Policy Design

Domain one: Strategic vision

# Q1: Is a national action plan (NAP) for tackling antimicrobial resistance (AMR) in place in Europe?

Yes, many countries in Europe have developed a National Action Plan (NAP) for tackling antimicrobial resistance (AMR). As of the latest data, the number of countries in the WHO European Region that reported having developed a NAP on AMR increased from 34 (68%) of the 50 countries in 2017 to 44 (85%) of the 52 countries that responded in the latest round of global monitoring [Reference: Page 2, Surveillance of antimicrobial resistance in Europe for 2021, 2022, ECDC, WHO]. This indicates a significant effort across European countries to address AMR through the establishment of NAPs. Additionally, the European Commission adopted a European One Health Action Plan against AMR in 2017, which provides a framework for continued, more extensive action to reduce the emergence and spread of AMR across the EU [In-house knowledge].

Reference

EU, WHO. (2023). *Antimicrobial resistance surveillance in Europe 2021 to 2023*. Page 14.

10 in Chapter 3). Member States of the WHO European Region have enhanced efforts to tackle AMR. In 2017, only 34 (68%) Country-specific information for each bacterial species, of the 50 countries reported having developed a national including information on patient age group and sex, are action plan (NAP) on AMR, but the latest round of global available on the WHO European Region website [1].

ECDC, WHO. (2022). *Surveillance of antimicrobial resistance in Europe for 2021*. Page 2.

action plan (NAP) on AMR, but the latest round of global Country-specific information for each bacterial species, monitoring showed that this had increased to 44 (85%) ofincluding information on patient age group and sex, are the 52 countries that responded in the Region. The chal available on the WHO European Region website [1].

Austrian Federal Goverment, the Federal ministry for social, health, care and consumer protection. (2021). *National Action Plan on Antibiotic Resistance*. Page 23.

Entwicklungen auf nationaler und internationaler Ebene (globaler Aktionsplan der Weltgesundheitsorganisation (WHO; World Health Organization) zu AMR 2015, „Schlussfolgerungen des Rates derEuropäischen Union (EU) zu den nächsten Schritten im Rahmen einer “One-Health“ Strategie zur Bekämpfung der Antibiotikaresistenz“ [1]) seit der Veröffentlichung des Nationalen Aktionsplan zur Antibiotikaresistenz (NAP-AMR) im Herbst 2013 führten dazu, dass im Jahr 2016 eine Überarbeitung des bestehenden nationalen Aktionsplans beschlossen wurde.

ECDC. (2020). *Antimicrobial resistance in the EARS-Net for 2020*. Page 8.

A majority of EU/EEA countries in a 2017 survey reported having implemented or initiated work towards establishing objectives and targets for the reduction of antibiotic use in humans, often through the development of a national action plan (NAP) on AMR. Only a few, however, had published these targets in 2017 [16] and had identified specific funding sources to implement their NAPs [12].

EFSA, ECDC. (2024). *The European Union summary report on antimicrobial resistance in zoonotic and indicator bacteria from humans, animals and food in 2021–2022*. Page 11.

The European Commission adopted an Action Plan to tackle AMR on 29 June 2017.1 The Action Plan is underpinned by a One Health approach that addresses resistance in bacteria from both humans and animals.

ECDC. (2020). *Antimicrobial resistance in the EARS-Net for 2020*. Page 32.

A European One Health Action Plan against Antimicrobial Resistance (AMR). Brussels: EC; 2017. Available at:https ://ec.europa.eu/health/sites/health/files/antimicrobial\_resistance/docs/amr\_2017\_ action 16. D’Atri F, Arthur J, Blix HS, Hicks LA, Plachouras D, Monnet DL et al.

ECDC, EFSA, EMA. (2024). *Antimicrobial consumption and resistance in bacteria from humans and food producing animals 2019−2021*. Page 146.

