

SUBMISSION: Health and Social Care Select Committee inquiry into Antimicrobial resistance (AMR) – June 2018

Key summary

- We welcomed the five year strategy; ‘*UK Five Year Antimicrobial Resistance Strategy 2013*’¹, produced by the Department of Health and continue to believe the commitment to lead, and succeed in combating AMR on the national, and international stage is positive and necessary for the UK and global population health.
- The persistent and rising resistance to antimicrobials, antifungals and antivirals presents a real and concerning risk to population health in the UK and across the globe. Additionally we are concerned about the emerging resistance to disinfectants used to support decontamination of items used to deliver care.
- The prevention of infection within and outside of health and social care settings is central to reducing the impact of AMR in human and animal health. There is more to be done to ensure that health care professionals and the public are aware, and understand the importance of how to minimise the development and spread of infections.
- The prevention of infection should not be considered in a silo, and efforts to reduce the impact of AMR must not be focused only on health care in hospital settings. Encouraging a healthy lifestyle through public health campaigns is essential. Vaccinations, healthy diet, hydration, regular exercise, and stopping smoking must be central to a future strategic approach.
- The future AMR strategy should focus on embedding prevention, promotion and wellbeing into all nursing practice to prevent ill health in order to minimise the risk of infection.
- The UK Government must commit to making AMR a priority through the delivery of a strategy for 2018 and beyond. We expect this to include:
 - Acknowledging the importance of, and engaging with local government in the AMR strategy due to their central role in public health provision
 - A clear strategy for the management of the most resistant bacteria currently posing a threat in the UK, Carbapenemase Producing Enterobacteriaceae (CPE); which if established, presents a significant risk to the ability to treat the most serious of infections in the most vulnerable of patients;
 - Upskilling health care staff to prescribe well;
 - Informing the public about the effective use of antibiotics, and when they are necessary;
 - Investment in science and research into new antimicrobials;
 - Investment in translating innovations in research and science into operational delivery to improve patient outcomes;
 - Investments in point of care testing and rapid diagnostic services to identify levels of resistance and plan treatments accordingly;
 - Increasing the development and uptake of vaccinations to prevent infection in human and animal health;
 - Influencing global partners such as the World Health Organisation (WHO) to link AMR reduction programmes with those working to reduce the burden of non-communicable diseases and sustainable development goals (SDG).

¹ Department of Health, *UK 5 Year AMR Strategy 2013 to 2018* 2013. Accessed July 2018. Available here: <https://www.gov.uk/government/publications/uk-5-year-antimicrobial-resistance-strategy-2013-to-2018>

1. What results have been delivered by the UK AMR 2013-2018 strategy?

The development and implementation of the five year strategy in itself is a positive reflection that UK Government and stakeholders are working together on this agenda. We were pleased to see particular progress in the following areas:

- Improved multi-professional engagement on AMR through an increasing number of meetings led by the Chief Medical Officer in England, bringing together multi-professional leaders to support the 'One Health' agenda, and share this learning on the frontline;
- The continuing development of the English Surveillance Programme for Antimicrobial Utilisation and Resistance (ESPAUR) group and their report which has standardised surveillance and reporting on resistance patterns;
- The appointment of a national leadership position based at NHS Improvement, to oversee the prevention of infection and reductions in AMR. This has allowed for national accountability on progress for infection prevention measures.
- The introduction of Public Health England's local AMR indicators resource which upskills and provides information on effective antimicrobial prescribing and infection prevention and control.

Context: The UK health and care system which the new UK Government strategy will be operating within

Health and care cannot be viewed in isolation in regard to the challenge of AMR. AMR impacts all aspects of health and care, public health and population wellbeing; requiring adequate resources including workforce, to deal with the challenges it brings. Additionally, there is an increasing need to focus on the prevention of infection at source, which mainly occurs outside of secondary care. Many such infections, which require antibiotics in particular, may be unrelated to health care and therefore new approaches are needed to identify and measure those that can be avoided or reduced. Local government, who until now have not been consistently recognised in AMR strategies will have a key role in the future and must be engaged now to shape this.

