



ANTIMICROBIAL RESISTANCE AND DIAGNOSTICS

Consensus Statement and Policy Directive

February 2024

FOREWORD BY MAGGIE THROUP MP

I am delighted to contribute a foreword to this consensus statement, as this initiative marks an important milestone in progressing steps to tackle antimicrobial resistance (AMR).

AMR is a serious threat, that has been called a 'silent pandemic' that will have a calamitous impact on both the UK and the rest of the world, if left unaddressed. Tackling such a significant challenge demands that we use all the tools we have available to us, from the research that is underway to discover and develop new antimicrobials, through to the technologies we can access right now to support us in safeguarding existing antimicrobials.

It is the latter point, making use of what is already available to us, that this consensus statement is concerned with – and there is a compelling case for policymakers, health systems and others to come together to ensure that we are fully leveraging the opportunities that are in front of us, right now, to start to tackle the challenge of AMR.

I have worked closely on these issues, both in my career before Parliament, and since in my role as an MP and minister, to underline the value of rapid diagnostics and the potential they hold to address one of the greatest health challenges of our time, whilst at the same time offering opportunities to improve patient experience and patient outcomes.

It is my sincere hope, that through initiatives such as this consensus statement, and the collaborative working across relevant agencies, the government, healthcare professionals, patients and the general public, we can prioritise antimicrobial stewardship and implement changes that reverse the growing threat of AMR.

A handwritten signature in blue ink, appearing to read 'Maggie', is located below the foreword text.

INTRODUCTION

This consensus statement has been co-ordinated by BIVDA (the British In Vitro Diagnostics Association), in partnership with the undersigned organisations and leading experts in the fields of diagnostics and antimicrobial resistance.

This document sets out a consensus position on the role of diagnostics in supporting antimicrobial stewardship, underlining the need for action to support adoption of existing rapid diagnostic technology – specifically C-Reactive Protein (CRP) point of care testing (POCT).

We would like to thank all signatories for their support of this initiative. This consensus statement will be presented to the Department of Health and Social Care, NHS England, the

UK Health Security Agency and other relevant system partners for consideration as policy is taken forward under the *UK 20 Year Vision for Antimicrobial Resistance* and the next *UK 5-Year Action Plan for Antimicrobial Resistance*.

THE THREAT OF ANTIMICROBIAL RESISTANCE (AMR)

AMR has the potential to become one of the most profound health challenges ever faced globally – with far reaching implications for health services across the world and an impact on almost every area of modern medicine.

AMR is already having a severe impact – with the number of AMR deaths worldwide reported to be 1.27 million in 2019¹. In 2016 the AMR Review led by Lord O’Neill found that, without action to prevent increasing resistance to antimicrobials and manage the resources that are currently available, global deaths could rise to 10 million and a cumulative cost of \$100 trillion by 2050.² The OECD has found that one in five infections are now resistant to antibiotics, with the potential for this rate to double by 2035.³ In 2022, there were 58,224 serious antibiotic resistant infections in England, including a rise in E.coli cases.⁴

Tackling the threat of AMR is multifaceted and will require decisive action in research and development, innovation, regulation and in areas beyond human medicine. Alongside this, there is a pressing need to reform pathways and enhance uptake of tools that are already available and that could have a significant impact in antimicrobial stewardship today.

THE VALUE OF POINT OF CARE TESTING IN AMR STEWARDSHIP

Most antibiotics are prescribed in primary care without a definitive diagnosis. The point of care C-Reactive Protein test (POC CRP) is an effective rapid test technology that can be used to assist clinical decision making as to whether an individual presenting with symptoms of respiratory tract infection (RTI) needs an antibiotic. POC CRP testing is a prognostic first line approach and subsequent testing of sensitivity to antimicrobials is undertaken in a secondary care microbiology laboratory setting. Evidence from more than 12 randomised trials using POC CRP have shown to reduce antibiotic prescribing by 22-36% for RTIs⁵ and 22% for COPD⁶, which are key indications for antibiotic prescribing in primary care.⁷ Cost effectiveness studies have shown the use of POC CRP can both reduce costs to practices and deliver benefits in relation to unnecessary antibiotic prescribing, compared to current standard practice.⁸

POC CRP was originally included as an aid for clinical decisions regarding antibiotic prescribing in the NICE Clinical Guideline for Pneumonia⁹ and also included in the recent guideline relating to suspected respiratory tract infection in the over 16s¹⁰. In these guidelines, when clinicians are unsure, a fingerstick blood result of <20 mg/L CRP is recommended as a ‘do not prescribe indication’, as these infections are typically due to viruses or are self-limiting and non-severe. Elevated CRP >100 mg/L is an indication that the patient will benefit from an antibiotic prescription. This is a simple and effective pathway that aids and complements clinical decision making in patients presenting with an RTI.