(2017). A European One Health Action Plan against Antimicrobial Resistance (AMR). https://e c.e uropa.e u/h ealth/s ites/h ealth/f iles/ antimi crobi al\_r esist ance/d ocs/a mr\_2 017\_a ction-p lan.p df Eurostat. (2023). Hospital days of in- patients. https://e c.e uropa.e u/e urost at/d atabr owser/v iew/h lth\_c o\_h osday/d efaul t/t able?l ang=e n Flor, M., et al. (2018).

EFSA, ECDC. (2018). *The European Union summary report on antimicrobial resistance in zoonotic and indicator bacteria from humans, animals and food in 2016*. Page 30.

www.efsa.europa.eu/efsajournal 29 EFSAJournal2018;16(2):5182 EUSR onAMR in zoonoticandindicator bacteriafrom humans,animals andfood2016 A new EU action plan against antimicrobial resistance The European Commission adopted a new Action Plan to tackle Antimicrobial Resistance (AMR) on 29 June 2017.

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# Q2: Are the objectives contained within the NAP specific, measurable (e.g., reduction in drug-resistant infection, slowing trends of resistance development), and time-bound in Europe?

The objectives within the National Action Plans (NAPs) on Antimicrobial Resistance (AMR) in Europe are designed to be specific and measurable, aligning with the overarching goals of reducing drug-resistant infections and slowing the trends of resistance development. However, the degree to which these objectives are time-bound can vary across different Member States, and there have been challenges in ensuring that these objectives are consistently applied and effectively monitored.

For instance, the European Parliament resolution of 1 June 2023 on EU action to combat antimicrobial resistance calls on Member States to implement a national action plan against AMR, based on the One Health approach and in line with the objectives of the World Health Organization Global Action Plan. It emphasizes the importance of regular updates to these National Action Plans [Reference: European Parliament resolution of 1 June 2023 on EU action to combat antimicrobial resistance, 2023, European Parliament]. This suggests a framework for specific, measurable, and time-bound objectives, although it highlights the need for ongoing commitment and adaptation.

Moreover, the European Centre for Disease Prevention and Control (ECDC) suggests that national action plans should be evaluated at least every three years, with actions to address the findings of the evaluations implemented. This indicates an effort to ensure that objectives are not only specific and measurable but also reviewed and updated within a defined timeframe [Reference: Antimicrobial resistance targets - how can we reach them by 2030, 2023, ECDC].

However, there have been challenges in ensuring adequate funding for the implementation of NAPs, with effective intervention packages to combat AMR. This has been one of the largest remaining challenges, indicating that while objectives may be set, their implementation and the achievement of time-bound targets can be hindered by resource limitations [Reference: Antimicrobial resistance surveillance in Europe 2021 to 2023, 2023, EU, WHO].

In summary, while the objectives within the NAPs in Europe are intended to be specific, measurable, and time-bound, the effectiveness of these plans can be affected by factors such as funding, the level of intersectoral coordination, and the commitment to regular evaluation and update of the plans. These challenges highlight the importance of continued efforts to ensure that the objectives of NAPs are not only well-defined but also effectively implemented and adapted over time to combat AMR effectively.

Reference

ECDC. (2021). *Assessment tool for joint One Health country visits in relation to antimicrobial resistance*. Page 2.

The Global Action Plan has five overarching strategic objectives: 1. Communication, education and training; 2. Surveillance and research; 3. Sanitation, hygiene and infection prevention measures; 4. Optimisation of use of antimicrobial medicines in human and animal health; 5. Investment in new medicines, diagnostic tools, vaccines and other interventions [3].

ECDC. (2020). *Antimicrobial resistance in the EARS-Net for 2020*. Page 8.

A majority of EU/EEA countries in a 2017 survey reported having implemented or initiated work towards establishing objectives and targets for the reduction of antibiotic use in humans, often through the development of a national action plan (NAP) on AMR. Only a few, however, had published these targets in 2017 [16] and had identified specific funding sources to implement their NAPs [12].

Ministry of Health, Barbados. (2017). *National Action Plan on Combatting Antimicrobial Resistance*. Page 12.

