

About us:

The NIHR Health Protection Research Unit in Gastrointestinal Infections brings together leading researchers from the University of Liverpool, UK Health Security Agency and the University of Warwick. Through collaboration and knowledge sharing, this integrated, multidisciplinary research programme will generate new strategies to protect the UK population from diarrhoeal diseases, and will play a pivotal role in maintaining and growing the UK Health Security Agency's scientific expertise and future workforce.

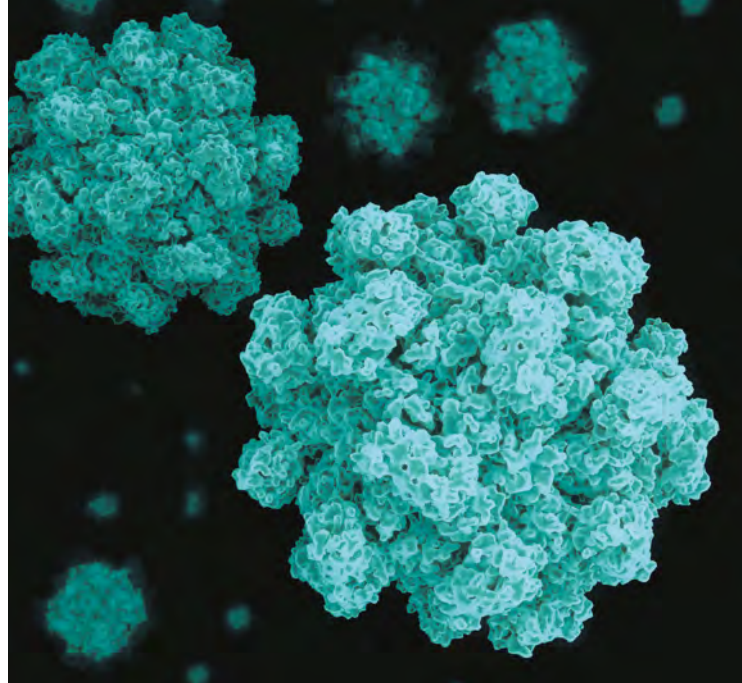
Our aims:

1. Improve methods for the surveillance and control of gastrointestinal infections, including among underserved communities in whom the disease burden is greatest.
2. Enhance detection and tracking of microbes that cause gastroenteritis to prevent disease outbreaks.
3. Through high quality, multidisciplinary training, equip health protection scientists with the necessary knowledge and skills to help reduce the population burden of gastrointestinal infections.
4. Engage strongly with patients and the public in our research and with wider stakeholders to support knowledge mobilisation.



Gastrointestinal infections continue to place a major burden on the UK population. By developing new methods for disease surveillance and pathogen detection across all groups in society, we will develop new approaches to control diarrhoeal diseases and contribute to reducing health inequalities.

Nigel Cunliffe, Director, and Roberto Vivancos, UK Health Security Agency Lead, NIHR Health Protection Research Unit in Gastrointestinal Infections.



NIHR | Health Protection Research Unit
in Gastrointestinal Infections
at University of Liverpool

