Response to the UK's new National Action Plan to tackle AMR: survey results

1. Introduction

Last week, The UK Government published the latest five-year AMR National Action Plan (NAP) "Confronting Antimicrobial Resistance", which aims to take the UK closer to reaching its vision of containing and controlling AMR by 2040.

This plan focused on four key themes: reducing the need for, and unintentional exposure to, antimicrobials; optimising the use of antimicrobials; investing in innovation, supply and access; and being a good global partner.

Following its release, the Microbiology Society launched a survey to gather feedback and insights from the microbiology community regarding the content of the NAP.

We thank our community for their feedback via this survey and look forward to continuing to convey the collective opinion of the microbiology community to the UK Government over the next five years as the NAP is delivered.

2. Headlines

- 82 responses were collected to the survey, comprised of 16 questions (provided in Appendix)
- The overall response to the NAP was largely positive, with 88% of respondents agreeing that the four key areas should be prioritised, 74% of respondents agreeing that the commitments are clear enough, 66% of respondents agreeing that the research areas have been prioritised correctly and 66% of respondents thinking that the NAP is suitable and appropriate for all of the 'One Health' sectors.
- Positive comments include: 'happy to see some action', 'brilliant that the UK is taking the lead'; 'step in the right direction'; and 'happy to see this important action plan moving forward'.
- While 55% of respondents thought that this NAP is an improvement from the previous plan, 40% were not sure. Of those who gave comments, some found the targets to be more realistic, though ultimately less ambitious.
- 51% of respondents believed the NAP to be ambitious enough. Those who did not think the NAP was ambitious enough (22%) cited a lack of joined-up thinking; a lack of global leadership and a lack of ambitious targets. A few respondents also highlighted that the level of ambition is dependent on the funding available to implement the plan.
- 56% of respondents believed that the human health targets are appropriate, with those who disagreed citing a lack of sufficient ambition in the targets (although many identified a need to be realistic).

- When asked to comment on whether the 30 commitments laid out in the plan were sufficiently clear, a significant majority (74%) agreed, with <4% saying 'no' (23% indicated 'not sure'). The majority of comments provided highlighted a need to define measures of success, rather than changes to the commitments themselves

3. In-depth

3.1 The key themes

- 87% of respondents agreed with the prioritisation of the four key themes (reducing the need for, and unintentional exposure to, antimicrobials; optimising the use of antimicrobials; investing in innovation, supply and access; being a good global partner).

- Those with further feedback provided some comments that suggested a lack of clarity around the definition of 'being a good global partner'.

- Additionally, 45% of respondents think that a key theme is missing from the NAP. The most frequent themes (30% of comments) suggested specifying the use of surveillance and diagnostics in the management of AMR and the development of alternative therapeutics.

3.2 Proposed outcomes by theme

- Respondents were largely positive about the proposed outcomes:
- For theme 1 'Reducing the need for, and unintentional exposure to, antimicrobials':
    - 67% of respondents did not think that any areas were missing from the outcomes.
    - 28% said they believed areas were missing from these outcomes, including several respondents suggesting an increased emphasis on the role of diagnostics; prioritising the use of vaccines in Infection Prevention Control (IPC); infection management in high-risk groups; expanding surveillance outcomes to reference monitoring the use of/exposure to antimicrobials in healthcare and the environment and understanding the transfer of resistance between microbes (not just the spread of resistant microbes).
- For theme 2 'Optimising the use of antimicrobials':
    - 63% of respondents did not think that any areas are missing from the outcomes.
    - 28% believed areas were missing from the outcomes. Comments included clarification of the balance between theme 1 and theme 2 and their overlap. Concern was raised over what was to be included within the 'antimicrobial stewardship and disposal' outcome, with some comments suggesting that stewardship alone did not cover other key strategies to optimise antimicrobial use. Other strategies to consider include novel-use strategies, avoiding 'double-use' of antimicrobials in humans and animals and ensuring the linking of effective prescribing to stewardship.
- For theme 3 'optimising the use of antimicrobials; investing in innovation, supply and access':
    - 70% of respondents did not think that any areas are missing from the outcomes.