Managing the risk of Carbapenemase Producing Enterobacteriaceae (CPE)

The increasing threat of multi-resistant bacteria which are resistant to 'last resort' antibiotics is of extreme concern and represents a complex and multi-faceted challenge. Despite these known risks, the UK currently does not have an agreed comprehensive strategy in place to identify and manage people colonised or infected with CPE. Research from 2016 showed that while 92% of acute trusts who responded had a written CPE plan, only 75% reported consistent compliance with screening and isolation of CPE risk patients.² There is an urgent need to engage with health care professionals and commissioners/providers of health and care services in addition to experts and scientists to agree proactive and reactive measures to manage this risk, specifically minimum standards for the prevention of infection and detection and surveillance. This should include data collection on the numbers of people presenting colonised or infected with CPE. These measures would permit a greater understanding of the level of risk by monitoring incidents of colonisation or infection, helping to prevent secondary cases arising and AMR increasing.

The UK Government has also acknowledged the need to reduce health care related and associated, Gram-negative BSI's by 50% in 2021.³ Steps must be taken to prepare resources for the challenges that superbugs bring, to support health care professionals to respond accordingly to any escalations of risk. The UK has a unique experience historically in the management of MRSA and *C. difficile*, both of which were established with detrimental impacts on patients before coordinated action was taken. Action to combat CPE should be immediate to prevent serious and

² The Journal of Hospital Infection, *An evaluation of a toolkit for the early detection, management and control of carbapenemase-producing Enterobacteriaceae: a survey of acute hospital trusts in England, 2016*. Accessed July 2018. Available here: [https://www.journalofhospitalinfection.com/article/S0195-6701\(18\)30145-2/fulltext?dgcid=raven_jbs_etoc_email](https://www.journalofhospitalinfection.com/article/S0195-6701(18)30145-2/fulltext?dgcid=raven_jbs_etoc_email)

³ Public Health England, *Health matters: preventing infections and reducing antimicrobial resistance 2016*. Accessed May 2018. Available here: <https://www.gov.uk/government/publications/health-matters-preventing-infections-and-reducing-amr/health-matters-preventing-infections-and-reducing-antimicrobial-resistance>

costly consequences in the future. The Republic of Ireland declared a Public Health emergency in October 2017 after cases doubled in 2016 to 280.⁴ There will be potentially irreversible consequences if the UK Government does not mitigate the impact of CPE which will see severe implications for the ability to provide health care which the public both need and deserve.

2. What should be the key actions and priorities for the Government's next AMR strategy, due to be published at the end of this year?

The previous 2013-2018 strategy focused heavily on the issues of bacterial antibiotic resistance however, an updated strategy must emphasise actions to be taken on AMR across the microbial spectrum. Health care professionals must be supported to work holistically and take a joined up approach to combat infections by assessing risk across a patient pathway within all settings. This will be achieved by encouraging the entire multi-disciplinary team to work together to plan for infection risks in their patients and local populations, and act accordingly. This may require a re-imagining of how and when professionals work together or focus their roles to support AMR programmes.

The role of nursing in AMR

Nurses can, and do make at an international, national and local level contribution to reducing risks of AMR. They have a central role to practice and advocate for high standards of infection prevention and antibiotic preservation through stewardship activities, and are best placed to educate communities and at risk groups about how to prevent illnesses (including through vaccination), well-being and public health programmes. Nurses play a key role bringing research and science innovations to the patient bedside. Additionally the new Nursing and Midwifery Council competency will see newly qualified nurses as 'prescribing ready'.⁵ This is a ground-breaking opportunity to support antibiotic stewardship in both prescribing practice, and administration of drugs among the profession which is very positive.

However, the expertise of nurses to combat AMR and deliver the right care, at the right time to meet the needs of patients will not be realised without the resources and adequate workforce supply. Currently in England, approximately 40,000 nursing posts remain unfilled, and more than half of nurses in our recent survey reported their last shift being understaffed, with patient care compromised.⁶ Nurses reported that poor working conditions created by understaffing, are leading to unsafe care, and may impact the spread of infection.⁷ This leaves an already stretched workforce struggling to support patients with complex needs, who cannot be treated with the medicines available.

