Plain English summary

National syndromic surveillance data for the surveillance of gastrointestinal pathogens and exploration of novel digital data to enhance GI surveillance

BACKGROUND

Every year, about 17 million people in the UK get a stomach bug, but most people get better by themselves and don't need see a doctor. Even those people who do see a doctor do not usually get tested for the bugs that might be causing their illness. This means that scientists don't know about the millions of people who have a stomach bug each year. It's important to know how many people have stomach bugs have so we can understand where the patients with the bugs are in the country.

STUDY

We will use a type of surveillance called 'syndromic surveillance'. Instead of collecting samples of poo from sick patients to test for stomach bugs, we study sick people who have visited a doctor or called NHS 111 because they are feeling unwell. We look at the information that has been recorded by the doctor about the symptoms that the patient has had during their illness, for example, stomach aches, diarrhoea or being sick.

The aim of this project is to improve the way that scientists track the bugs that give people upset stomachs at certain times of the year. We will first read about how other countries use syndromic surveillance to find out when people have stomach bugs. We will learn lessons from what other countries have done. This will improve the way we undertake surveillance of stomach bugs in the UK. We will then try to record the most common patient symptoms associated with stomach bugs. This will help us recognise patients who have a stomach bug from their medical records.. We will also see if certain groups of people (like elderly people, or people from parts of the country that are more deprived) get stomach bugs more often than others. Finally, we will look at a nasty stomach bug that can cause more dangerous symptoms, which can lead to death. We will see if we can improve the surveillance systems that monitor people who have this nasty stomach bug. The results from each part of the research will be used to help scientists learn about when these stomach bugs are around, which allows us to tell patients as quickly as possible about the bugs so that they can try to avoid becoming ill.

INVOLVING THE PUBLIC

During this project we will arrange meetings with members of the public and patients (including people who have had stomach bugs). During these meetings we will show them how we plan to do our research to see if they have ideas about how we can improve it.

HOW WE SHARE OUR FINDINGS

We will write about what we have found and learned from our research. We will put this in reports which we will publish in special science journals. These will be available to anyone who wants to read them. We will also give advice to scientists and doctors at the UK Health Security Agency who are experts in stomach bugs. We will also tell the NHS about our research. It will help the NHS to care for patients with stomach bugs. It will also help the NHS protect more vulnerable patients from catching stomach bugs when they are in hospital.

IMPACT OF RESEARCH

This research will improve the surveillance systems that the UK Health Security Agency uses to monitor how many people there are with stomach bugs are in the population. This will give us a better understanding of how these bugs behave and move through the population. Using this information, we can improve the messages that we give the public through the news and social media. This will give people more accurate and timely information and advice about trying to avoid catching stomach bugs and staying healthy.