EUROPEAN NETWORK FOR INFECTION PREVENTION AND ANTIMICROBIAL RESISTANCE (ENIPAR)

Call to Action for EU and national legislators
'Europe-wide action is needed to fight antimicrobial resistance through timely infection prevention and control'

High standards of infection prevention and control, along with the prudent use of antibiotics in communities, hospitals and long-term care facilities, are essential to reducing the emergence and development of antimicrobial resistance (AMR). Strengthening strategies by leveraging existing and innovative technologies, tools and therapies is crucial to support the challenge of resistant infections today.

The Call to Action of the European Network for Infection Prevention and Antimicrobial Resistance (ENIPAR)

Considering that progress has been slow in some areas and that major challenges remain, efforts must be intensified to ensure that targets are met at the global, European and national level, including a 10% reduction in mortality from AMR and a 20% reduction in inappropriate human antibiotic use within the community, hospitals and healthcare facilities and environments. These targets could be more easily reached through already available technologies and tools that can support decisions in all healthcare settings, and as part of broader policies and strategies aimed at improving the health of European citizens.

Keeping AMR high on the political agenda is a prerequisite for sustained support for the implementation of successful strategies. The current momentum was created on the basis of strong international collaboration at different levels. This now needs to be sustained: for instance, the initiative shown by the Swedish Presidency of the Council of the European Union has to be carried forward. In this context, the recent Council conclusions on the future of the European Health Union recommend that the Commission and Member States ensure the implementation of the 2030 targets. They also recommend reinforcing more performance-based antimicrobial stewardship and infection prevention and control[i]. In this regard, progress monitoring is key, in order to evaluate successes and failures in every country.

Many innovative tools and technologies to tackle healthcare-associated infections (HAIs) and AMR are already available, simple to adopt and cost-effective. By scaling these up, we can not only reduce the spread of infections and subsequent resistance, but also support other efforts to combat AMR by buying more time (as R&D pipelines for new medicines require time) and safeguarding reserve lists of antimicrobials. Prevention is also about decreasing the number of patients, preventing people from needing to be admitted to hospital and the risk of becoming subject to AMR.

As prevention is a cornerstone of the AMR resistance response, in the coming pages ENIPAR members advance baseline recommendations to European and national health authorities for prompt action on infection prevention measures and for fostering health resilience.

Successful implementation of **high-impact, evidence-based interventions** is key to strengthening the EU response to healthcare-associated infections and AMR prevention and control. The factors that make this possible work best when combined, and include the following areas: governance and leadership; surveillance; community and workforce awareness; IPC instruments; and medical technologies and tools.

By 2030, we call on global, EU and national policy makers to:

Support more innovative community awareness and workforce

- Ensure **continuous training of healthcare workforce to increase knowledge, appropriate use of technologies and implementation of protocols on infection prevention and control** by all personnel in the community, hospitals (including neonatal intensive care units), and long-term care facilities, with the help of behavioural insights.
- Sustain existing interventions to address the **excess of information and lack of clarity** around **infections**.
- Support citizen and **community health literacy and self-care of behaviours** related to infections, including immunisation, and hand hygiene.
- Promote continuous education programmes and curricula[iiiii], involving patient advocates, including **mandatory cross-sectoral training and competence courses** on AMR and infection prevention and control. These courses should also target schools and children.
- Leverage the expertise from various sectors and traditions to **enhance community and public awareness and workforce capacities in preventing and treating infectious diseases**, integrating innovative approaches and holistic practices in all healthcare settings.

Improve Antimicrobial Stewardship (AMS)

- Improve the implementation of more impactful **AMS programmes**, with pre-stated targets and indicators, the primary objective of AMS being to optimise clinical outcomes while reducing the unintended consequences of antimicrobial use.
- Promote the importance of **multidisciplinary antimicrobial stewardship teams** (including hospital pharmacists, nurses, doctors, microbiologists, IT specialists, NGOs, patient advocates etc.)[ivv] or other forms of antimicrobial governance in the hospital and in the community by enhancing the rational and optimal use of antimicrobial agents, selecting the appropriate medicines and dose according to patient-specific factors (such as age, weight, kidney and liver function), determining the correct administration and duration of the therapy, and utilising antibiotic susceptibility testing to minimise the use of broad-spectrum antibiotics[vi]. This will also improve the responsible care of patients and avoid the spread of drug-resistant infections[vii].
- Improve **knowledge about AMR and available guidelines in small hospitals,** as current AMR stewardship programmes often prioritise large hospitals, leaving smaller, peripheral facilities overlooked. This imbalance can result in inadequate AMR management in smaller settings, where resources and expertise might be limited. In order to address this issue, it is crucial to extend AMR education, resources, and implementation support to smaller hospitals. This could involve tailored training programmes (including tele-mentoring), simplified guidelines suited to smaller settings, and ensuring that stewardship initiatives are accessible and practical for all healthcare facilities, regardless of size. By broadening the focus of AMR programmes to include smaller hospitals, the overall effectiveness of AMR management can be significantly improved across the entire healthcare system.

