

A survey of antimicrobial resistant (AMR) *Escherichia coli* in retail meats on sale in Northern Ireland (2023-2027)

Area of research interest: [Antimicrobial resistance](#)

Study duration: 2023-09-20

Planned completion: 31 December 2027

Project status: Ongoing

Project code: FS900189

Conducted by: HallMark Meat Hygiene Ltd and Agri-Food and Biosciences Institute

Background

The FSA is continuing to commission projects to improve our understanding of the role the food chain plays in the development and spread of antimicrobial resistant (AMR) bacteria. Our AMR surveillance programme has been established for several years, with a particular focus on retail meats.

From 2015 to 2020, the FSA had been participating in the EU-harmonised survey on AMR *Escherichia coli* in retail meats. This survey has generated AMR prevalence data, over several years, in beef, pork and chicken meat collected at retail in the UK. The survey confirmed that chicken, and to a lesser extent, beef and pork can be contaminated with AMR *E. coli*.

Approach

The FSA have commissioned an AMR survey in beef and pork in 2023, 2025 and 2027 and chicken and turkey meats in 2024 and 2026 collected at retail sale in Northern Ireland (NI) under (EU) 2020/1729. The sampling methodology and analytical methods meet EU specifications to ensure comparability of data with the previous AMR data from the EU survey and that from Member States.

This survey starts with collecting beef and pork meat samples on retail sale in the NI from September to December 2023, with sampling representing 80% retail market share and 80% population coverage. Analysis requires the initial isolation and enrichment of *E. coli* from all meat samples, prior to testing for AMR, specifically Extended Spectrum Beta Lactamases (ESBLs), AmpC and Carbapenemase-producing *E. coli*.

One of the main objectives within the [FSA's Strategy for 2022-2027](#) is ensuring that 'food is safe'. Addressing the public health threat posed by AMR is a national strategic priority for the UK and led to the Government publishing both a [20-year vision of AMR \(as pdf\)](#) and a [5-year \(2019-2024\) AMR National Action Plan \(NAP\) \(as pdf\)](#). This survey will provide continued monitoring for *E. coli* from retail meats and fits into the [Northern Ireland AMR Action Plan \(as pdf\)](#) which aims to promote relevant research, and to ensure that policy and practice are informed by this.

This will help to determine if these meats pose a risk to public health in relation to AMR and allow future monitoring of trends over time.