



DANMAP

Press release, 7 October 2021

Antimicrobial use decreased further in Denmark during COVID-19

Antimicrobial consumption in humans has decreased for the seventh consecutive year in Denmark. The decrease was enhanced by COVID-19. This is shown by the DANMAP report on the consumption of antimicrobial agents in 2020. DTU National Food Institute and Statens Serum Institut (SSI) are behind the report. DANMAP celebrates its 25th anniversary this year.

Antimicrobial consumption continues to decrease in Denmark, and consumption plummeted further during COVID-19. This is the conclusion of the recently published DANMAP report for 2020. DTU National Food Institute and SSI are behind the report.

22% drop in consumption in 10 years

Every year, DANMAP publishes new figures on antimicrobial consumption in humans and animals in Denmark. Concurrently, new figures are released for the occurrence of antimicrobial resistant bacteria in humans, food and animals.

The new figures for 2020 show that the total antimicrobial consumption in Denmark was 14.71 Defined Daily Doses per 1,000 inhabitants per day (DID). Over the last 10 years, the consumption has decreased by 22%. Relative to 2019, it has decreased by 7%.

Fewer prescriptions for antimicrobials by general practitioners

Antimicrobial consumption in the primary healthcare sector (antimicrobials that patients buy in pharmacies) has been decreasing for several years, and 2020 was no exception.

In the primary healthcare sector, prescriptions are issued by general practitioners, other practising specialists and dentists. The consumption figures also include prescriptions from hospital physicians when they discharge patients to their own homes or see them for an outpatient consultation at the hospital.

In 2020, the consumption in the primary healthcare sector was 393 prescriptions per 1,000 inhabitants. General practitioners accounted for 71% of the prescriptions. At the municipal level, antimicrobial consumption in the primary healthcare sector has been reduced by up to 32% since 2016.

In Danish hospitals, the trend has been different for several years. Here, antimicrobial consumption has increased by 33% over the last 10 years when measured in DDD per 100 bed-days (DBD).

“By measuring the consumption per 100 bed-days, the year-on-year variation in hospital activity is taken into account. The activity in the hospitals is of importance to the quantity of antimicrobials used. The more patients treated in a hospital, the greater the need for antimicrobials,” says Brian Kristensen, Head of Section for Infection Epidemiology & Prevention at SSI.

SSI's analysis shows the clear imprints of COVID-19

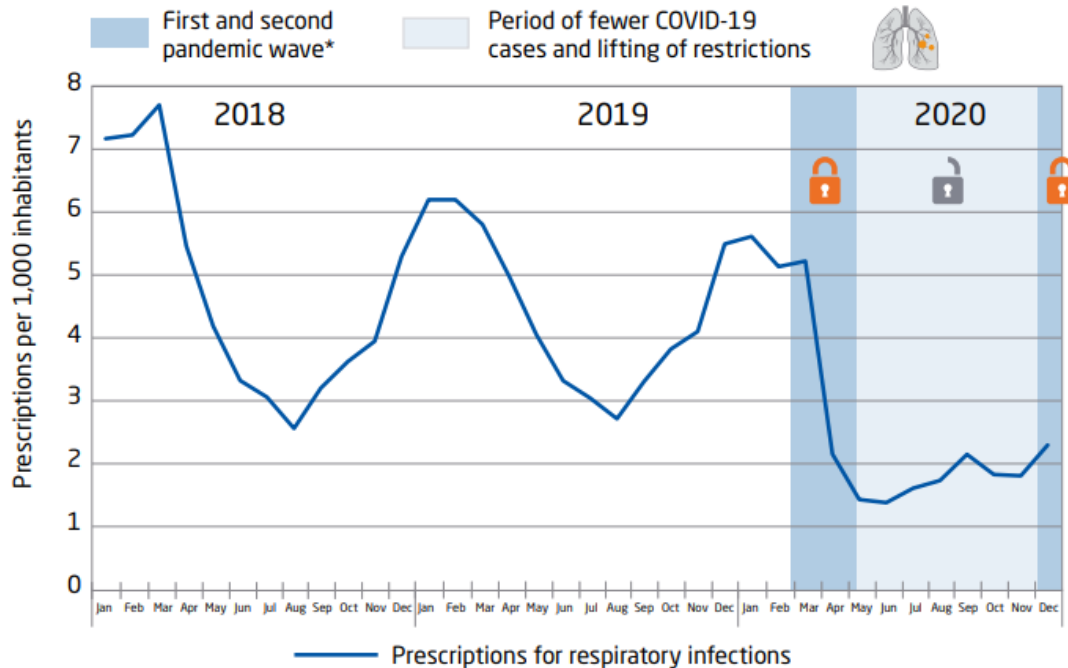
In DANMAP 2020, SSI has analysed how the COVID-19 pandemic has affected antimicrobial consumption in Denmark. The analysis includes the first and second pandemic waves (end of February to beginning of May and beginning of December to the end of the year, respectively).

