



Arts & Humanities
Research Council



Department
for Environment
Food & Rural Affairs



Veterinary
Medicines
Directorate

Tackling antimicrobial resistance theme 4: Behaviour within and beyond the healthcare setting Call specification

Summary

The Economic and Social Research Council (ESRC), in partnership with the National Institute for Health Research (NIHR), the Arts and Humanities Research Council (AHRC), the Biotechnology and Biological Sciences Research Council (BBSRC), the Medical Research Council (MRC), the Department for Environment, Food and Rural Affairs (Defra) and the Veterinary Medicines Directorate (VMD) are pleased to invite applications for cross disciplinary proposals on the topic of behaviour relating to antimicrobial resistance (AMR).

We will accept two types of proposal:

- Small scale **pump priming grants**, maximum of £250,000 at 100 per cent FEC for up to 24 months. These grants will be primarily for research relevant to the needs of Low and Middle Income Countries (LMICs).
- Large scale **collaborative grants**, maximum of £2 million at 100 per cent FEC for up to 48 months. These grants will be open to proposals focusing on the UK or global settings.

All proposals should be highly collaborative and have a strong focus on real world impact. Research proposals relevant to humans and/or animals are welcome.

Deadline for proposals:

- Pump priming grants - **16.00 on 20 July 2016**
- Collaborative grants - **16.00 on 8 September 2016**

An optional networking and information event, where applicants can gain additional information and meet potential collaborators, will be held in London on **14 June 2016**.

A separate workshop with Defra and VMD on **10 June 2016** will explore collaborations for research on behaviour as it relates to animals.

A proportion of the funding for this call comes from the Global Challenges Research Fund (www.esrc.ac.uk/gcrf), a £1.5 billion funding stream to support cutting-edge research which addresses the problems faced by developing countries.

Background and scope

This call will address theme 4 of the cross-Research Council initiative on AMR: 'Behaviour within and beyond the health care setting'. An interdisciplinary workshop to develop the aims for this theme was held in early 2015; a full report of this workshop is available at: <http://www.esrc.ac.uk/files/funding/funding-opportunities/amr/anti-microbial-resistance-behaviour-within-and-beyond-the-healthcare-setting/> (PDF). This call also supports Strategic Aims 1 and 2 identified in the 2013 Department of Health-led UK Five Year Antimicrobial Resistance Strategy 2013-18 (<https://www.gov.uk/government/publications/uk-5-year-antimicrobial-resistance-strategy-2013-to-2018>).

Through this call, we aim to expand understanding of how the behaviour of public, professionals and organisations impacts on AMR; how it can enhance or control the spread of AMR; how it is affected by social, psychological and organisational context, cultures and history; and how it can be influenced to create different future scenarios.

We use a broad definition of 'behaviour', including understanding the underlying determinants of behaviour and behaviour change, and factoring in cultural, organisational and individual-level influences. Recognising that infection control needs to be addressed both nationally and internationally, this call enables both UK and globally focused research.

Supporting the UK Five Year Antimicrobial Resistance Strategy, and in line with the cross-Research Council initiative, this call is specifically relevant to resistant bacteria of humans and animals rather than other classes of pathogens and other target species. This means that we seek proposals which relate primarily to understanding or influencing behaviours relevant to **antibiotics** (either their use, or behaviour that might lead to their use not being necessary). Proposals that are also relevant to other classes of pathogen are permissible as long as the primary focus is antibiotics.

This call is to fund behaviour-related research underpinning the following objectives:

- Identifying the specific economic conditions, cultural norms, experiences and practices relating to antibiotics that enable the development of the best strategies for action
- Understanding the needs of practitioners and those seeking antibiotic treatment so as to appropriately influence expectations and behaviour
- Preserving the efficacy of existing antibiotics
- Informing and evaluating interventions aimed at the public, those at high risk, and organisations involved in antimicrobial stewardship to control and reduce the reliance on antibiotics.

Proposals should clearly outline the impact they will have on antibiotic use and/or AMR.

Call details

Applicants are invited to submit proposals that will address one or more of the sub themes outlined in more detail below.

