

How much is enough? Spending to protect lives and money against the global threat of antimicrobial resistance

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Abstract

Antimicrobial resistance (AMR) ranks among the top 10 recognized global health risks. However, despite its projected health and economic burdens, the global response to prevent and mitigate AMR has been insufficient. Our research aims to assess the current state of financial investments in AMR globally and in the United Kingdom and provides recommendations for future investments to tackle the impacts of AMR. To do this, we conducted a scoping review of the peer-reviewed and grey literature according to pre-defined search strategies. To place the state of AMR funding within the context of global priorities, we also purposively sampled three other global health threats from the Global Risk Registrar and compared their investments with that of AMR. Of our identified priority investment areas for AMR, we found that the most significant portion of funding is available for research and development, compared to those for infection prevention and control, water, sanitation and hygiene initiatives, and antibiotic use in animals. However, given that some of these investment areas overlap with each other and with other global risks, exemplified by the surge in funding for vaccine research and development during the COVID-19 pandemic, it is challenging to distinguish AMR-specific investments accurately.

Furthermore, compared with other global risks with similar risk profiles to AMR, such as infectious diseases, pandemics, and the water shortage crisis, overall investments in AMR have lacked critical global political pushes. Therefore, to address AMR moving forward, investments over the next 10 years must exceed the \$40 billion that was initially suggested by the O'Neill report. Future investments must continue to focus on infection prevention and control, and water, sanitation, and hygiene initiatives, which will additionally require investments in robust public health infrastructure, especially in low- and middle-income countries. Overall, our results show that insufficient funds, combined with their disproportionate distribution across investment areas and an over-reliance on market mechanisms, are hindering progress on tackling AMR. While this highlights the need for global collaboration that overcomes donor-driven funding priorities, a multi-sectoral approach will be crucial to promote an efficient distribution of funding to address the global burden of AMR comprehensively.