Enhance the role of already available medical and digital technologies and promote innovative solutions

- **Utilise medical technologies (medical devices and in vitro diagnostics) which can help prevent, diagnose and control infections, stopping the spread of resistant bacteria throughout the patient pathway and in patient communications and/or healthcare settings**. Prevention and management of HAIs contribute to the control of bacterial resistance, by limiting the transmission of multidrug-resistant organisms, and consequently reducing the need for antibiotic therapy.
- Support access to already available and proven **rapid point-of-care tests in primary care settings**, where most antibiotics are prescribed, thus encouraging prudent antibiotics use and keeping current and new antibiotics effective.

- Spread actions related to **research and innovation** across a broad spectrum, including the development and integration of medical technology solutions.
- Promote **early detection by ensuring universal access to diagnostic services** that can guide proper diagnosis and treatment for patients, as well as detecting changes in resistance and preventing the spread of AMR.
- Encourage **proactive screening practices for high-risk groups (e.g. pregnant women and premature babies) before and during hospitalisation for multidrug-resistant organisms,** to improve patient management, help mitigate exposure and limit the spread of infections in the community and healthcare settings. For instance, molecular diagnostic testing can indicate the presence or not of a bacterial infection which requires an antibiotic or whether bacteria are drug resistant, thus supporting clinicians in selecting the right treatment and managing prescription and antibiotic use appropriately. This must be carefully interpreted in collaboration with an antimicrobial stewardship team to avoid overtreatment of high-risk groups, which may lead to unintended consequences such as antibiotic-related adverse effects (e.g. nausea, vomiting, or harm to the unborn baby).
- **Promote the use of digital health technologies** by implementing key tools which provide increased medical value that translates to better patient outcomes and cost-savings for hospitals, health systems and society at large.
- Improve **access to advanced diagnostic tools and medical technologies in rural and remote areas**. Initiatives such as mobile health units, telemedicine, and investments in local healthcare infrastructure can enhance diagnostic capabilities.
- Invest in the research and development of innovative non-antibiotic approaches to infection prevention and management, including **integrative healthcare options**, reducing the need for antibiotics, enhancing patient outcomes, and promoting sustainable healthcare practices.

Increase surveillance to gather quality data

- Implement **more effective and financially efficient mechanisms for the clinical surveillance of AMR** and antimicrobial use (AMU) in humans – strengthening capacity to provide only high-quality data (e.g., on child death in hospitals related to infections) that are necessary for action, supporting multisectoral collaboration and enabling the monitoring of progress **through screening and diagnostic testing** with adequate funding. Screening software can bring together data from various hospital systems, helping clinicians to monitor infection, detect pathogens, and comply with reporting protocols and prescribing practices, thus supporting targeted and timely interventions that improve patient outcomes.
- Close existing surveillance and monitoring gaps and, **in line with the European Health Data Space (EHDS), ensure completeness of data (including patient and physician surveys to investigate the use of antibiotics and attitudes), real-time data and timely access to data where appropriate** by 2030, on both AMR and Antimicrobial Consumption (AMC) at all levels (e.g. primary care, community, hospitals and long-term care facilities).
- In accordance with the European Centre for Disease Prevention and Control (ECDC), **set up indicators** and share best practices on their use to support attainment of the recommended targets. Propose additional targets on other AMR-related matters such as infection prevention control for all healthcare personnel, prescription practices and training. In this regard, targets should not be limited to the number and appropriateness of prescriptions recommended.

Push Infection Prevention and Control as the engine against AMR

- **Map and assess more effectively the implementation of protocols and guidelines** within pharmacies, hospitals, community care and long-term facilities to understand the impact of prevention practices and solutions.
- Further reinforce infection prevention and control (IPC) in adherence with local guidelines. **All IPC programmes should aim to prevent, screen, and monitor infection rates with the support use of medical technologies**. Clear key performance indicators (KPIs) must be set, regularly measured, and published to ensure the commitment of all stakeholders in the fight against AMR, along with enforcement by authorities.