We expect all proposals to incorporate relevant cross-disciplinary expertise. Relevant fields and disciplines include, but are not limited to, anthropology, infection control specialists, economics, epidemiology, microbiology, cultural studies, health services research, informatics, law, politics, visual representation, language, history and the built environment. International collaborations are welcome, but not essential.

As AMR is a significant current real world problem, all proposals should clearly articulate the difference the proposed research will make in tackling AMR. This will be part of the assessment criteria.

Sub themes

These themes apply to the use of antibiotics in both humans and animals, at both a UK and global level.

Awareness and engagement

Awareness and understanding of the issues surrounding AMR remains relatively low and varies considerably across different contexts. The scale of awareness varies across and within societies; there is also variation in knowledge and awareness among different relevant groups such as healthcare providers, retailers and farmers. Crucially, the relationship between awareness and a diversity of behaviours, norms, and practices is not fully understood. There are significant opportunities to find ways to raise awareness, increase public engagement and encourage societal changes in behaviour. There is therefore scope for new research which examines the representation and language associated with AMR across campaigns and a range of media, including their alignment with scientific evidence. Research should investigate the ways in which media representations are understood and communicated within families and communities as well as at an organisational level within healthcare and agriculture.

We will fund research analysing the complex influence of these factors, and so better inform the design of future strategies for action. Research falling under this sub-theme should build on existing data and ongoing public and professional awareness-raising campaigns where relevant. Applications using engaged or participatory research methods involving communities, health practitioners and other relevant organisations are especially encouraged. Research approaches which include co-production and learning from practice and experience on the ground are welcomed.

Public health as an opportunity to reduce the use of antibiotics: Preventing infection and transmission

The widespread availability of antibiotics has often led to a focus on *treatment* over the *prevention* of infection. However, preventing infection and transmission of disease through public health measures can improve health and therefore decrease reliance on drug-based therapies. Research focusing on the role of public health systems, both historical and contemporary, in preventing and addressing AMR is needed to:

- inform new strategies which limit the emergence and spread of multi-drug resistant organisms in humans and animals, including research on human behaviours

- inform strategies targeted on at risk populations, particularly those least likely to access preventative campaigns and services
- develop suitable and effective infection prevention and control strategies within different settings that will impact antibiotic use and AMR development
- understand the effect of new AMR relevant policies which many countries are developing or implementing, and maximise opportunities for cross national learning.

Research under this challenge should be attuned to the broader context, including changing patterns of resistance, capacities of health systems to adapt and cope, wider social determinants of health, legal and ethical frameworks, historical and cultural factors, and potential inequalities in the impacts of public health interventions. Public and cost benefit analyses should be undertaken, where appropriate. Research on vaccination and diagnostics policies and practise can be incorporated under this heading, where there is a clear link with antibiotic use.

Informal markets and access to antibiotics

The widespread availability of drugs and treatments internationally, particularly antibiotics, raises issues of stewardship, monitoring and control that need further research. Within Low and Middle Income Countries (LMICs), where lack of access to adequate treatment has been a major issue, the growing availability of antibiotics via local and informal markets can save lives. However, the availability of non-prescription antibiotics and the use of counterfeit, often substandard, products is linked to increased incidence of AMR. Policies aiming to regulate antibiotic use may also disproportionately affect the poor or have other unintended consequences. Exploring what is 'appropriate' use of antibiotics in different contexts is therefore important in formulating fair and workable solutions. Local markets for antibiotics have grown out of particular cultures and traditions around the world, shaped by variable formal regulation and enforcement on pricing, distribution and purchase of these pharmaceutical products.

In wealthier countries, antibiotics, along with other medicines, are available through online purchasing, with implications for human and animal health and associated regulatory and surveillance mechanisms. Understanding the drivers within a variety of national contexts will therefore be beneficial in tackling AMR. It is particularly important that research under this sub theme focuses on practical solutions that benefit the most vulnerable in society.

