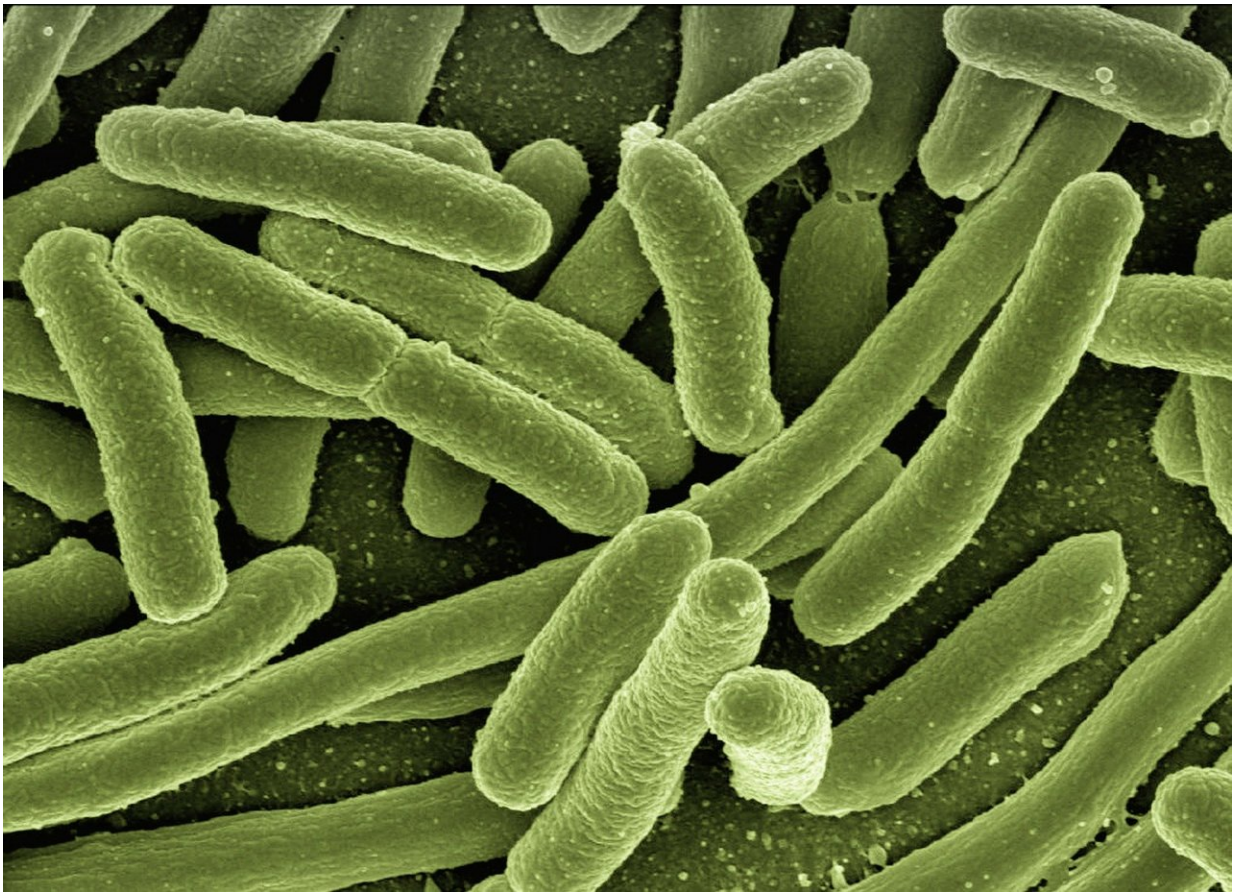


Gut infection outbreaks halved during first 6 months of COVID-19 pandemic in UK

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The number of reported gastrointestinal infection outbreaks more than halved during the first 6 months of the COVID-19 pandemic in the UK,

compared with the previous 5-year average, while lab confirmed cases fell by a third, finds research published in the open access journal *BMJ Open*.

While several factors are likely to have been behind these figures, the [public health measures](#) adopted to curb the spread of COVID-19 [infection](#), such as improved [hand hygiene](#), undoubtedly had a key role, say the researchers.

If this level of hygiene practice were to be maintained once the pandemic is over, there could be a permanent change in the number of gastrointestinal infections reported, they suggest.

While a growing body of evidence indicates that the pandemic and the mandatory infection control measures have had a major impact on other health conditions, such as heart disease and cancer, it's less clear what impact they've had on infectious diseases.