The 2016 AMR Review urged the use of rapid POC tests in primary care to be mandatory to aid a doctor’s judgement when providing an antibiotic prescription² and there are several rapid tests now available alongside POC CRP, including for Strep A, which can reduce antibiotic prescribing. In 2022, the Academy of Medical Sciences’ report on learnings from the COVID-19 pandemic emphasised the great value of diagnostic testing when triaging patients with RTI, underlining that connections between diagnostic tests and therapeutic interventions need to be strengthened.¹¹ The importance of utilising POC CRP testing to strengthen antimicrobial stewardship and optimise antibiotic use is recognised internationally in the recommendations

of the OECD 2023 report '*Embracing a One Health Framework to Fight Antimicrobial Resistance*'.¹

Since its inclusion in the NICE guidelines, NHS implementation studies have successfully utilised POC CRP in primary care, community hospital at home services, and in community pharmacies.¹² POC CRP is an effective tool for triaging patients with respiratory symptoms and patient feedback has been positive and shown to support patient education.¹³ In the emerging new models of care, such as Virtual Wards and Acute Respiratory Infection (ARI) Hubs, implementation of POC CRP Testing represents an opportunity to promote antimicrobial stewardship and minimise AMR, and truly optimise infection management.¹⁴ There are 11,200 community pharmacies across England and 89% of the population are less than a 20-minute walk from their nearest pharmacy, with community pharmacies holding the potential to offer a "test and treat" service through their current NHS Contract.^{15,16,17}

CONSENSUS STATEMENT

We the undersigned highlight the threat of AMR, both in the UK and globally, and call for urgent action to support effective stewardship of antimicrobials.

We emphasise the important role of diagnostics in supporting antimicrobial stewardship, and underline the recommendation made in the final report of the Review on Antimicrobial Resistance 2016, namely:

"In high-income countries, governments, regulators and other health system leaders to support the uptake and use of rapid point-of-care diagnostics in primary and secondary care. Incentives should be considered in high-income countries to facilitate the mandatory use of such tests to support clinical decision-making, where they are available, or the use of up-to-date epidemiological data where they are not, by 2020."²

We highlight the specific value of C-Reactive Protein testing, a point of care prognostic test that can support clinical decisions on antibiotic prescribing and, most notably, support decisions to exclude patients from requiring an antibiotic prescription.

We recognise the evidence-base for the use of POC CRP to support clinical decision-making in relation to respiratory tract infections.

We call for action in the short, medium and long term to enable and embed the use of POC CRP in community and primary care services – including implementation of measures to incentivise, monitor and optimise adoption of POC CRP.

We underline the importance of ensuring that policy taken forward under the UK 20-Year Vision for Antimicrobial Resistance, including the UK 5-Year Action Plan on Antimicrobial Resistance, supports uptake of POCT.

To support this, we the undersigned put forward the following recommendations for the Department of Health and Social Care, NHS England and other relevant system partners.

RECOMMENDATIONS

By 2024

- **NHS England should support adoption of POC CRP in Acute Respiratory Infection (ARI) Hubs to support the development of further evidence on the value of rapid POCT and its impact on antibiotic prescribing, patient outcomes, and patient experience. This includes:**

- Appropriate resourcing of ARI Hubs to sustain provision of POCT capacity,
 - Implementation of governance and evaluative measures to monitor the impact of POCT access.
- ARI hubs should implement guideline NG237 on *Suspected Acute Respiratory Infection in Over 16s: assessment at first presentation and initial management* to utilise POC CRP where it is unclear whether antibiotics are needed for someone with a lower respiratory tract infection.
 - The Department of Health and Social Care and NHS England should develop a service specification for ARI Hubs, including access to POC CRP.
 - The Department of Health and Social Care and NHS England should commit to funding to support uptake of POC CRP in primary care.

