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Changes in behaviour last year led to fall in antibiotic resistant infections

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The incidence of antibiotic resistant bloodstream infections fell in England in 2020 for the first time since 2016, although numbers still remain higher than six years ago, data from the UK Health Security Agency have shown.¹

There were 55 384 antibiotic resistant bloodstream infections in 2020, down from 65 583 in 2019. Deaths attributable to antibiotic resistant bacteria also fell, to 2228 last year, from 2596 the year before. The reduction in antibiotic resistance in 2020 was mainly driven by fewer *Escherichia coli* bloodstream infections, the report found.

The agency said the reduction in all mono-microbial bloodstream infections, from 137 655 in 2019 to 127 449 in 2020, and in antibiotic resistant bloodstream infections was likely to have been due to changes in behaviour brought on by the covid-19 pandemic, such as less social mixing, enhanced hand hygiene, and fewer people in hospital.

It said this indicated it was likely there would be a rise in numbers of resistant infections as pandemic restrictions end.

The incidence of bloodstream infections of each of the key individual pathogens decreased from 2019 to 2020, with the largest relative decrease, of 59%, seen for *Streptococcus pneumoniae*, from 8.7 cases per 100 000 population in 2019 to 3.6 per 100 000 in 2020.

However, the report found that although the total number of infections and resistant infections fell in 2020 the proportion of bloodstream infections that were resistant to one or more antibiotics was the same as in 2019 and actually higher than in 2016.

Of the key pathogens, such as *Staphylococcus aureus*, *E coli*, *Klebsiella pneumoniae*, and *S pneumoniae*, there were 77 310 bloodstream infections in 2020, down from 88 195 in 2019 and 81 673 in 2016. Of those, 20% (15 549) in 2020, 20% (18 188) in 2019, and 18% (14 829) in 2016 were resistant to antibiotics.

Susan Hopkins, chief medical adviser at the UK Health Security Agency, said, “Antimicrobial resistance (AMR) has been described as a hidden pandemic, and it’s important that we do not come out of covid-19 and enter into another crisis . . . Serious antibiotic resistant infections will rise once again if we don’t act responsibly—and that can be as simple as regular and thorough handwashing.”

The report showed that efforts to improve antimicrobial stewardship have led to a continuing decrease in prescribing of antibiotics, with defined daily doses per 1000 people a day falling during the pandemic from 18 in 2019 to 16 in 2020.

Antibiotic prescribing has been falling in general practice, dentistry, and community and hospital settings since 2016, and, while this trend continued in the other settings, in dentistry prescribing rose by 22% between 2019 and 2020 (0.611 to 0.746 per 1000).

Wendy Thompson, a member of the FDI World Dental Federation’s AMR working group said, “The covid-19 pandemic has been unforgiving. But using antibiotics to make up for a lack of access to urgent dental care is a risk to patient safety and should be avoided wherever possible. We need to start treating patients with acute dental pain or infection, not medicating them.”

¹ UK Health Security Agency. English surveillance programme for antimicrobial utilisation and resistance (ESPAUR) report 2020 to 2021. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1033851/espaur-report-2020-to-2021-16-Nov.pdf.