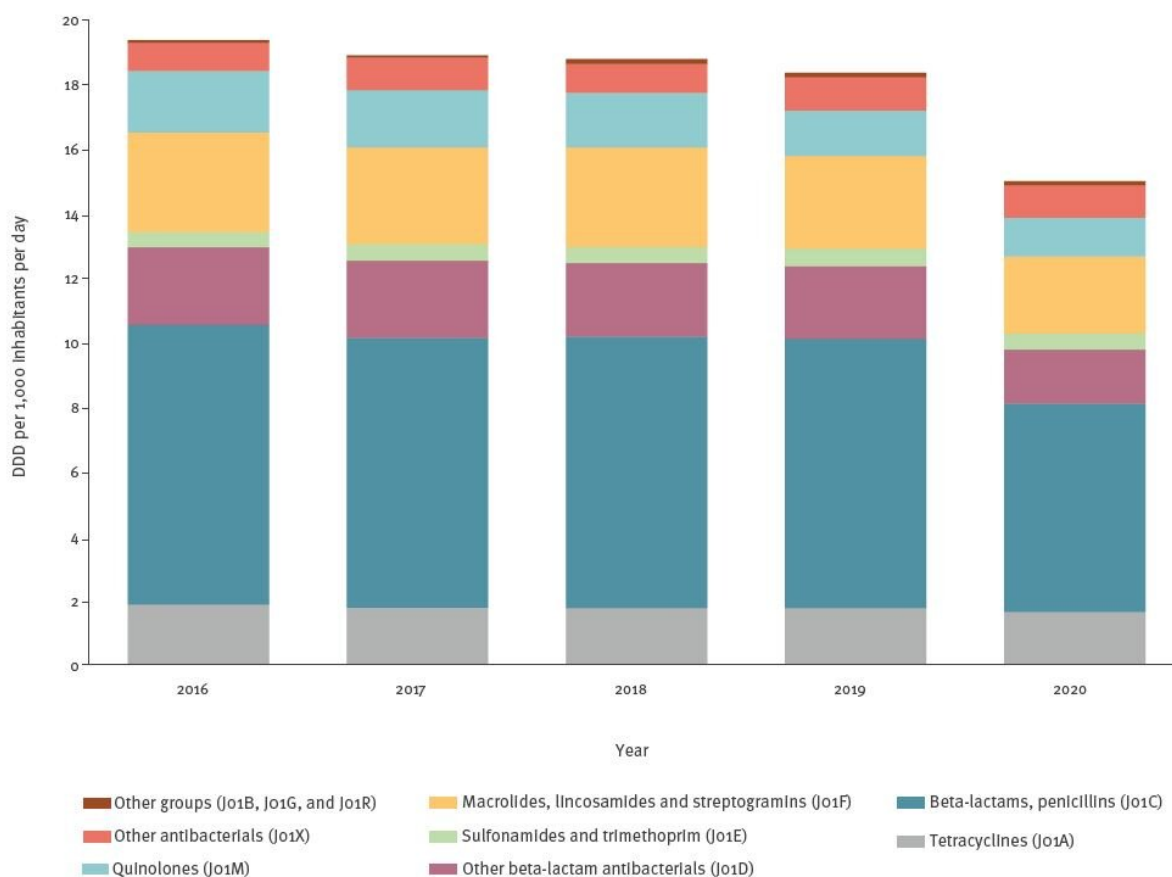


EU/EEA during COVID-19 pandemic: Largest annual decrease in antibiotic use in the community in two decades

November 18 2021

Consumption of antibacterials for systemic use (ATC group J01) in the community, population-weighted mean, by ATC group, 29 EU/EEA countries, 2016–2020



ATC: anatomical therapeutic chemical index; DDD: defined daily doses; EEA: European Economic Area; EU: European Union.
The population-weighted mean is based on antimicrobial consumption data reported by 29 EU/EEA countries (Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden). Cyprus and Czechia only reported total care data (community and hospital consumption combined), and community consumption was imputed by assuming that community consumption contributed 90% of total care consumption.

From 2016 and 2019, the EU/EEA population-weighted mean annual change in the consumption of antibacterials for systemic use was -0.34 defined daily doses (DDD) per 1,000 inhabitants per day, representing a 1.8% annual decrease (median: -0.44 DDD/1,000 inhabitants/day or a 2.3% annual decrease). Between 2019 and 2020, the decrease was ten times higher, declining by -3.35 DDD/1,000 inhabitants/day. This represents a 18.3% decrease between 2019 and 2020. Credit: *Eurosurveillance* journal

On the occasion of European Antibiotic Awareness Day (EAAD) on 18 November and the start of World Antibiotic Awareness Week, new data from the European Centre for Diseases Prevention and Control (ECDC) published in *Eurosurveillance* show that antibiotic consumption in the community decreased by more than 18% between 2019 and 2020.

This decline, noted by the authors as the largest annual decrease in the two decades of reporting via the European Surveillance of Antimicrobial Consumption Network (ESAC-Net), was observed in 26 of the 27 reporting countries of the European Union and European Economic Area (EU/EEA). Changes were largest and most consistent in the primary care sector, most likely as a result of the COVID-19 pandemic.

In the rapid communication published today in *Eurosurveillance*, Diaz Högberg et al. analyzed the consumption of antibacterials for systemic use. From 2016 and 2019, the EU/EEA population-weighted mean annual change in the consumption of antibacterials for systemic use was -0.34 defined daily doses (DDD) per 1,000 inhabitants per day, representing a 1.8% annual decrease (median: -0.44 DDD/1,000 inhabitants/day or a 2.3% annual decrease). Between 2019 and 2020, the decrease was 10 times higher, declining by -3.35 DDD/1,000 inhabitants/day. This represents a 18.3% decrease between 2019 and 2020.

Overall decline in consumption of penicillins and beta-lactams

The 26 countries that reported an overall decrease in consumption of antibacterials showed a decline in consumption of penicillins between 2019 and 2020, as well as reduced [consumption](#) of other beta-lactams (including cephalosporins, macrolides, lincosamides and streptogramins).

According to the authors, possible reasons for the decrease could be a general drop in the number of primary care consultations during the COVID-19 pandemic, as people were more cautious to seek healthcare for mild or self-limiting infections, or due to difficulties in getting medical appointments.

The authors also hypothesize that "the large decrease noted for [antibiotics](#) commonly used to treat [respiratory tract infections](#), e.g. penicillins and other beta-lactam antibacterials, is in line with the reported low incidence of non-COVID-19-related respiratory tract infections in the EU/EEA in 2020. This has been attributed to the non-pharmaceutical interventions put in place as a response to the pandemic, including physical distancing, respiratory etiquette, face masks and promotion of hand hygiene."

As exposure to antibiotics is associated with the emergence of antibiotic resistance, the overall uptake and how antibiotics are consumed in a population has an impact on antibiotic resistance. Prior to the COVID-19 pandemic, the primary care sector accounted for about 80% to 90% of all antibiotic prescriptions, mainly for respiratory tract infections.

Diaz Högberg et al. note that it remains to be seen if the decline in [antibiotic consumption](#) in the community observed in 2020 will be sustained throughout 2021 and what implications the recent decrease

may have on antimicrobial resistance in Europe overall.

More information: Diaz Högberg L, Vlahović-Palčevski V, Pereira C, Weist K, Monnet CL, ESAC-Net study group. Decrease in community antibiotic consumption during the COVID-19 pandemic, EU/EEA, 2020. *Euro Surveill.* www.eurosurveillance.org/content/2021.26.46.2101020

Provided by European Centre for Disease Prevention and Control (ECDC)

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