By 2026

- The Department of Health and Social Care and NHS England should expand 'Pharmacy First' under the *Delivery Plan to Recover Primary Care* to:
 - Include assessment of LRTIs and patients presenting with respiratory symptoms as one of the common health conditions under the programme and,
 - Embed the use of POC CRP in service and competency frameworks for the assessment of LRTIs and prescribing decisions.
- NICE should develop an approach to quantifying the impact of interventions that safely reduce antibiotic prescribing on antimicrobial resistance – including assessment of future healthcare costs and health related quality of life.

By 2028

- The Department of Health and Social Care and NHS England should develop and implement a primary care incentive to support the adoption of POC CRP in respiratory care pathways, including:
 - Accurate recording of the number of antibiotic prescriptions have been informed by the use of POC CRP, and
 - Performance against a target proportion of antibiotic prescriptions that are informed by the use of POC CRP.
- The Department of Health and Social Care, NHS England and Integrated Care Boards should ensure that appropriate guidelines are available to primary and

community care settings to support the adoption and implementation of POC CRP within care settings.

- The Department of Health and Social Care and NHS England should commit to funding to support access to POC CRP across relevant settings, including GP practices, community pharmacies, and community diagnostics centres.

SIGNATORIES

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ABOUT BIVDA

BIVDA is the national industry association for manufacturers and distributors of in vitro diagnostic tests in the UK, representing over 95% of the industry and more than 230 organisations. Our members employ more than 9,600 people, within a sector worth an estimated £2.7 billion and playing a significant role in UK exports.

¹ Antimicrobial Resistance Collaborators. Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis. *The Lancet*. 20 January 2022. doi:10.1016/S0140-6736(21)02724-0

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³ OECD. Embracing a One Health Framework to Fight Antimicrobial Resistance. September 2023.

⁴ UK Health Security Agency. English surveillance programme for antimicrobial utilisation and resistance (ESPAUR): Report 2022-2023. November 2023.

⁵ Cooke J, Llor C, Hopstaken R, Dryden M, Butler C. Respiratory tract infections (RTIs) in primary care: narrative review of C reactive protein (CRP) point-of-care testing (POCT) and antibacterial use in patients who present with symptoms of RTI. *BMJ Open Respir Res*. 2020;7(1):e000624. doi:10.1136/bmjresp-2020-000624

⁶ Butler CC, Gillespie D, White P, et al. C-Reactive Protein Testing to Guide Antibiotic Prescribing for COPD Exacerbations. *N Engl J Med*. 2019;381(2):111-120. doi:10.1056/NEJMoa1803185.

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⁸ Hunter R. Cost-effectiveness of point-of-care C-reactive protein tests for respiratory tract infection in primary care in England. *Adv Ther*. 2015;32(1):69-85. doi:10.1007/s12325-015-0180-x.

⁹ NICE. Pneumonia in adults: diagnosis and management, clinical guidance [CG191]. August 2022.

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- ¹² LumiraDx. Testing Times. Final Report on the Role of Rapid Diagnostics in Tackling Antimicrobial Resistance (AMR). September 2022.
- ¹³ Abbott. Straight to the Point: The case for NHS diffusion of C-Reactive Protein point of care testing. January 2018.
- ¹⁴ Jawad et al 2023 Antibiotics <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10215707/pdf/antibiotics-12-00819.pdf>
- ¹⁵ Community Pharmacy England. PSNC Pharmacy Advice Audit 2022: a summary of findings. June 2022.
- ¹⁶ Todd A, Copeland A, Husband A, Kasim A, Bambra C. The positive pharmacy care law: an area-level analysis of the relationship between community pharmacy distribution, urbanity and social deprivation in England. *BMJ Open* 2014;4(8):e005764. (In eng). DOI: 10.1136/bmjopen-2014-005764.
- ¹⁷ Cooke J, Sheraz M, Hill J, Lawton K. Community Pharmacists working with GPs reduce Antibiotic Prescribing for RTIs using CRP Point-of-Care-Testing. *Journal of Pharmacy and Pharmacology* 2019;71(Suppl S1):9-10.