Nurse staffing levels for safe and effective patient care should be enshrined in law in England and Northern Ireland. Wales have recently implemented legislation, and in Scotland a safe staffing Bill has been published by the Scottish Government. Without Governmental, national and local system accountability for staffing specified in law, it will be difficult to make a success of any future AMR strategy. Combatting AMR requires the right staff, at the right time, with the right skills and resources to treat patients holistically.⁸

The nursing profession must be included in the development and implementation of any future strategy, and internationally there remains much to do to promote the role of nursing in this global priority. We need greater international visibility and contribution from nursing including:

⁴ Health Service Executive Ireland, *Health care associated infection and antimicrobial resistance*, 2017. Accessed June 2018, Available here: <https://www.hse.ie/eng/about/who/healthwellbeing/our-priority-programmes/hcai/resources/cpe/>

⁵ Nursing and Midwifery Council, *New NMC standards shape the future of nursing for next generation*, 2018. Accessed July 2018. Available here: <https://www.nmc.org.uk/news/press-releases/new-nmc-standards-shape-the-future-of-nursing-for-next-generation/>

⁶ RCN, *Safe and Effective Staffing: the Real Picture*, 2017. Accessed July 2018. Available here: <https://www.rcn.org.uk/professional-development/publications/pub-006195>

⁷ RCN, *Nursing on the brink*, 2018. Accessed May 2018, Available here: <https://www.rcn.org.uk/professional-development/publications/pdf-007025>

⁸ RCN, *Nursing on the brink*, 2018. Accessed May 2018, Available here: <https://www.rcn.org.uk/professional-development/publications/pdf-007025>

- Nursing representation and leadership within all WHO member countries should be clearly communicated, visible and active at the international level, supporting the World Health Assembly (WHA) resolution on AMR and the future WHO global action plan.
- A nurse envoy should be present in any and all WHA and WHO delegations from the UK, to ensure that the contribution of nursing is recognised, enhanced and supported to achieve the WHA resolution on AMR and future WHO global action plan.

Education and training

Inextricably linked to workforce capacity is the importance of upskilling nurses to maintain effective antibiotic stewardship and continuing professional development (CPD) training is key to this. However, access to CPD opportunities across the UK is under threat due to funding cuts, capacity and staffing pressures. In England, the Health Education England (HEE) budget for 'workforce development', has been cut by 60% over the past two years, from £205m in 2015/16 to £83.49m in 2017/18.⁹

CPD must be refocused to include the management of AMR, for example by implementing recommendations outlined in the guidance produced within *All our Health*, and the toolkit *Making Every Contact Count*, as more care is being delivered outside the hospital walls.^{10, 11}

Preventing infection and hand hygiene

Hand hygiene remains an essential activity to improve the prevention of infection across all health and care settings. We recently published updated guidance focusing on glove use and the prevention of contact dermatitis, the main work-related skin condition affecting health professionals' hands.¹² Our pilot Glove Awareness Week in April 2018, successfully engaged staff across the multi-disciplinary team raising the importance of appropriate glove use and hand hygiene.

Hand hygiene however remains an area of challenge and much more needs to be done to improve it. There remains no agreed approach, long term strategy, national policy or tools to support organisations to measure compliance across the UK. We have requested a mandate and funding from the UK Government to develop and initiate a multi-professional hand hygiene reference group to support hand hygiene in all settings.

Recommendations: The UK Government must produce a national strategy for the prevention of infection that places people and patients at its heart and ensures staff across all health and social care settings prioritise compliance, and take appropriate measures. Taking into account the complexity of behaviour change and societal engagement in health and hygiene, this will require long term vision and funding to implement.

We would like to see the establishment of a multi-professional Reference Group to inform a strategic approach to hand hygiene, with responsibility for delivery a strategy and associated support tools for health care professionals. We would be best placed to lead this work.

Developing new drugs and treatments; the importance of vaccines and; developing rapid diagnostic testing

The right treatment, at the right time, administered by the right professional, for the right duration in a regulated environment, will support appropriate use of antibiotics. The uptake in vaccines for

⁹ HEE (14/3/17) HEE Proposed Budgets for 2017/18 <https://hee.nhs.uk/sites/default/files/documents/7%20-%20Proposed%20budgets%20for%202017-18.pdf> (accessed 12/10/17)

¹⁰ Public Health England, *Antimicrobial resistance: applying All Our Health*, 2015. Accessed May 2018. Available here: <https://www.gov.uk/government/publications/antimicrobial-resistance-amr-applying-all-our-health>

¹¹ NHS England, *An Implementation Guide and Toolkit for Making Every Contact Count: Using every opportunity to achieve health and wellbeing*, 2014. Accessed July 2018. Available here: <https://www.england.nhs.uk/wp-content/uploads/2014/06/mecc-guid-booklet.pdf>