- Aligning with ECDC and WHO guidelines, ensure all healthcare professionals possess **core competencies** for infection prevention and control and knowledge of the signs for sepsis.
- Make use of **EU and national guidelines for the prevention and potential treatment of common infections**.
- Make use of **EU and global guidelines to respect infection prevention and control,** encourage best practices and optimise the prudent use of antibiotics.
- **Highlight prevention, awareness-raising and proper management of infections and prescriptions in out-of-hospital settings,** including primary care, where most antibiotics are prescribed, as well as dental practices, aesthetic medicine clinics and other community health facilities. Where there are patients and service users, we must incentivise and prioritise prevention and education. This is particularly important to patients that are immunocompromised due to immune decay, as a result of a specific treatment or due to underlying genetic conditions such as primary immunodeficiencies.
- Provide **new funding for quality control and include enabling mechanisms such as grants, revised payment structures and reward systems** which should be implemented to incentivise hospitals to adopt essential practices aimed at reducing infection rates. The lack of reimbursement for certain medical devices and diagnostics, especially outside of hospital settings, disincentivises their use and favours presumptive antibiotic prescriptions.
- Introduce **funding that supports prevention** initiatives through strategic investments while fostering public-private-civil society partnerships, such as public uptake of privately developed MedTech.
- Foresee specific incentives for governments, especially in low- and middle- income countries, to **invest in new antibiotics, non-antibiotic prevention and treatment strategies (including TCIM), and vaccines**.
- Strengthen health promotion-based prevention strategies and well-being **to reduce over- and misuse of antimicrobials, and foster efficient disease management**.
- Invest in **preventive actions that foster the health resilience and well-being of populations**. Preventative measures and solutions are cost-effective, reduce non-communicable diseases (NCDs), the need for antibiotic medicines, and improve overall quality of life and well-being.
- Adopt **common vaccination strategies** and ensure that all healthcare professionals have access to vaccination records.
- Raise awareness on the **importance of vaccination and hygiene for preventing AMR**[viii].
- Adopt a **One Health approach** as recommended by the Quadripartite Organizations[ix] and reiterated by the Council of the EU[x].
- Through the involvement of all relevant stakeholders and competent healthcare professionals, **monitor and reduce the exposure to antimicrobials** and enhance environmental sustainability.

Reinforce governance and leadership to effectively address AMR

- Strengthen **National Action Plans** addressing AMR and encourage the adoption of the Council Recommendation on stepping up EU actions to combat AMR in a **One Health approach**. It is essential for countries to develop strategies that are sustainable over the long-term, with continuous funding, resource allocation, and robust policy support.
- Regularly **evaluate** the outcomes of National Action Plans in terms of infection and AMR reduction, and take actions to address the findings of these evaluations while considering new findings and emerging trends.
- Consider **AMR as part of national health security, preparedness and response plans**, ensuring integrated efforts to avoid AMR becoming an aggravating factor during epidemic and pandemic crises, and securing the necessary leadership and buy-in at a high level. Special attention should be paid to groups that are especially vulnerable to AMR, such as those with a low immunity like babies at neonatal care units (most of whom get antibiotics from day one), the elderly, immunodeficient patients, the immunocompromised, and more. Special protocols should be established so as to ensure that their particular needs are taken into consideration in any plan or activity to tackle AMR. This should involve testing pregnant women and premature babies to assess if they have an infection before women are admitted to wards with other pregnant women

and premature babies are moved to other hospitals. This would reduce the risk of transmitting AMR and infections to others.

- Support **low- and middle-income countries** with technical assistance, funding, and capacity-building initiatives to implement effective AMR strategies.
- Raise awareness of the **immediate availability of tools and technologies**, in order to rapidly implement and sustain cost-effective solutions.
- Advocate for the **EU to take a leading role globally**, engaging with diverse stakeholders to develop coordinated strategies to address AMR in a multisectoral One Health approach.
- Implement stricter regulations and monitoring mechanisms for antimicrobial production and their **release into the environment, to mitigate potential public health risks**.
- Facilitate the **exchange and uptake of best practices between Member States through relevant European institutions,** such as the European Centre for Disease Prevention and Control (ECDC), the European Medicines Agency (EMA), and the EU Joint Action on Antimicrobial Resistance and Healthcare-Associated Infections (EU-JAMRAI 2), to enhance collaborative learning and improve health outcomes across the region.
- Pay increased attention to the **social, cultural, commercial and political determinants of infection**, also ensuring improved water and sanitation mechanisms. Poor living conditions in the EU remains a major challenge.
- Introduce a **label** on the package of antibiotics to show the country production and that they are produced under safe circumstances.

