ROYAL PHARMACEUTICAL SOCIETY

DHSC Call for Evidence on the AMR future action plan January 2023

RPS Submitted Response

Threat of AMR

The first 2 questions are about the scale and nature of the threat of AMR. The other questions are about our efforts to respond to AMR.

In your experience, how has the scale of the threat of AMR changed since the national action plan was published in 2019?

- (●) The threat of AMR has increased since 2019
- ( ) The threat of AMR has stayed the same since 2019
- ( ) The threat of AMR has reduced since 2019
- ( ) Don't know

There are several drivers of AMR, which may differ between sectors. The national action plan states that the 3 biggest drivers of AMR for infections in humans in the UK are:

1. a rise in the incidence of infections, particularly Gram-negative bloodstream infections (including E. coli)
2. the import of resistant infections through international travel
3. antimicrobial use

In your opinion, what are the top 3 drivers of AMR?
Please give 3 short examples.

We would agree with the drivers stated in the action plan.

However, we think that another important driver that cannot be ignored is the development of resistance to antimicrobials. The most recent example of invasive group A strep where antibiotics had an upsurge in use where in many situations they were not needed. We are unsure whether this is covered under point 3.

Also, COVID has shone a light on the impact of Health inequalities and the gaps that are widening which will ultimately increase risk and incidence of AMR.

Priority interventions for tackling AMR

The current national action plan focuses on 3 key ways of tackling AMR:

- reducing the need for, and unintentional exposure to, antimicrobials - (including preventing and controlling the occurrence of infections, vaccination, and limiting exposure to antimicrobials through food and the environment)
- optimising the use of antimicrobials (including ensuring that the right drug, time, dose, duration, patient/animal, and route are taken)
- investing in innovation, supply and access (including supporting the development, supply, and access to old and new antimicrobials, vaccines and diagnostics)

We would like your view on which of these areas requires the most focus over the next 5 years. Through ongoing stakeholder engagement in 2023, we will further prioritise the specific actions that fall within each of these areas.

Which of these areas would you most like to see prioritised over the next 5 years?

Reducing the need for, and unintentional exposure to, antimicrobials

- (•) 1
- ( ) 2
- ( ) 3

Optimising the use of antimicrobials

- ( ) 1
- ( ) 2
- (•) 3

Investing in innovation, supply and access

- ( ) 1
- (•) 2
- ( ) 3

Are there any actions you think are required to tackle AMR that do not fall within one of these categories?

- (•) Yes
- ( ) No
- ( ) Don't know

Diagnostics does not explicitly fall into any category. We are unsure if this falls under point one on reduction but in the last national action plan it fell under innovation.

In the shorter term there will not be many new antibiotics coming to market, so we need to make better use of the ones we have.

We do not agree with the use of the term unintentional exposure if this is being used to describe exposure through prescribing where the clinical presentation does not necessitate treatment with an antimicrobial. Prescribing is not unintentional, and when it is not wanted or

needed it is overprescribing and this should be drawn out and highlighted. We feel the term unnecessary prescribing is more appropriate and more accurately reflects how patients would be exposed to antimicrobials with no clinical rationale. If this is not what 'unintentional exposure' covers then overprescribing needs to be explicitly mentioned and this could fall into point 1 or 2. Wherever one incorporates overprescribing, we think should be the most important.

Innovation could include optimising and diagnostics which will improve AMR. Taking a global view, issues arise in countries that don't have access to narrow spectrum antibiotics which could treat infections, these infections then spread. Innovation should include robust supply chains (relevance to the UK over recent years), improved availability of medicines as necessary to reduce use of unnecessarily broad-spectrum drugs due to narrow spectrum ones being unavailable. In addition, the recent strep A outbreak is further proof of the need for diagnostics - how many antibiotics courses could we have saved with having a fast reliable test? Point of care tests are key for primary care settings including community pharmacies.

Innovation and supply have large funding streams behind them in some areas and this is not reflected in the funding and prioritisation around AMS. e.g., IPC E&T is mandated nationally within Wales whereas AMS E&T is not, but both are equally important. There is also a risk that prioritising innovation which can have a high cost for countries (e.g., a new diagnostic test, vaccine, or antimicrobial), and is therefore out of reach for most around the world, could favour high income countries.

