£19.2 million for cross-government surveillance project to protect public health

The project brings together the Food Standards Agency (FSA), Food Standards Scotland (FSS), the Department of Environment, Food and Rural Affairs (Defra), the Department of Health and Social Care (DHSC), Public Health England (PHE) and the Environment Agency to test the application of genomic technologies in the surveillance of foodborne pathogens and antimicrobial resistant (AMR) microbes in all four nations of the UK.

The funding will support a three-year project to develop a pilot national surveillance network, using the latest DNA-sequencing technology and environmental sampling to improve the detection and tracking of foodborne and antimicrobial resistant pathogens through the whole agri-food system from farm to fork. The heart of this 'virtual' network will be a new database that will permit the analysis, storage and sharing of pathogen sequence and source data, collected from multiple locations across the UK by both government and public organisations.

> Foodborne disease in the UK is estimated to cause around 2.4 million cases of illness a year. The cost of this burden on society is estimated at over £9bn per year. This project is designed to help safeguard UK food, agriculture and consumers by using cutting edge technology to understand how pathogens and AMR spread. Tracking the source of these issues will ultimately help us to develop better control strategies to reduce illness and deaths.
> Professor Robin May, Chief Scientific Adviser for the FSA

> Antimicrobial resistance poses a major risk to public health and the loss of functional antibiotics has the potential to cause 10 million additional global deaths every year by 2050. To put this in context the current pandemic has so far caused around three million deaths globally.
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> UK sales of antibiotics for food-producing animals have halved in the last six years. This vital new project will build on that progress, and ensure antibiotics continue to remain effective for both people and animals.
>
> Professor Gideon Henderson, Chief Scientific Adviser for Defra

> AMR is a silent pandemic that already poses a serious threat to modern medicine and our planet, by making common infections even more difficult to treat in both humans and animals. To tackle this global threat, we need to make better use of our technological advances, and strengthen our ability to collect, analyse, and share health data from all aspects of life.
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> 'Building on the progress made at the G7 meetings this year, this new project will help us identify how pathogens and AMR spread, through analysing food, environment and health factors. Through this joined-up approach we will be able to take decisive action to save thousands of lives every year.
>
> Dame Sally Davis, UK Special Envoy on AMR

This project reflects the “One Health” approach, recognising that health, food and environment are all linked and that AMR in the environment can have profound implications for other sectors.

> This project will help us to understand the complex role that the environment plays in the development, maintenance and transport of resistance leading to the exposure of people, animals and crops. We can finally begin to add environmental knowledge to build a true “One Health” approach to AMR.
> Professor Doug Wilson, Chief Scientist for the Environment Agency

> Working across industries and taking a One Health approach is a critical part of our approach to better understand and track antibiotic resistance and ensure that we can keep antibiotics working. Our ongoing and established surveillance work of antibiotic resistance in samples from patients with gastrointestinal infections will form an important part of this joint initiative and help ensure that information is shared across the system.
>
> Dr Neil Woodford, Deputy Director, National Infection Service Public Health England

The Government’s Shared Outcomes Fund (SOF) tests innovative ways of bringing together the public sector. It aims to address cross-cutting issues in a way that improves outcomes and ensures value for money.