Background

Antimicrobial resistance is one of the greatest planetary health challenges of our time, yet efforts need to be scaled up to effectively mitigate its threats. It is a recognised cross-border issue and one of the top three health threats faced by the European Union, along with pathogens with high pandemic potential, and chemical, biological, radiological, and nuclear threats.

It is estimated that every year, AMR causes the death of more than 35,000 people in the European Union and the European Economic Area (EEA), alone, putting a significant burden on European healthcare systems, with an approximate cost of €11.7 billion per year (€24 per capita)[xi]. By 2050, AMR could be associated with up to 10 million deaths[xii] and more than $1 trillion (€923.8 billion) in annual healthcare costs[xiii]. Effective infection prevention and control measures can significantly reduce this economic and healthcare burden.

Poor prevention and control of infection is a key contributor to increased AMR. Healthcare-associated infections (HAIs), many of which are caused by multidrug-resistant organisms, not only harm patients, but also visitors and health workers, and place a significant burden on health systems. In Europe alone, some 9 million HAIs occur every year in acute and long-term care facilities; they lead to 25 million extra hospital days and an accumulated cost €13-24 billion[xiv] for healthcare systems.

As more than 70% of cases of infections with antibiotic-resistant bacteria are estimated to be due to healthcare-associated infections[xv], greater provision of high infection prevention and control and testing, particularly in acute care settings such as hospitals, day-care, primary care and long-term care facilities, is needed. This also includes high standards of patient (especially the elderly and those with chronic diseases) and healthcare worker safety.

Although robust treatment options exist for people infected with multidrug-resistant bacteria, the scale-up of existing solutions to prevent, detect, monitor, and manage infection and resistance could greatly enhance prevention and treatment efforts. One example is timely and appropriate access to diagnostic tests, which can ensure resilience and optimal prescription of antimicrobial treatment in all healthcare settings, including primary care.

While policy discussions have been ongoing for years, observed progress towards national and international targets is variable, but generally too slow. Recent developments at the EU and global levels,

including Lancet's on AMR mortality and antibiotic use reduction[xvi], are encouraging, but their success greatly depends on their implementation.

The threat of AMR is being significantly exacerbated by factors like climate change[xvii], conflicts, and the displacement of populations. Climate change contributes to this problem by altering environmental conditions that favour the survival and spread of resistant bacteria. For instance, higher temperatures can increase bacterial infection rates and facilitate the spread of diseases to new regions. Additionally, extreme weather events, such as flooding, often lead to mass displacement and overcrowded living conditions, which are ripe for the spread of infections and the misuse of antimicrobials, further driving resistance.

Conflicts and displacement also play a critical role by disrupting healthcare systems, leading to the improper use of antibiotics and poor infection control practices. These conditions, combined with the effects of climate change, create a feedback loop that accelerates the spread of resistant bacteria and complicates efforts to manage AMR.

Persistent challenges and gaps are fuelling the impact of antimicrobial resistance

Most EU Member States have developed national action plans on AMR, yet over 75% of plans lack funds for implementation[xviii]. The COVID-19 pandemic has further affected implementation, with 90% of countries in Europe reporting a redeployment of resources from AMR to the COVID-19 response[xix]. Several national plans are also outdated[xx] and do not fully respond to numerous cross-sectoral challenges.

In particular, some of the challenges listed below are among the primary causes of often poor IPC and the subsequent fight against AMR:

- Inappropriate use of antibiotics in various countries[xxi], overuse of antimicrobial agents and resistance dissemination.
- Lack of access to available and proven rapid point-of-care tests to support informed antibiotic prescribing decisions in the primary care setting.
- Inconsistency in infection prevention control protocols between Member States, including limited surveillance[xxii] and monitoring mechanisms.
- National challenges related to hospitalisation, such as overseas hospitalisation, regular hospital visits, transfers of patients, intensive care unit stays, surgeries[xxiii] and invasive medical procedures.
- Poor coordination between hospitals, primary care, community care and long-term facilities, including inadequate settings for and repeated transfers of high-risks patients, which leads to limited room for prevention of and intervention on infections and AMR.
- Lack of reliable patient data across Europe[xxiv].
- Complexity of AMR and difficulty in conveying its urgency to the public, as well as a lack of consistent definitions across patient care, healthcare practice, the public, and policy development[xxv]. This hinders alignment and effectiveness in addressing AMR across different sectors and care levels.
- Lack of recognition across the EU of the role of medical technologies (i.e. tests, imaging tools) in preventing infections. This is linked to the variable adoption of medical technologies to support decision-making[xxvi] in urgent care that could help detect and monitor multidrug-resistant organisms, as well as help staunch the spread of resistant bacteria[xxvii] throughout the patient care journey, therefore fighting the root of the problem causing AMR.