There needs to be a change to the way deaths are coded so that we have real-time accurate mortality data. Currently many sepsis, pneumonia and other common infection related deaths may be caused by AMR, however they are coded by the clinical syndrome.

Learning from previous action to tackle AMR

We would like to learn from current and previous government action on AMR. Since the publication of the national action plan, the UK has made significant progress in tackling AMR. For example, the UK has:

- reduced the use of antibiotics in food producing animals
- piloted novel and innovative ways of evaluating and paying for antibiotics on the NHS
- published National Infection Prevention and Control Manuals in England and Wales
- advocated for more action on AMR on the global stage, including through the UK's G7 presidency

Within the UK, what are the key successes we should look to maintain or develop in responding to AMR? 3 examples + 250 words

Data

We have great access to data which drives improvement and understanding performance but there are gaps e.g., private prescriptions, online pharmacies.,

We need to improve gathering of data such as happened during COVID-19 and fix issues with SNOMED CT coding to provide better quality data across all settings.

There is a lack of joint working across the four countries and across primary and secondary care with disparities around the data availability and sharing, e.g., in Wales, GPs own the data, which can limit access. We ask for data to be shared and ensure the same data sets

are available across the UK. Since BREXIT, we are no longer included in the ECDC benchmarking and upload to GLASS (WHO) is still only at 50%.

Behaviours

Evidence is required that existing resources such as Successes and TARGET work in reducing antibiotic seeking behaviours. Conversations around supply of antibiotics can be challenging. More needs to be done around patient behaviour and expectations.

We don't understand cultural differences around why certain populations gets more infections and the outcomes of using antibiotics in those populations.

AMS activity:

We need more research into primary and secondary care AMS activities, and clinical decision support tools. Scoring systems can be used as a diagnostic tool. Evidence is required on their safety, and they need to be built into IT systems.

Point of care tests are useful in primary care but are expensive so not routinely used and should be centrally funded.

QI has worked, and the incentive scheme helped drive this in primary care. QUOFF being mobilised for infection and policy incentives seems to be effective.

Despite the substantial progress made on AMR in the past decade, we know there is much more to do. There are some areas where we have struggled to make the progress we envisaged. This includes failing to reduce the incidence of some specific drug-resistant infections in people. It also includes other areas where we think we could focus more government action, such as understanding and minimising the transmission of AMR in the environment. Given financial pressures and limited resources both within and outside of government, we are seeking views on the most important, realistic and tangible actions we can take to have the most impact on AMR.

Within the UK, what are the areas that require more focus or development to address AMR? 3 examples 250 words

Above examples can be used.

The national action plan includes several commitments to improve the professional capacity and capability for tackling AMR. We would like to understand whether we have the required workforce and skillsets to best tackle AMR.

Within your sector, do you think the UK has sufficient capacity and capability to tackle AMR?

YES/ YES some areas/ **NO** / DON'T KNOW

Primary care

Primary care and antimicrobial stewardship activities are under resourced compared to secondary care, most of the funding for antimicrobial stewardship is within hospitals. We need to prioritise finding for antimicrobial stewardship and antimicrobial pharmacists, to

increase capacity, in primary care. We also need dedicated roles to look at AMR in the worst affected areas.

Systems in primary care and community pharmacy must have interoperability to allow everyone to see what is being used to treat patients, including dental. If there is any setting where antimicrobials are prescribed, supplied, or dispensed then the IT systems must be interoperable, and the data visible in a central repository

Prescribing

In our sector, pharmacy, the majority work in primary care and community. Pharmacists will be graduating as independent prescribers and will be managing infection; we need to ensure the NAP has a commitment to ensure all those pharmacists can diagnose common infections, know when to refer patients, and use antibiotics appropriately.

Recording

There are currently schemes which allow the supply of antibiotics without prescriptions being written as part of PGD's. It may be easier to establish the volume of antibiotics being used if there was a way to record this digitally with the information held centrally and address the issue of unmonitored sectors, something already done in Scotland.

