent of the problem. In 2024, 141 countries were participating in this first surveillance system to report data on AMR.

Updated WHO Global Action Plan on AMR (2026) – This renewed 10-year global framework for coordinated AMR action builds on the action plan from 2015. It specifies recommended actions until 2036, including prevention, sustainable use and accountability.

COUNTRY POSITIONS

India

India must balance access to antibiotics for its large population with overuse and inappropriate use. They have a strong One Health approach and action plan and a big pharmaceutical sector but have very limited funding to solve this issue.

The United States of America

Even with substantial healthcare, quality research and pharmaceutical capacity, the USA has hundreds of thousands of resistant infections each year. They have the scientific and financial resources, which is why they are an important actor in the development of new antibiotics, diagnostics and surveillance.

Sweden

Sweden has a clearly established national strategy that seems to be successful as they are among the lowest antibiotic use and resistance levels in the EU. Their regulations are strict and they have high-quality lab services that help them reach international goals.

Nigeria

AMR is growing in Nigeria, increasing the burden on the country. The implementation of the Action plan has been partial, as there is very limited access to appropriate healthcare, diagnostics and surveillance.

China

As a major supplier of antibiotics, China plays a vital role in the global pharmaceutical supply chain. The country faces high levels of resistance due to extensive historic antibiotic use in both human healthcare and agriculture. In response, China has established a national action plan emphasizing a One Health approach. It combines agricultural regulations and improving how hospitals track and control the way antibiotics are prescribed.

United Kingdom

The UK stands out, as it created a subscription-style funding model, which pays pharmaceutical companies a fixed annual fee for new antibiotics, instead of paying per pill sold. This model encourages drug companies to make new antibiotics, without pushing overuse.

Russian Federation

Russia's AMR crisis revolves mainly around multidrug resistant tuberculosis (MDR-TB), which is a major health threat across their region. Russia has a national plan to fight antibiotic resistance through 2030, but progress has been limited, due to weak unequal access to testing labs and easy access to antibiotics without prescription.

France

France has historically faced higher antibiotics consumption rates than other Western European countries. This led to them prioritizing highly effective public education campaigns to change patient expectations around prescriptions. France focuses on lowering community-level misuse and sustainable research alternatives.

QUESTIONS A RESOLUTION SHOULD ANSWER

- How can inappropriate antibiotic use be reduced, while maintaining access to antibiotics that are necessary?
- How can the prevention of infection through proper hygiene be strengthened?
- How can healthcare systems reduce the spread of resistant bacteria?
- How can countries with limited resources be a part of global AMR surveillance?
- How can appropriate antibiotics stay affordable and accessible?

CONCLUSION

In conclusion, the biggest challenge this crisis poses is to correctly balance the positives antibiotics brings us, while combating bacterial resistance caused by overuse. This is a global and cross border health issue, meaning each Member State has to individually create solutions that are supported internationally, to ensure countries are able implement them in their unique systems.

Additionally, it is not an easy task to develop new antibiotics, which is why it needs international cooperation to share progress and find alternatives as quickly as possible.

However, it is important to emphasize that if people do not change the way antibiotics are used now, these new antibiotics will suffer the same fate as the current ones and become ineffective, illustrating the significance of diverse solutions. This collaboration is also necessary to guarantee this issue is tackled in every sector that drives antibiotic resistance, from human medicine to agriculture and the environment.

Currently, the world is moving towards addressing this issue accordingly, but it is far from being solved, which shows the importance of a coordinated international response.

BIBLIOGRAPHY / REFERENCES

1. https://apps.who.int/gb/ebwha/pdf_files/WHA79/A79_5Add2-en.pdf
2. https://hospitalsmagazine.com/dr-zartash-khan/
3. https://www.alopexx.com/antimicrobial-resistance
4. https://www.who.int/news-room/questions-and-answers/item/antimicrobial-resistance-in-the-food-chain
5. https://pmc.ncbi.nlm.nih.gov/articles/PMC4536854/
6. https://www.medicaldaily.com/antibiotic-resistance-history-373773
7. https://www.cdc.gov/antimicrobial-resistance/programs/AR-actions-events.html
8. https://www.cdc.gov/food-safety/about/drug-resistance.html
9. https://www.mdanderson.org/cancerwise/what-is-a-multidrug-resistant-organism-mdro.h00-159781968.html
10. https://www.sciencedirect.com/science/chapter/referencework/abs/pii/B9780128036785000321?via%3Dihub
11. https://www.frontiersin.org/journals/microbiology/articles/10.3389/fmicb.2025.1698809/full
12. https://www.mdpi.com/2079-6382/14/6/621
13. https://link.springer.com/article/10.1186/s12982-025-00859-1
14. https://www.genevaenvironmentnetwork.org/resources/updates/antimicrobial-resistance-and-the-environment/
15. https://www.who.int/data/gho/data/themes/topics/topic-details/GHO/global-antimicrobial-resistance-surveillance-system-glass
16. https://www.ncbi.nlm.nih.gov/books/NBK513277/
17. https://www.whatisbiotechnology.org/assets/exhibitions/amr/presentation/AMR_Presentation_November_2020.pdf

18. https://www.uhc2030.org/news-and-events/news/article/preventing-antimicrobial-resistance-together-why-we-should-leverage-universal-health-coverage-to-address-amr/
19. https://www.ovid.com/jnls/jfmpc/fulltext/10.4103/jfmpc.jfmpc_275_19~indias-national-action-plan-for-antimicrobial-resistance-an
20. https://www.oecd.org/en/publications/transmission-of-antimicrobial-resistance-from-livestock-agriculture-to-humans-and-from-humans-to-animals_fcf77850-en.html
21. https://www.who.int/news/item/25-05-2026-the-world-health-assembly-adopts-updated-global-action-plan-on-antimicrobial-resistance-(2026-2036)
22. https://www.who.int/publications/i/item/9789241509763
23. https://www.who.int/health-topics/one-health#tab=tab_1
24. https://www.who.int/news-room/fact-sheets/detail/antimicrobial-resistance
25. https://pharmaceutical-journal.com/article/feature/everything-you-need-to-know-about-the-nhs-antimicrobial-resistance-subscription-model
26. http://resistancecontrol.info/2016/government-engagement/the-french-approach-to-fighting-antibiotic-resistance-a-constant-and-coordinated-effort-since-2000/

This is the end of the document.