¹² Royal College of Nursing, *Tools of the trade: guidance for health care staff on glove use and prevention of contact dermatitis*, 2018. Accessed May 2018. Available here: <https://www.rcn.org.uk/professional-development/publications/pdf-006922>

some preventable infections which have a causal effect on the prescription of antibiotics or demand for health care must be strengthened in the next strategy. In addition to creating incentives for new vaccines to be developed globally, the UK Government must recognise the risk associated with current and future vaccine shortages.¹³

Vaccine manufacturing is limited to a small number of large companies and therefore any interruption to the UK vaccine supply could result in significant risks of infection, due to transmission within the UK, or imported through migration or travel. Mitigating the risks associated with our vaccine supply chain need to be reviewed, monitored and assured to protect us now, and for future generations. The Department of Health and Social Care are currently consulting on changes to the national vaccination programme, to review the cost effectiveness methodology of vaccination programmes. We are concerned about the potential impact on funding for currently available vaccines and feel that the implications, and unintended consequences for AMR have been overlooked.

Point of care testing and rapid diagnostics

Rapid diagnostics offer healthcare professionals significant support in the diagnosis and prescribing of treatment for people who present with symptoms of some infections. Whilst some rapid diagnostics are available, their uptake and use is variable. As a member of the UK AMR Diagnostics Collaborative, we welcome the outcomes of the current pilot for use of rapid diagnostic technology and hope that recommendations are rolled out at scale.

Recommendations: The UK Government must invest in, develop and implement rapid diagnostics infrastructure and training to support clinical staff to administer tailored antimicrobial drugs to treat the relevant infection.

Strengthened international communication and collaboration

AMR poses a security threat to the UK. Risks associated with biosecurity, include unforeseen consequences of deployment of UK staff in humanitarian crisis or through the receipt of patients after major incidents such as the Romanian nightclub fire, where victims with burns were treated in the UK and Norway.¹⁴ ¹⁵Whilst the risk of AMR should not prevent the UK from supporting such humanitarian needs, risk assessment and mitigating actions to prevent the transfer and importation of highly resistant organisms must take precedence when planning such operations. It was positive to see the UK commit to including AMR on the National Security Risk Assessment in 2017, and it must remain on the register and recommendations included in a future strategy.

The UK supports surveillance of health threats and structured communications internationally on cross border threats. At the European level, the European Centre for Disease Control (ECDC) facilitates collaboration on cross-border health threats, such as communicable diseases which can spread easily and increase anti-microbial resistance.

The lack of a contributory relationship to ECDC activities would exclude the UK from reporting and comparing important surveillance data on communicable diseases and health threats. This could affect the preparedness of the UK's health and social care system if a communicable disease outbreak develops and we need to respond rapidly. As it stands, there are no details on the UK's ambitions for continued involvement with ECDC, nor on aspects of public health in the post-Brexit deal. It is imperative that the UK maintains our strong information sharing links through ECDC, and that we enforce robust mechanisms of new early warning systems that alert us to AMR and associated risks. The new strategy must examine ways in which we can maintain the benefits of this information sharing

¹³ O'Neill et al, *Tackling drug resistant infections globally: final report and recommendations*, 2016. Accessed July 2018, Available here: https://amr-review.org/sites/default/files/160518_Final%20paper_with%20cover.pdf

¹⁴ BBC News, Romania nightclub fire: NATO flies victims to UK and Norway, 2015. Accessed April 2018, Available here: <https://www.bbc.co.uk/news/world-europe-34762985>

¹⁵ European Public Health Alliance, *In the Red Zone. Antimicrobial resistance: Lessons from Romania, a study by EPHA* 2015. Accessed July 2018. Available here: <https://epha.org/in-the-red-zone/>

system across the continent. Additionally, beyond the immediacy of EU borders, the inclusion of AMR in the International Health Regulations would support standardised expectations and communication on risks associated with AMR.

International collaboration through the many global and European agencies to combat AMR must not be put at risk by the UK's decision to leave the EU. We have been working closely with the European Public Health Alliance (EPHA) on the development and implementation of their AMR strategy, and will be continuing to provide the expert voice of nursing to these aims.

Recommendations: The UK Government should make a formal agreement as part of the Brexit deal to continue to contribute and participate in the ECDC.

About the Royal College of Nursing

The Royal College of Nursing is a professional body and trade union representing over 430,000 registered nurses, midwives, nursing students, health care assistants and nurse cadets. Our members work in a variety of hospital and community settings in the NHS and independent sector.

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