Since 2019, several capabilities required to tackle AMR have changed. This includes our sequencing capability, surveillance capabilities, diagnostic lab capability, and antimicrobial stewardship activity.

What additional capacity and capability is needed in your sector to effectively tackle AMR? 3 examples 250 words

Leadership

Strong leadership is required in this area and should be a priority to implement. Leaders then need to acknowledge this is not just about reducing antibiotic use, that this is part of their responsibilities and work to ensure this is embedded as a responsibility for all.

Better data

Better data is needed to allow feedback on prescribing. There is currently a lack of coding and outcomes are issues which need addressed.

Communication

A primary care clinical system that is integrated with secondary care is needed. We need to know what has been given already to effectively treat people who do present in secondary care (and vice versa)

We also need to look at the effect changes to the way we communicate have had on AMS. Most prescribers admit that a shift to virtual consultations during the pandemic has had detrimental effects on AMS. Whilst a return to F2F has been encouraged, the current model of care is a hybrid, therefore ongoing efforts are required to both fully understand and tackle these behaviours.

In your opinion, what are the key barriers to making progress on tackling AMR in your sector? 3 examples 250 words

Lack of Data

We have an inability to articulate the problem to senior leaders due to lack of integrating the data (coding, prescribing, outcomes etc.).

We need data available that can show people this is in an issue in a way they can understand, we need simplified data and comms available to show the extent of the problem for clinicians, and also the public. This would hopefully help drive behaviour change.

Leadership

There is a lack of buy-in to tackling AMR at a leadership level. Senior leaders need to work to embed AMS into teams and create a culture where this is a priority. We need joined up action from leaders and teams on the ground who can make a difference.

Lack of awareness or willingness to act

Infection is part of nearly all long-term conditions, but it separated from the Long-Term Plan. The CORE5PLUS20 (a national NHS England approach to reduce health inequalities) population in England are also the high antibiotic users but this is not addressed.

We need to acknowledge that sometimes the wrong messaging in public can sometimes be detrimental to AMS. We need to use public messaging to make teams aware of the LTP and raise awareness of AMS and potential consequences of inaction.

International efforts to tackle AMR

AMR is a global challenge, and no one country can tackle it alone. The UK plays a leading role advocating for and taking action to tackle AMR in several multilateral arenas. As part of our leading international role, we helped secure the Political Declaration on AMR at United Nations General Assembly in 2016. We also recently secured G7 commitments on AMR on a number of ministerial tracks. We will continue to deliver our domestic commitments on AMR, as well as pushing forward international commitments. Through our global engagement, we recognise there is also much to learn from other countries' efforts, both successes and challenges.

What, if anything, do you think we can learn from other countries' responses to AMR?

3 examples – 250 words

Within European countries

- Netherlands, Sweden, use fewer antibiotics per head of population so there may be some learning from them.
- Estonia – Use a joined-up patient and healthcare portal which would also help for antimicrobials
- France – use mapping whenever an antibiotic is prescribed this could be used to help understand the supply chain

- Belgium - operate a limited list in primary care, so GPs cannot prescribe whatever they like. A restrictive primary care formulary.

Overall, it comes back to data, people do point prevalence if their data is not good, manual systems should not be necessary

Opportunities from COVID 19

We saw an unprecedented level of cross-disciplinary working during the COVID-19 pandemic with government, industry and researchers collaborating to respond to a significant public health challenge. The toolbox we used to tackle COVID-19 will be similar for AMR. As reported by the Academy of Medical Sciences, diagnostics, surveillance, therapeutics, and vaccines are crucial aspects of the AMR response and can draw on the COVID-19 experience.

In your opinion, which of these tools should be prioritised for adapting to use in tackling AMR?