Stewardship and appropriate use of antibiotics

'Stewardship', or the conservation and appropriate use of existing antibiotics, is recognised as central to tackling AMR. Key factors include inappropriate prescribing of antibiotics and people's expectations and interpretations of treatment regimens. Whilst timely and appropriate treatment of probable bacterial infection is important, interventions that limit unnecessary antibiotic exposure are needed.

New multidisciplinary stewardship research is welcomed in specific areas:

- Where better understanding of communication approaches used, as well as people's underpinning motivations, might inform or improve the design of interventions.
- Stewardship and use research outside traditional healthcare settings, where previous research is sparse (eg actual use in the home, on farms, in care homes, and prisons).

- Evaluation of existing mandatory approaches to stewardship in health and social care environments.
- Where linking AMR incidence data to stewardship practices could improve the understanding of the impact and outcomes of different interventions.
- Ethical, equality and legal issues around stewardship and regulation approaches.

We acknowledge that stewardship research is being conducted by a range of stakeholders and proposals in this area may wish to build in an element of monitoring findings and emerging research questions from existing work.

Behaviour as it relates to animals and AMR

We also welcome proposals for grants focusing specifically on behaviour as it relates to domestic and farmed animals. To date there have been relatively few studies, often in specific livestock sectors. There needs to be a thorough understanding of the use of antibiotics in animals, including the relationship with human health and wellbeing. Specific issues to be explored might include:

- Drivers and motivations of farmers and perceptions of AMR, and their relationship with actual antibiotic use and incidence of AMR.
- The extent to which AMR is perceived as a ‘human health’ issue and options to raise awareness of AMR as a potential threat to veterinary medicine.
- The influence of large private sector organisations (eg supermarkets) on both consumer perceptions and farm practice, and how it can be utilised to positively influence behaviour.
- The extent to which biosecurity measures can reduce infection and transmission of disease in livestock production, including variability of effect and actual impact on antibiotic use.
- Economic analysis and business modelling relating to disease prevention measures such as biosecurity and vaccination to reduce antibiotic use.

Individual proposals that are relevant to both human *and* animal health are also welcome.

Types of funding

There are two separate funding streams under this call for proposals:

Pump priming grants

Pump priming grants are for a maximum of £250,000 at 100 per cent FEC for up to 24 months in duration.

Pump Priming Grants are to support research that will provide new insights and stimulate creative thinking to tackle AMR. They can be on any of the sub themes detailed above, but may naturally have a narrower focus, and so may address only part of one of the sub themes highlighted. Pump priming proposals can also bring new collaborations and different disciplines/approaches together, and enable researchers to explore new international approaches. An element of networking activity can therefore be included in a pump priming grant – for example travel costs or workshops to help build new partnerships. However networking alone should not be the primary focus of any proposal, as it expected that grants will include some form of substantive output. This could be in the form of exploratory findings or new data which will lay the groundwork for future avenues of investigation. Pump Priming Grants are not intended to support a logical progression of an

already established research project or other types of on-going work; therefore, the nature of these awards will be more exploratory. Early career researchers are particularly encouraged to apply.

This funding stream will primarily be for research relevant to the needs of Low and Middle Income Countries (LMICs) – see the ‘ODA relevance’ (Official Development Assistance) section below for further detail. UK focused applications are permissible where exciting opportunities to explore new ways of tackling AMR exist.

Pump priming grants must start on or before 1 January 2017, or earlier, however it may be possible to permit a later start date for UK focused applications.

Collaborative grants

Collaborative grants are for a maximum of £2 million at 100 per cent FEC for up to 48 months. These grants will be open to proposals focusing on the UK or global settings. The objectives of the collaborative grants are to:

- address the aims of the call with interdisciplinary collaborations creating critical mass and expertise;
- be a national or international focal point for AMR research in the chosen research area where researchers can collaborate on long term research projects.

Collaborative grants will support high quality innovative research addressing one or more of the sub themes highlighted above. They should be conducted by cross disciplinary teams of researchers, preferably crossing the remits of more than one funder involved in the call. Grants may often need to involve research groups from more than one research organisation and should include researchers with a strong track record and expertise that adds value to the proposed research. Collaborative grants should also involve strategic partnerships with other sectors such as industry, practitioners (both human and veterinary), policy makers, and the public, as appropriate. In addition to carrying out high quality research, collaborative grants will build research capability and capacity in addressing the AMR challenge by attracting new expertise to the field, either through applying existing research strengths to AMR, or through development of early career researchers. Collaborative Grants can be either UK or ODA focused.