    - Of the 21% who felt elements were missing, comments included the importance of investment into blue-sky research and the inclusion of diagnostics development in the 'innovation and influence' outcome.
    - Many comments highlighted the need to specify the importance of cross-disciplinary working in this theme.
- For theme 4 'Being a good global partner':
    - 65% of respondents do not think that any areas are missing from the outcomes.
    - 26% of respondents believed an area was missing. Comments suggested a lack of understanding of the measures of success within this outcome. Almost all comments (80%) highlighted the need to develop the intended outcomes of AMR diplomacy, be that with which countries/regions or regarding what these partnerships should look like (for example multi-national studies or public engagement campaigns).

3.3 Research priorities

- 66% of respondents believed the research areas have been prioritised correctly.
- 33% of respondents thought that there is a research priority missing, with research around antifungal resistance, diagnostic tool development and the development of/spread of/exposure to AMR in agriculture/ the environment cited multiple times (n=5).
- One comment specified that there is sufficient evidence for the basic drivers and effects of AMR and how it spreads, and suggested deprioritising that research question.
- A further comment highlighted the need to encourage research into novel materials to prevent colonisation by microorganisms in the healthcare environment (for example on medical instruments and devices).

3.4 Targets and commitments

3.4.1 Human health targets

- 56% of respondents thought that the proposed targets for human health are appropriate.
- Those who did not think the targets were appropriate (26%) highlighted a concern that the targets were lacking ambition. Most frequently mentioned (n=6), was the idea that targets 2a and 4a were lacking ambition.
- Additionally, one comment mentioned the reduced ambition of the reduction of antibiotic consumption from 15% generally in the 2019-2024 NAP to 5% in human health only in the 2024-2029 NAP.
- Further concerns were raised around targets being hard to measure and the lack of targets around investment and funding. However, one individual expressed that it is hard to tell whether these targets lack ambition or whether in fact they are realistic and therefore achievable.

A few themes emerged when asked about any additional targets that should be included:

- A specific target on the amount that will be spent on R&D or target around increased funding/investment.
- A specific target on the number of new antimicrobials/vaccines/antifungals bought to market.
- More specific targets outside human health (agriculture was frequently highlighted).
- Public engagement targets were proposed, including incorporating AMR into the school curriculum.
- Targets around surveillance were suggested, specifically the inclusion of sensitivity testing rate targets.
- The lack of targets included in alternative therapeutics and diagnostic use was highlighted.

3.4.2 Other commitments

- When asked to comment on whether the 30 commitments laid out in the plan were sufficiently clear, a significant majority (74%) agreed, with <4% saying 'no' (23% indicated 'not sure').
- Comments widely emphasised the need to formalise how these would be measured and a lack of clarity over metrics and definitions of success. As in previous responses, one respondent emphasised a lack of attention being given to antifungal drug development.

3.5 Feasibility:

When asked what the biggest challenge in achieving the proposed plan is, the following themes emerged:

- Implementation: the plan lacks specific details on how it will be implemented/how it will achieve the outcomes.
- Accountability: the need for attributing responsibility for deliverables to department-level, which is currently lacking, especially with a general election on the horizon.
- Funding: the feasibility of the NAP is dependent on appropriate funding, which has not been outlined. Lack of clarity around financial investment is a theme across the whole survey.
- Public engagement: the success of the plan is dependent on raising public and professional awareness of AMR.
- Buy-in from stakeholders: there are issues with engaging international, cross-sectoral stakeholders across 'One Health' in meaningful collaboration.

4. The role of the Microbiology Society

At the Microbiology Society, we are committed to bringing together everyone who works on AMR, whoever they are and wherever they are. Visit our website to see ways that we're committed to supporting the AMR community.

We welcome the UK Government's commitment to 'collaborating with civil society in addressing AMR, ensuring that a diverse spectrum of voices are heard' and we look forward to working with the UK Government to contribute to the implementation of the NAP.

Appendix A: list of questions posed

1. The National Action Plan is organised under four key themes: reducing the need for and unintentional exposure to antimicrobials; optimising the use of antimicrobials; investing in innovation, supply, and access; and being a good global partner.

   Do you agree that these four key areas should be prioritised in the National Action Plan?

2. Do you think any key theme is missing from the National Action Plan?

3. The national action plan has nine strategic outcomes organised under four themes:

   Theme 1 - Reducing the need for, and unintentional exposure to, antimicrobials.