Diagnostics

- (•) 1
- ( ) 2
- ( ) 3
- ( ) 4

Surveillance

- ( ) 1
- (•) 2
- ( ) 3
- ( ) 4

Therapeutics

- ( ) 1
- ( ) 2
- (•) 3
- ( ) 4

Vaccines

- ( ) 1
- ( ) 2
- ( ) 3
- (•) 4

In your opinion, are there any other tools that should be adapted from use during the COVID-19 pandemic for tackling AMR? YES/NO /DON'T KNOW

There should be wider availability of Point of Care Testing. Good POC / rapid diagnostics or clinical scoring systems would help to reduce inappropriate prescribing in all sectors. Funding would need to be allocated to implement these ideas.

Platform trials to determine benefit at scale in a more limited timeframe.

COVID-19 has also delayed progress in tackling AMR, putting severe strain on healthcare services and diverting resources from the 'silent pandemic' of AMR to the urgent COVID-19 response.

We think it has also altered the risk landscape. For example, different patterns of healthcare use during COVID-19 restrictions led to increased prescribing of antimicrobials in certain settings (such as dentistry). Also, COVID-19 potentially made patients more vulnerable to hospital acquired infections.

Do you believe the changes in ways of working within your organisation due to the COVID-19 pandemic have affected efforts to respond to AMR, such as delivery of the current national action plan (NAP)?

- (•) Yes
- ( ) No
- ( ) Don't know

The increased focus on IPC and vaccination was welcome, but it appeared this was often at the expense of AMS.

The increase in virtual consultations in primary care as mentioned above has led to increased prescribing rates, which is not necessarily good for AMS.

Erosion of staffing in general has a detrimental effect. AMS takes time, therefore in secondary care it is easier to leave a patient on an antibiotic rather than review/act on it, and in primary care it is faster to write a prescription than have an educational discussion with the patient as to why they don't need one. When staff are pressured, they will take the path of least resistance which is usually not the ideal AMS approach.

Are there other ways in which the COVID-19 pandemic has altered the AMR risk landscape?

Increased number of phone/virtual appointments (especially in primary care) has had an impact but in some community pharmacies have hugely increased the number of face-to-face consultations and treatment of uncomplicated infections who are a very engaged group in AMS/AMR

Moving AMS resource to COVID had an impact but has had a positive outcome too, as relationships were built with a wide variety of staff/leaders that perhaps were not engaged with AMS agenda previously which can be utilised in future AMS work/strategy

Are there other global events, such as supply chain disruption or the conflict in Ukraine, that have changed the UK's ability to respond to AMR?
YES/NO / DON'T KNOW

Yes, but not necessarily global. The Invasive Group A Strep situation with resulting antibiotic-seeking behaviours and knock-on supply chain issues in the UK.

Measuring success

The national action plan includes measurable ambitions and targets including to:

- reduce the number of resistant infections
- reduce antimicrobial use in humans and animals
- ensure prescriptions state whether they were supported by a diagnostic test

In your opinion, what are the best measures of success in tackling AMR? Please include up to 3 examples in no more than 250 words.

Public and professional awareness: During the COVID-19 pandemic, public awareness of infection spread increased, along with prevention and control measures and acceptability of point of care diagnostics.

It is also important to manage expectations, recent campaigns in the media have not been helpful for AMS.

Changes in behaviour of public and healthcare workers and measuring engagement / intention to tackle AMR or take the appropriate actions that contribute to tackling AMR.

Evidence of tackling inequalities in incidence of infections, AMR, and antibiotic use.

Prescribing Metrics: Focus on reducing particular antibiotic classes or overall use is welcomed however it should ideally be linked to outcomes which is a challenge within AMS

Do you believe that there is sufficient public and professional awareness of AMR?

- ○ **Yes**
- ◉ **No**
- ○ **Don't know**

No, and where there is awareness, it does not always translate into action, e.g. prescribers treating the patient in front of them even though aware of longer-term risks. Treating the patient there and then almost always wins. Also, behaviour changes in individuals between when they are well and unwell e.g. experienced clinicians who understand the risks seeking antibiotics for symptom resolution when they have a self-limiting infection.

Also, many of the gains from COVID on IPC measures have now been reduced.

Is there any other evidence you would like to tell us as we develop the 2024 to 2029 national action plan?

Please tell us using no more than 250 words.