**Executive Summary**

The last two decades have witnessed several global, European and national initiatives to combat antimicrobial resistance (AMR). At the World Health Assembly in 2015, all UN Member States endorsed the Global Action Plan on AMR and adopted a Resolution, recognising the importance of tackling AMR through a “One Health” approach, involving different actors and sectors, and committing to develop by 2017, national action plans (NAPs) on AMR aligned with the Global Action Plan. Council Conclusions on a One Health approach to combat AMR, adopted in June 2016, reiterated this commitment and elaborated on some aspects which NAPs on AMR, adapted to national contexts, could include.

In spite of the recent momentum, enhanced political will and strengthened policy commitment towards a more coordinated and multisectoral approach to addressing AMR, progress on the development and more importantly, the implementation of national plans at local level has not been optimal.

Although the ambitious target of adopting NAPs worldwide by 2017 has not been reached, at a global level, the tripartite organisations (the World Health Organization, Food and Agriculture Organization of the United Nations and the World Organization for Animal Health) recognise that there has been sustained progress in the development of NAPs to address AMR since 2016. The tripartite global database for AMR includes a recent overview of country progress on AMR based on country self-assessment. To date, 60.4% of reporting countries worldwide have developed NAPs on AMR and among those countries that have not yet developed a NAP, 33 % of countries reported that a plan is currently under development.

All surveyed EU and EFTA Member States reported the implementation of a NAP. However, publication the database demonstrates significant variation in the stages of development of NAPs in these countries. This is also the case across the WHO European region, where 22% of countries reported having developed a NAP on AMR, 30% reported having an operational NAP, approved by government and aligned with the Global Action Plan and 16% of countries reported developing and implementing a NAP across various sectors with the identification of funding sources and the inclusion of evaluation mechanisms.
Coherent and robust policies are crucial to effectively combat AMR. A national action plan serves as a guiding policy framework in the fight against AMR, whereby different multi-sectoral actions are aligned and coordinated. A complete overview of which countries have developed an action plan is necessary to compare actions and measures, learn from best-practice examples and overcome common challenges.

Through the scrutiny of different data sources which record the development and/or implementation of a NAP in the countries in question, based on country self-reporting, a disparity in the number of countries which reportedly have developed or implemented a NAP was identified. Therefore, the European Public Health Alliance (EPHA) has undertaken a thorough independent mapping exercise of NAPs and similar initiatives in 31 European countries. The country analysis seeks to shed light on the current European situation, focusing on actions taken to combat AMR by governments and which aspects of AMR are given the most importance in policy-making. Based on the analysis, some examples of NAPs have been evaluated according to four thematic areas:

- encompassing a One Health approach;
- including financing estimates and identification of funding sources;
- integrating implementation and evaluation mechanisms;
- identifying clear measurable goals.

Across the 31 European countries studied in this paper, good practice examples co-exist alongside poor practices and inaction. Most countries do have a NAP in place or have initiated the process for its development. In fact, of the 31 countries analysed in this paper, 74% have developed and/or implemented a NAP or a similar initiative to tackle AMR.

However, Member States are at very different stages in terms of developing and implementing NAPs or similar initiatives to combat AMR. It is striking that most One Health NAPs are found in Northern and Central Europe, where AMR prevalence is generally lower than the rates observed in Eastern and Southern European countries, which often face considerable healthcare systems challenges and lack of sustained financing.

There are also considerable variations with regard to the comprehensiveness and the One Health approach reflected in the NAPs in place. In fact, at the time of this analysis, only 51% of the countries analysed could be considered as having action plans or national programmes or strategies that follow a One Health approach. In fact, whilst acknowledging the One Health concept, some NAPs do not appear to follow a truly One Health approach and still address AMR in different fields separately.

It is often unclear whether certain national policies would qualify as formal national plans. Indeed, some plans appear to be rather fragmented comprising of a main strategy accompanied by other secondary documentation or separate strategies targeting one sector in particular. Therefore, there remains
considerable scope to **streamline the multiple strategies on AMR present in some countries and to incorporate them into a single, coordinated One Health NAP.** This may require better coordination and communication among different government Ministries and agencies, ensuring that all relevant actors understand the importance of adopting a multisectoral approach.

Interestingly, irrespective of whether NAPs were released recently, certain elements laid out in the 2016 Council Conclusions on AMR, such as infection prevention, promoting prudent use of antimicrobials, surveillance and monitoring of consumption and resistance of antimicrobials; awareness-raising and education feature predominantly as common overarching goals or priorities in most NAPs which are currently in place.

However, the identification of measurable targets covering both the human and the veterinary sector, the integration of monitoring and evaluation mechanisms as well as the inclusion of estimates of required financial resources or a delineation of dedicated funds available for NAP implementation, is not a common occurrence in the plans and strategies of most of the countries analysed, which may hamper effective implementation of the proposed actions.