- Lack of incentives from the EU and national governments to diagnose infection early on. This is in addition to the lack of payment structures and reward systems to implement gold standards for screening and prevention practices aimed at reducing infection rates.

- Lack of adherence by EU Member States to the AWaRe framework for antimicrobial stewardship and efforts for safeguarding antimicrobials[xxviii].

- Lack of investment in preventive measures to improve population health and manage the overall risk of infections.

- Lack of knowledge about the complexity of the drivers of infection, which include both pure healthcare aspects but also social and economic ones.

- Workforce deficits when it comes to the knowledge of and ability to address AMR through infection prevention and control.

- The worsening rates of antimicrobial resistance are being exacerbated by climate change and on-going conflicts[xxix] [xxx].

- Inconsistency in establishing antimicrobial stewardship teams across Member States.

Political action is on course to meet the EU and WHO 2030 targets

With the 2030 targets in sight, set by the World Health Organization (WHO) and the European Union (EU), global efforts to tackle AMR are showcasing a growing commitment to address the problem. These targets emphasise reducing antibiotic consumption, lowering infection rates, and promoting prevention measures. Recent EU initiatives, along with upcoming international meetings, reflect a strong and coordinated commitment to achieving these goals and enhancing infection control measures worldwide.

More specifically, in June 2023, the Council of the European Union adopted a **Council Recommendation** on stepping up EU actions to combat AMR in a One Health approach[xxxi]. The Recommendation, which was further reiterated in the Council Conclusions of June 2024[xxxii], urges the implementation of infection prevention and control measures and policies in the community, long-term care facilities and healthcare settings, and prudent use of antibiotics. More specifically, it puts forward **targets to be achieved in the EU by 2030**, including reducing the total consumption of antibiotics and the total incidence of bloodstream infections with resistant bacteria, and ensuring that more of the antibiotics consumed belong to the WHO Access group of antibiotics[xxxiii].

2024 is a crucial year for AMR at global level. The **United Nations (UN) General Assembly** convened its second **High-Level Meeting on AMR** during its 79th session (UNGA 79) in New York in September 2024, following the first meeting in 2016.

G7 Leaders[xxxiv] also remain deeply concerned with AMR and will support an ambitious outcome document that includes concrete goals and targets to galvanise action, along with the mandate for an evidence-based panel to continue to drive global action on AMR. G7 leaders pledged to continue promoting equitable access to essential antibiotics and integrated actions to counter AMR within a One Health Framework, by exploring and implementing infection prevention and control measures, as well as exercising stewardship for prudent and appropriate use of antibiotics, including surveillance of their use and consumption.

Cosignatories

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EUROCAM - Traditional, Complementary and Integrative Medicine

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European Health Management Association (EHMA)

European Association of Hospital Pharmacists (EAHP)

Fondazione The Bridge

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European Wound Management Association (EWMA)

International Patients Organisation for Immunodeficiencies (IPOPI)

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UNITE – Parliamentarians Network for Global Health

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of hospital pharmacists


EHMA
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About the European Network for Infection Prevention and Antimicrobial Resistance

Founded in March 2024, the European Network for Infection Prevention and Antimicrobial Resistance (ENIPAR), consisting of stakeholders such as academics, patient groups and healthcare professionals, is committed to implementing effective infection prevention and control measures and policies in healthcare settings and in the community, and to promoting prudent and sustainable use of antibiotics in the community, long-term care facilities and healthcare settings.

The ENIPAR aims to be a vigilant body, fostering dialogue among relevant stakeholders, supporting European and national initiatives to educate and promote awareness on the root causes of AMR, including the urgent threat of multidrug resistance caused by the WHO-classified pathogens, and proposing solutions and highlighting best practices to reduce and monitor AMR, leading to improved patient and healthcare worker safety. The role of industry, academia, patients and NGOs, including networks like ENIPAR, is key in providing input to decision-makers and EU institutions.

Interested stakeholders convene to discuss the implementation of effective, results-driven policy measures to enhance patient education, stewardship and infection control, harmonised surveillance of resistant pathogens, and ultimately stopping the spread of AMR. While this network promotes human health related AMR actions, all AMR strategies need to be based on a One Health approach which promotes involvement and collaboration of all sectors.

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