In England alone, it's estimated that there are more than 17 million cases of gastrointestinal infections every year, resulting in over 1 million healthcare consultations and around 90,000 laboratory-confirmed diagnoses.

The researchers wanted to find out what impact the infection control measures imposed during the pandemic had on gastrointestinal infection trends in the first 6 months.

The infection control measures included improved hand hygiene, reduced social contact, social distancing, increased environmental cleaning, and closure of premises.

The researchers drew on routinely collected [health data](#) from 7 English surveillance systems coordinated by the UK Health Security Agency

(UKHSA), previously Public Health England, and Google Trend data, for the period 01 January to 2 August 2020 inclusive.

The surveillance systems gather information on outbreaks, laboratory notifications, calls to the NHS 111 health advice service, GP appointments, and attendance at emergency care.

The infectious microbes of interest included *Campylobacter* spp, *Cryptosporidium* spp, Shiga-toxin producing *E coli* (STEC), *Giardia* sp, *Listeria* spp, norovirus, non-typhoidal *Salmonella* spp, and *Shigella* spp.

The data were split into phases as government policy evolved: pre-[outbreak](#) (phase 1); early outbreak (phase 2); pre-lockdown (phase 3); early lockdown (phase 4); late lockdown (phase 5); lockdown easing (phase 6) and further easing (phase 7).

They were then compared with data collected from week 1 to week 31 in 2015–19 (5-year average).

During the first 6 months of 2020, 1544 suspected and lab-confirmed gastrointestinal infection outbreaks were reported in England, representing a 52% fall on the 5-year average for the period.

During the 'pre-outbreak' phase (weeks 1–4), notified outbreaks were comparable to previous years' figures. But from week 7 ('early outbreak' phase) they were 22% lower than the previous 5-year average: 510 vs 651.

This trend continued until notified infection outbreaks were 87% lower by the 'late lockdown' phase (weeks 19–22): 46 vs 350. And reported outbreaks remained substantially lower than historically observed for the duration of the response to the COVID-19 pandemic.

Historically, most (95%) suspected or confirmed outbreaks of gastrointestinal infections reported in England are attributed to viruses, and mostly occur in hospitals and care homes.

During phases 2–7 of the COVID-19 response, reported suspected and confirmed viral outbreaks fell by 62% (862 vs 2239), with significant falls in parasitic infection outbreaks (2 vs 32; 94% fall) and bacterial infection outbreaks (51 vs 97 outbreaks; 47% fall).

Lab-confirmed infections also fell by a third (34%): 27,859 cases reported between phases 2 and 7 compared with a 5-year average of 42,495.

While lab-confirmed infections began to increase from week 16 onwards, mirroring historic seasonal trends, they still remained below the 5-year average.

During the historic peak for lab reporting, which occurred during lockdown easing, 4617 cases were reported. This compares with the 5-year average of 7879.

Reductions in lab-confirmed cases were observed for all pathogens across all age groups and in both sexes, ranging from 26% in children aged 1–9 to 42% among women aged 80+.

Potential explanations for these trends include reductions in healthcare provision and unwillingness to seek medical attention, say the researchers.

Emergency care attendances, GP consultations, and calls to the NHS 111 helpline for gastroenteritis and diarrhoea/vomiting were all lower than in 2019. And while NHS 111 calls gradually increased, they remained substantially lower than in 2019.

Evidence from Google Trends data showed searches for key phrases, such as 'food poisoning', 'gastroenteritis' and 'sickness bug' all plunged between weeks 11 and 13, while trends for 'handwashing' and 'disinfection' rose substantially between weeks 8 and 14, mirroring patterns observed in other surveillance systems.

This is an observational study, and as such, can't establish causality. It only covered the first few months of the pandemic and wasn't able to separate out the impact of other contributory factors, caution the researchers.

But they nevertheless conclude: "There has been a marked change in trends of [gastrointestinal] infections in the context of the COVID-19 pandemic.

"The drivers of this change are likely to be multifactorial: while changes in health seeking behaviour, pressure on diagnostic services, and surveillance system ascertainment have undoubtedly played a role, there has likely been a true decrease in the incidence for some pathogens resulting from the control measures and restrictions implemented.

"This suggests that if some of these changes in behaviour, such as improved hand hygiene were maintained, then we could potentially see sustained reductions in the burden of [gastrointestinal] illness."

More information: Impact of the COVID-19 pandemic on gastrointestinal infection trends in England, February–July 2020, *BMJ Open* (2022). [DOI: 10.1136/bmjopen-2021-050469](https://doi.org/10.1136/bmjopen-2021-050469)

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