Objectives of the National Action Plan In alignment with those of the GAP-AMR, the five (5) Objectives of the NAP are: Objective 1: Improve awareness and understanding of antimicrobial resistance through effective communication, education and training. Objective 2: Strengthen the knowledge and evidence base through surveillance and research including in animals, plants, the environment and food.

Ministry of Health and Sanitation, Ministry of Agriculture, Forestry and Food Security, Envioronment Protection Agency, Sierra Leone. (2018). *National Strategic Plan for Combating Antimicrobial Resistance*. Page 14.

The overarching goal of the NAP is to ensure, for as long as possible in Sierra Leone, continuity of successful treatment and prevention of infectious diseases with medicines that are quality-assured, prescribed and used responsibly, and accessible to all who need them at a price that they can afford. 4. Objectives The following are the specific objectives of the NAP-: 1.

Ministry of Health, Kenya. (2017). *National action plan on prevention and containment of antimicrobial resistance 2017-2022*. Page 8.

The NAP aims to provide a coherent policy framework and priority actions to contain the emergence and spread of AMR, through the following strategic objectives: • To improve awareness and understanding of antimicrobial resistance through effective communication, education and training • To strengthen the knowledge and evidence base through surveillance and research • To reduce the incidence of infection through effective sanitation, hygiene and infection prevention measures • To optimize the use of antimicrobial medicines in human and animal health • To develop an economic case for sustainable investment that takes into account the needs of the country and investment into new medicines, diagnostics, tools, vaccines and other interventions.

EU, WHO. (2023). *Antimicrobial resistance surveillance in Europe 2021 to 2023*. Page 59.

Despite these limi countries reporting this in 2017 [2]. One of the largest tations, the presence of specific AMR patterns across remaining challenges is to ensure adequate funding clinical settings covered by the surveillance networks for implementation of NAPs, with packages of effectiveis apparent. High percentages of resistance to third intervention to combat AMR.

Ministry of Health, Kenya. (2017). *National action plan on prevention and containment of antimicrobial resistance 2017-2022*. Page 16.

This is in line with the National policy on prevention and containment of AMR. The NAP is anchored on the following key strategic objectives: to improve awareness and understanding of antimicrobial resistance; to strengthen knowledge through surveillance and research; to reduce the incidence of infection; to optimize the use of antimicrobial agents; and to ensure sustainable investment in countering antimicrobial resistance.

ECDC, WHO. (2021). *Surveillance of antimicrobial resistance in Europe 2020 data*. Page 5.

Executive summary work towards establishing objectives and targets for the 6. Surveillance atlas of infectious diseases. In: European Centre for Disease Prevention and Control [website]. Stockholm: European reduction of antibiotic use in humans, often through the Centre for Disease Prevention and Control; 2021 (https://www.ecdc. development of a NAP on AMR.

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# Q3: Are there quantitative targets for AMR or antimicrobial use outlined in the national action plan (NAP) in Europe?

In Europe, the approach to setting quantitative targets for antimicrobial resistance (AMR) or antimicrobial use (AMU) within National Action Plans (NAPs) is nuanced and varies by country. The European Union encourages Member States to develop NAPs that include specific measures to achieve measurable overarching goals, implementation modalities, and indicators to assess progress towards these goals [Reference: Page 16, European Parliament resolution of 1 June 2023 on EU action to combat antimicrobial resistance, 2023, European Parliament]. This suggests a framework for setting quantitative targets is recommended.

However, due to the diverse situations regarding AMR and antibiotic consumption in individual countries, cross-country reduction targets are not deemed very meaningful. Instead, targets must be set at the national level, which could include general reduction, reduction of specific substances, or guideline-compliant prescription. Member States are advised to include such targets in their national AMR strategies [Reference: Page 102, Subgroup established under the EU AMR One Health Network to formulate suggestions for AMR Actions, 2022, UN AMR One Health Network].