   This theme has three outcomes:

   1. Infection prevention and control and infection management - this outcome aims to reduce exposure to antimicrobials through a whole-systems approach to infection prevention and control (IPC), improved diagnostics and treatment in different settings (humans, animals, agriculture and the environment).

   2. Public engagement and education - this aims to empower and engage the public on the risk of exposure to antimicrobials.

   3. Strengthened surveillance - this aims to improve understanding of AMR through capability to measure, predict and understand how resistant microorganisms spread across and between humans, animals, agriculture and the environment.

   Do you think any areas are missing from the outcomes?

4. The national action plan has nine strategic outcomes organised under four themes:

   Theme 2 - Optimising the use of antimicrobials

   This theme has two outcomes:

   4. Antimicrobial stewardship and disposal - this aims to improve the use of antimicrobials to preserve future effectiveness.

   5. AMR workforce - this aims to raise awareness with the workforce in human health, animal health and agriculture to improve the optimal use of antimicrobials.

   Do you think there are any areas missing from the outcomes?

5. The national action plan has nine strategic outcomes organised under four themes:

   Theme 3 - Investing in innovation, supply and access

   This theme has three outcomes:

   6. Innovation and influence - this calls on the life sciences sector to prioritise the development of new approaches to diagnose and treat infections, the development of vaccines to prevent infections as well as the development new antimicrobials.

   7. Using information for action - this aims to enable decisions to be based on robust surveillance, scientific research and data sets to provide the best information for decision making. This section also sets out the top research priorities from policy makers.

   8. Health disparities and health inequalities - this aims to improve the information available to identify where the burden of AMR is greatest. This will help to target future interventions where they will have the greatest impact.

   Do you think there are any areas missing from the outcomes?

6. The national action plan has nine strategic outcomes organised under four themes:

   Theme 4 - Being a good global partner

   This theme has the last outcome:

   9. AMR diplomacy - confronting AMR is a worldwide problem that requires global action. This outcome aims to fulfil the ambition to have sustained engagement via G7, G20 and other multilateral groups, technical networks, and bilateral relationships that will contribute to worldwide action on AMR.

   Do you think there are any areas missing from the outcome?

7. The National Action Plan sets the following targets for human health:

   Target 1a: by 2029, we aim to prevent any increase in a specified set of drug-resistant infections in humans from the 2019 to 2020 financial year baseline

   Target 1b: by 2029, we aim to prevent any increase in Gram-negative bloodstream infections in humans from the 2019 to 2020 financial year baseline

   Target 2a: by 2029, we aim to increase UK public and healthcare professionals' knowledge on AMR by 10%, using 2018 and 2019 baselines, respectively

   Target 4a: by 2029, we aim to reduce total antibiotic use in human populations by 5% from the 2019 baseline

   Target 4b: by 2029, we aim to achieve 70% of total use of antibiotics from the Access category (new UK category) across the human healthcare system

   Do you think the proposed targets are appropriate?

8. If you could add a target, what would it be?

9. The National Action Plan sets out ten research priorities for policymakers, which are:

- What is the cost of AMR?
- What is the relationship between AMR and health disparities?
- How to influence public awareness and behaviour on AMR?
- How to address AMR in international settings?
- What are the basic drivers and effects of AMR, and how does it spread?
- How can we prevent AMR from spreading?
- How can we optimise the use of antimicrobials?
- What methods can be used to prevent, treat and manage infections without antimicrobial medicines?
- How can we drive innovation of new products for tackling AMR How can we ensure what is known to work is implemented?

Do you think the research areas have been prioritised correctly?

10. Do you think any research priority is missing?
11. Do you think the National Action Plan is an improvement upon the previous action plan?
12. Do you think the National Action Plan is ambitious enough?
13. This National Action plan has nine strategic outcomes, underpinned by 30 commitments that set out the activity that government organisations will undertake to achieve the outcomes. Each of the commitments starts ‘we will’ - ‘we’ refers to government organisations (including departments and arm’s length bodies) and the NHS in England, Scotland, Wales and Northern Ireland. The full list of commitments can be found in Appendix D.

    Do you think the National Action Plan's commitments are clear enough?
14. Do you think the National Action Plan is suitable and appropriate for all the 'One Health' sectors (human, animal, environment)?
15. Which do you see as the biggest challenge in achieving the proposed plan?
16. Do you have any other comments about the National Action Plan and its release?