ODA relevance

A significant proportion of the funding for this scheme will come from the Global Challenges Research Fund (GCRF). GCRF forms part of the UK's Official Development Assistance (ODA) commitment, which is monitored by the Organisation for Economic Cooperation and Development (OECD) (<http://www.oecd.org>). ODA-funded activity focuses on outcomes that promote the long-term sustainable growth of countries on the OECD Development Assistance Committee (DAC) list (<http://www.oecd.org/dac/stats/daclist.htm>). Funding within this call will therefore be awarded in a manner that fits with Official ODA guidelines (<http://www.oecd.org/dac/stats/officialdevelopmentassistancedefinitionandcoverage.htm>).

Both ODA and non ODA focussed applications are eligible for this initiative. It is important applicants take time to consider whether or not their proposal is ODA compliant. Applicants who choose to propose an ODA focussed research application must include a mandatory attachment setting out how they fulfil the criteria for ODA compliance. It will be

important to ensure that it is clear how the proposal is ODA eligible as defined by “administered with the promotion of the economic development and welfare of developing countries as its main objective”. Further general advice on ODA and links to useful sources are provided on the ESRC website at <http://www.esrc.ac.uk/gcrf>.

Further guidance on this attachment will be provided in the Je-S Guidance for this call to be available by the end of May 2016.

Any queries about the ODA eligibility of potential applications should be sent to amr@esrc.ac.uk.

Partnerships and collaborations

Principal investigators (PIs) must be based at a UK institution eligible for Research Council funding, however UK co-investigators can be from business, the third sector, or government organisations, and academic co-investigators can be based anywhere in the world. We strongly encourage partnerships and collaborative relationships where these are substantive and add value. Partnerships may build on existing relationships or represent the development of a new collaborative relationship. The principal requirement is for meaningful, quality collaborations or partnerships, demonstrated through clear leadership roles across the proposed partnership, and balance and proportionality in partners’ roles and responsibilities.

The ODA relevant component of this scheme is concerned with focussing high quality research on addressing an issue of global importance. Where this includes international partnerships, all funded projects must have a strong underpinning research ethic based on mutual respect and understanding for different cultural, ethnic, social and economic beliefs and practices. Solutions to AMR in LMICs must be rooted in, and acceptable to, the institutions, communities and societies where they will operate.

We strongly encourage engagement of non-academic stakeholders in research proposals. We recognise that the exploitation of new knowledge does not just occur at the end of a research project, but rather is embedded throughout the research process itself. We therefore encourage non academic involvement in both the early design and on-going conduct of research projects. The commissioning panel will consider the plans for involvement of non-academic stakeholders in the research process. Proposals should also include a strategy for public engagement.

Capacity building

We encourage the building of research capacity through the research process. Examples of building capacity include: building of capability to work across disciplines and in partnerships; support and mentoring for more junior team members; co-design of research; and (specifically for ODA focused proposals) opportunities for those with relevant skills who have not previously worked on development relevant research projects to orient their research towards global issues; implementation with developing country partner staff. Note that studentships are not eligible under this call.

Eligible costs

Where appropriate to the project aims and not already being done elsewhere, eligible costs include synthesis of relevant existing work. Where this is requested, an appropriate sum

should be included for communicating outputs of synthesis (alongside other communications costs), and a clear indication in the timeline of when synthesis outputs will be completed by. We recommend that a minimum of 10 per cent of the overall budget should be dedicated to delivering the activities outlined in the impact summary. Researchers are encouraged to be innovative in the kinds of user engagement, communications and research uptake activities they plan to undertake. Guidance on developing an impact strategy is available on the ESRC website (<http://www.esrc.ac.uk/research/evaluation-and-impact/developing-an-impact-strategy/>).