Health Protection Research Unit in Gastrointestinal Infections

For more information

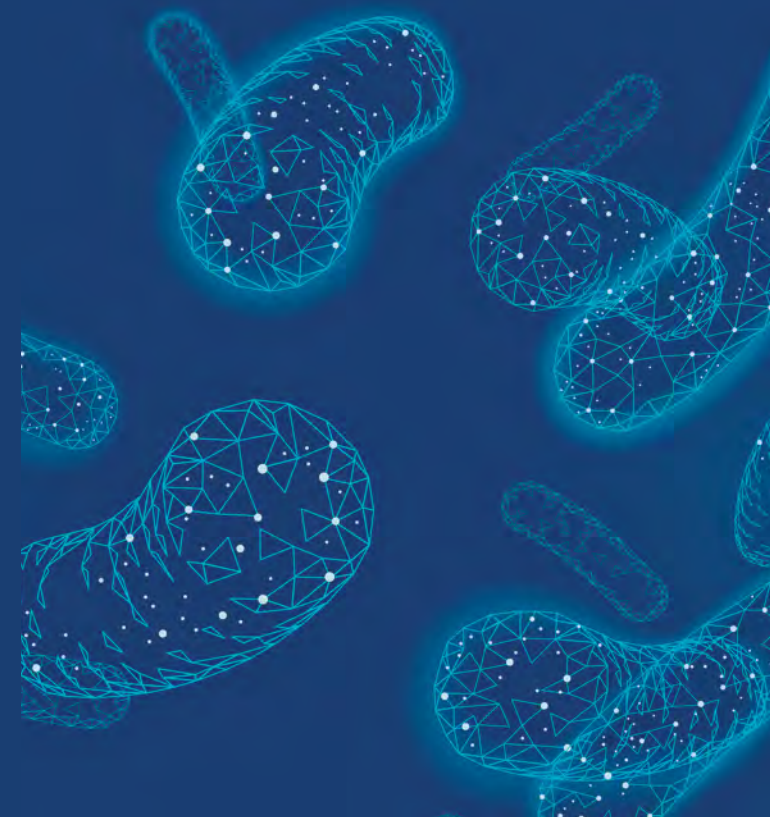
www.hprugi.nihr.ac.uk

hprugi@liverpool.ac.uk

 @HPRUGi



The Health Protection Research Unit in Gastrointestinal Infections is part of the National Institute for Health Research and is a partnership between the University of Liverpool and the UK Health Security Agency, in collaboration with the University of Warwick.



Our research themes



Theme 1 People and places

Exploring socio-economic, environment and behavioural factors in gastrointestinal infections

Local contexts and environments influence the behaviour of individuals, households and institutions and consequently the burden of gastrointestinal infections. By utilising and improving place-based surveillance data, we aim to best understand the high burden of infection in disadvantaged places and hard to reach groups. In turn this will help develop national and local policy and practice to reduce inequalities in the causes and consequences of gastrointestinal infections.



Theme 2 Data and informatics

Developing methods for surveillance and outbreak control

Through harnessing novel and emerging data sources alongside UKHSA syndromic surveillance and other intelligence systems, we aim to accelerate and target gastrointestinal health protection actions better by combining data sources and developing more actionable analytics across organisations. Existing UKHSA national syndromic surveillance big data feeds will be explored for their utility in complimenting GI surveillance programmes, from monitoring seasonal GI activity to supporting local outbreaks. Through the newly established Combined Intelligence for Population Health Action platform (www.cipha.nhs.uk), near-real-time data sources are being used by UKHSA, NHS, local authority public health and academic teams alike.



Credit: Shigella flexneri invading embryonic stem cell



Theme 3 Pathogens and microbiomes

Combating gastrointestinal infections with genome sequencing

Drawing upon research in the first HPRU in Gastrointestinal Infections, we aim to exploit the “state of the art” molecular approaches to support improved surveillance and control of diarrhoeal diseases. By collaborating with other disease-specific and cross-cutting HPRUs, this theme aims to provide additional analytical and developmental capacity to existing resources. In turn this will address important questions in support of the UKHSA's work in identifying gastrointestinal pathogens, and linking infections as part of outbreak detection, investigation and control.



Theme 4 Predict and prevent

Epidemiological prediction to guide disease prevention

We will address the UKHSA and public health priorities through research that uses, builds upon and complements UKHSA surveillance and outbreak investigation activities. The activities include analysis of datasets (UKHSA and external), gathering data using UKHSA surveillance, measuring the social impact of control measures and integrating these in models to develop policy. We will use primary mixed-method research to address carriage of gastrointestinal pathogens and antimicrobial resistance in different groups.

Research capacity development

Research capacity development is essential to providing public health practitioners and academics working in public health with the necessary knowledge and skills to enable them to understand and tackle the problem of gastrointestinal infections in the UK population. Through education and training we will develop staff capacity and capability in gastrointestinal infections, thus growing the human resource that will help develop and apply enhanced infection prevention and control strategies to protect the health of the population now and in the future.

Patient and public involvement and engagement

We will embed active forms of patient and public involvement and community engagement across the HPRU to ensure patients and the public are involved in co-producing public health knowledge of importance and relevance to them. Drawing on our knowledge of practice, the PPIE evidence base and funder policy and guidance, we will establish high quality PPIE practice. Our intention is to capture and report the impact of PPIE to support the developing evidence base. We will also explore the role of patients and the public in knowledge mobilisation.

Knowledge mobilisation

We will ensure the knowledge produced in the HPRU meets the needs of practitioners, policy-makers and the public through engagement with stakeholders throughout the research cycle. Using targeted and diverse dissemination strategies to share our findings, our research will catalyse change to reduce morbidity associated with gastrointestinal infections. We will evaluate our knowledge mobilisation success and seek to learn from experience as our work progresses.