Furthermore, the European Commission's Farm to Fork Strategy includes a target for a 50% reduction of overall EU sales of antimicrobials for farmed animals and in aquaculture by 2030 [Reference: Page 15, Proposal for a COUNCIL RECOMMENDATION on stepping up EU actions to combat antimicrobial resistance in a One Health approach, 2023, European Commission]. Although this target is specific to the agricultural sector, it indicates a move towards establishing quantitative benchmarks for antimicrobial use, which could influence the setting of similar targets within the human health sector.

In summary, while there is encouragement and a framework for setting quantitative targets for AMR and AMU within NAPs in Europe, the actual establishment of such targets is left to the discretion of individual Member States, taking into account their specific circumstances. This approach allows for flexibility but also underscores the importance of national-level action and accountability in combating AMR. [In-house knowledge]

Reference

ECDC. (2020). *Antimicrobial resistance in the EARS-Net for 2020*. Page 8.

A majority of EU/EEA countries in a 2017 survey reported having implemented or initiated work towards establishing objectives and targets for the reduction of antibiotic use in humans, often through the development of a national action plan (NAP) on AMR. Only a few, however, had published these targets in 2017 [16] and had identified specific funding sources to implement their NAPs [12].

ECDC, WHO. (2022). *Surveillance of antimicrobial resistance in Europe for 2021*. Page 2.

ied substantially among countries in the Region. In 2021, Since the publication of the Global Action Plan on resistance percentages of below 1% were reported by six Antimicrobial Resistance (GAP-AMR) in 2015 [2], most(14%) of 44 countries reporting data on this microorgan Member States of the WHO European Region have ism, while percentages equal to or above 25% were found enhanced efforts to tackle AMR.

ECDC. (2020). *Antimicrobial resistance in the EARS-Net for 2019*. Page 6.

In a 2017 survey, a majority of EU/EEA countries reported having initiated work towards establishing objectives and targets for the reduction of antibiotic use in humans, often in the context of developing a national action plan for AMR.

EU, WHO. (2023). *Antimicrobial resistance surveillance in Europe 2021 to 2023*. Page 60.

Only five countries of 18 report- of AMR in the future. In fact, on 13 December 2021, the ing to the WHO Regional Office for Europe Antimicrobial goal of strengthening preparedness against the ‘silent Medicines Consumption Network achieved this target in pandemic’ of AMR was agreed upon by all G7 Finance 2019 [4]. Ministers [9].

EU, WHO. (2023). *Antimicrobial resistance surveillance in Europe 2021 to 2023*. Page 14.

10 in Chapter 3). Member States of the WHO European Region have enhanced efforts to tackle AMR. In 2017, only 34 (68%) Country-specific information for each bacterial species, of the 50 countries reported having developed a national including information on patient age group and sex, are action plan (NAP) on AMR, but the latest round of global available on the WHO European Region website [1].

European Commission. (2023). *Proposal for a COUNCIL RECOMMENDATION on stepping up EU actions to combat antimicrobial resistance in a One Health approach*. Page 16.

The recommended targets should contribute to achieving common goals and can be complemented by national targets that cover other AMR-related aspects, such as infection prevention and control, antimicrobial stewardship, prescription practices and training.

ECDC, WHO. (2022). *Surveillance of antimicrobial resistance in Europe for 2021*. Page 2.

action plan (NAP) on AMR, but the latest round of global Country-specific information for each bacterial species, monitoring showed that this had increased to 44 (85%) ofincluding information on patient age group and sex, are the 52 countries that responded in the Region. The chal available on the WHO European Region website [1].

UN AMR One Health Network. (2022). *Subgroup established under the EU AMR One Health Network to formulate suggestions for AMR Actions*. Page 60.

to control and monitor antimicrobial use and development of AMR. The establishment of a set of qualitative and quantitative indicators to monitor levels of antimicrobial use and resistance, which could be used at both national and European level to monitor the progress of the European Action Plan/National Action Plans on AMR, is considered as a useful tool.