Funded proposals will be expected to network to share knowledge and best practice with each other and other projects which form the wider cross-council AMR initiative, and costs can be included for this purpose.

Where research proposed includes the development or evaluation of an intervention information on potential for replicability, acceptability, affordability, scalability, replicability and affordability should be included. Projects which assess the effectiveness of a particular intervention without situating that assessment within a broader research and policy context will not be funded. The financial resource advertised is for research costs and not for the cost of any intervention to be studied. It is up to applicants to consider how the cost of any intervention is supported. Researchers are advised to refer to the MRC framework on the development and evaluation of complex interventions for further guidance on interventions, where appropriate to their proposed plans: <http://www.mrc.ac.uk/documents/pdf/complex-interventions-guidance/> (PDF).

Intellectual property

Grants will be subject to ESRC's standard terms and conditions. These state that the IP generated through the grant rests with the grant holding research organisation.

Assessment process

An independent assessment process will be led by the ESRC, and all other funders will fully contribute, in the form of formulating guidance and suggesting panel members and peer reviewers.

Proposals for collaborative grants will be subject to external peer review and will then be considered by an assessment panel comprising experts from a range of disciplines as well as non academics. Pump priming grants will be reviewed and considered by the assessment panel only.

Applications will be evaluated against the following criteria:

- Academic excellence – proposals should demonstrate an innovative research agenda and potential to generate new knowledge
- Fit to the scope of the call
- Multi-disciplinary and collaborative approach – does the study truly involve a range of research disciplines that are appropriate to the research questions posed? Are an appropriate range of stakeholders involved?
- Potential impact – does the proposed research promise to make a substantive difference to AMR?
- Timeliness
- Value for money

In addition, applications identified as being ODA relevant will also be assessed for their potential to impact on issues relevant to the economic development of LMICs.

The funders reserve the right to make final funding decisions that reflect the funding sources available to them and the overall balance of thematic areas in the specification.

How to apply

ESRC will manage the application process on behalf of all funders.

All proposals must be submitted through the Research Councils' Joint Electronic Submissions (Je-S) system. The closing dates are:

- Pump priming proposals: **16.00 on 20 July 2016**
- Collaborative grants: **16.00 on 8 September 2016**

It will not be possible to submit proposals after the above times.

All proposals must be made on the **ESRC** Je-S Proposal Form, which is available at <https://je-s.rcuk.ac.uk/eforms/secure/login.asp>. Je-S is the electronic submission system which is used by all Research Councils to provide a common electronic system that supports research administration. More detailed information can be found at <https://je-s.rcuk.ac.uk/>. In particular applicants should note the **registration requirements** to make a Je-S submission. Only those proposals submitted through the Je-S system will be accepted for processing. The proposal submitted through Je-S will be taken to be the final version, and will be the version used for external review.

The specific **notes for guidance** for this call provide details on the information that you will be required to submit as part of your proposal. All applicants are strongly advised to consult ESRC's research funding guide (www.esrc.ac.uk/rfg), which sets out the rules and regulations governing its funding.

All the funders are committed to working together on this initiative, and will freely share information and queries received relating to the initiative with each other.

Information and networking event

An optional networking and information event, where applicants can gain additional information and meet potential collaborators, will be held in London on **14 June 2016**. A separate workshop with Defra and VMD on **10 June 2016** will explore collaborations for research on behaviour as it relates to animals. For further details on how to register visit: <http://www.esrc.ac.uk/news-events-and-publications/events/tackling-antimicrobial-resistance-behaviour-within-and-beyond-the-healthcare-setting/>

Commissioning timetable

- Call launch: 19 May 2016
- Workshop on behaviour relevant to animals: 10 June 2016
- Information and networking event: 14 June 2016

- Pump priming grants:
 - Call closes (Je-S application deadline): 20 July 2016
 - Funding decisions: October 2016
 - Grants start: January 2017
- Collaborative grants:
 - Call closes (Je-S application deadline): 8 September 2016
 - Funding decisions: January 2017
 - Grants start: April 2017

Contacts

For all queries to do with the call contact amr@esrc.ac.uk in the first instance.