Effective implementation of actions in the spirit of a One Health approach may be cumbersome, particularly if the national structures in place, such as coordination committees, do not ensure true representation of stakeholders from all sectors. Moreover, if funding is not clearly indicated and provided, responsible actors may face difficulties in accessing funds in order to realise projects set out in the plans. In fact, resource mobilisation and integrating sustainable financing mechanisms into NAPs is also essential for the implementation of wider AMR stewardship.

The analysis carried out in **this paper also sheds light on possible initiation and implementation challenges Member States could be facing in the process of developing or executing their NAPs.** The good news is that policy solutions exist and the paper discusses a number of opportunities that could provide support to MS in their endeavours.

**What role can the EU and other actors play to counter the challenges faced by Member States? How can countries which are struggling to meet their commitments benefit from both technical and financial support?**

As Member States do not seem to possess sufficient resources to develop and implement comprehensive national AMR strategies, **dedicated European funding could be made available to assist Member States.** They should also continue to benefit from expert assistance and any supporting tools at their disposal in the further development and implementation of their national policies for tackling AMR.
In this spirit, the paper puts forward the following recommendations directed towards both national governments and the EU institutions.

**EPHA RECOMMENDATIONS**

**TOWARDS THE EUROPEAN COMMISSION**

- Identify specific barriers hampering the development and implementation of NAPs in some countries and provide sustained technical assistance
- Allocate adequate EU funding (possibly a dedicated European AMR fund) to support countries’ implementation of AMR policies, especially those currently struggling to meet their NAP commitments
- Facilitate and strengthen civil society engagement within the EU AMR One Health Network, involving the AMR stakeholder network of the EU Health Policy Platform and giving it a more formalised role in order to be able to better contribute to policy-making at EU level
- Enhance the work of the AMR One Health Network to better address the environmental dimension, as this will encourage a similar approach nationally
- Adopt an EU strategic approach to pharmaceuticals in the environment as soon as possible
- Set minimum criteria to be included in NAPs, aligned with the Global Action Plan, which could be adapted to national contexts and needs
- Propose a regulatory framework to harmonise antibiotic prescription practices, limiting the sale and consumption of antibiotics across the EU
- Leverage country-to-country learning, coordination and best practice exchange which is valuable for informing future national actions, beyond what is already being done through the EU Joint Action (EU-JAMRAI)
- Strengthen EU engagement on addressing AMR, leading by example in the promotion of antibiotic stewardship and working to provide technical assistance to Member States
- Mainstream funding (which is often fragmented, disease-specific and research-focused) for AMR at European level
- Communicate the importance of AMR stewardship in the EU’s interaction with major global trading partners, ensuring that bilateral agreements are aligned with a One Health approach to fight AMR.

**TOWARDS EU MEMBER STATES**

- Implement national policies and actions on AMR following a One Health approach; bringing together policy-makers and experts from different sectors (human health, animal health,
environment, food safety, agriculture) as well as ensuring the involvement of all relevant bodies throughout the development, implementation and evaluation of NAPs

- Incorporate measurable targets in NAPs, following the harmonised outcome indicators proposed by ECDC, EFSA and EMA, to facilitate the monitoring of progress in reducing the use of antimicrobials and AMR in both humans and food-producing animals
- Identify funding sources and budget estimates for the execution of proposed actions and activities
- Mobilise appropriate human and financial resources to ensure effective implementation of NAPs
- Incorporate evaluation mechanisms and reporting arrangements in NAPs to monitor progress in the reduction of antibiotic use and AMR, adjusted accordingly to take account of national requirements and emerging priorities
- Ensure that national antibiotic councils and coordinating committees reflect a diversity of stakeholders, from multiple sectors
- Introduce and enforce policies aimed at regulating antibiotic prescriptions for humans and animals, to tackle high consumption rates at source.
- Scale up and mainstream multiple strategic plans and activities on AMR into one, single, coordinated One Health NAP which includes actions in different sectors
- Ensure that professionals and aspiring physicians, nurses, veterinarians, pharmacists and the entire health workforce are adequately trained to manage AMR challenges
- Invest in adequate healthcare infrastructure which is conducive to the delivery of quality and safe care alongside infection prevention and control measures
- Improve surveillance and data collection methods and undertake research to better study the effects of foodborne AMR and environmental antimicrobial pollution
- Allow for better engagement of Member States experiencing difficulties in developing their NAPs in the EU-JAMRAI
- Involve countries facing considerable healthcare and AMR challenges in research and development programmes in order to develop innovative and affordable tools or alternatives, while at the same time, meeting the needs of countries with high AMR prevalence.

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