Despite declining antimicrobial consumption over several years, it is clear that COVID-19 caused a further fall in consumption in the primary healthcare sector in 2020.

The number of prescriptions for antimicrobials thus plummeted after the first national lockdown in March 2020. One of the main reasons for this reduction was that fewer prescriptions of antimicrobials for respiratory infections were issued.

This may be due to the patients' changed contact patterns with the healthcare system and to the COVID-19 restrictions also limiting the spread of respiratory infections.

Consumption of beta-lactamase sensitive penicillins in primary health care with indication for respiratory diseases, prescriptions per 1,000 inhabitants, Denmark, 2018-2020



* The 'first wave' of the pandemic is defined as the period from 27 February 2020 (first SARS-CoV-2 cases in Denmark) to beginning of May 2020 (low incidence of SARS-CoV-2 cases, most restrictions lifted) and the 'second wave' as beginning of December 2020 (start of exponential growth of incidence and second series of restrictions/lockdown [large shops, high schools are closing])

Greatest decrease among the youngest

The decrease in prescriptions was greatest in the youngest age groups. For example, antimicrobial consumption for 0-9-year-olds fell by up to 54%.

"The decrease in the consumption of antimicrobials for children is connected with the children being home from school/childcare institution and that they therefore weren't exposed to being infected with disease in the same way as in previous years," says Brian Kristensen.

Antimicrobial consumption began to increase again in May and June, when the COVID-19 restrictions were gradually eased in Denmark. However, the monthly antimicrobial consumption remained lower for the rest of 2020 relative to the corresponding months in 2018 and 2019.

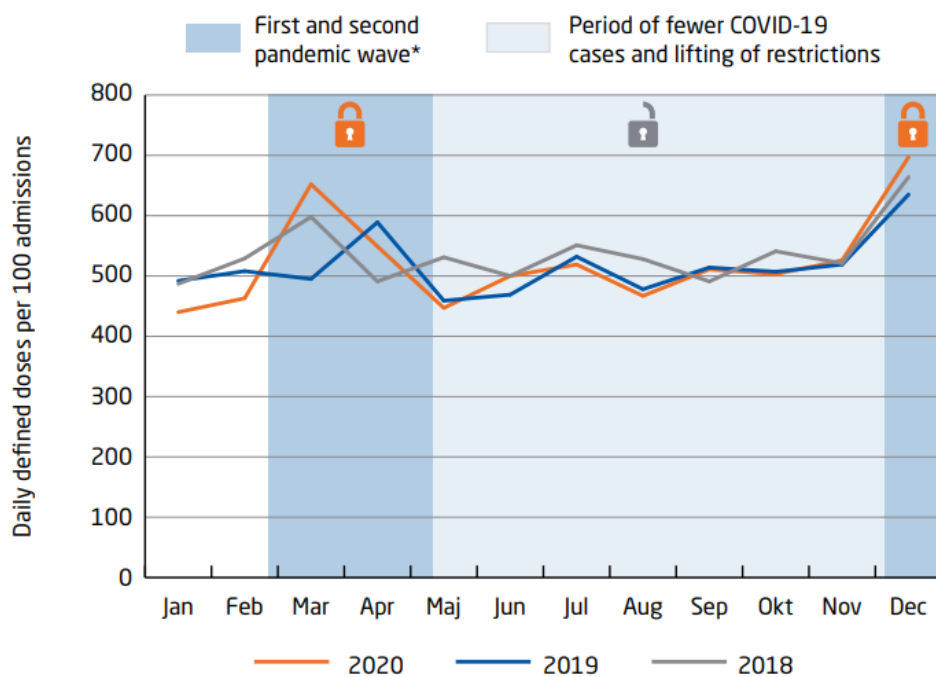
Higher antimicrobial consumption in hospitals during COVID-19

In 2020, the quantity of antimicrobial agents (measured in DDD) used in hospitals was 6% lower than in 2019. However, taking into account the activity level in the hospitals and the quantity of antimicrobial agents per admission, the consumption was instead approximately 1% higher in 2020 than in 2019.

Based on the hospitals' monthly antimicrobial consumption in 2020, measured in DDD per admission, it is clear that the consumption per admitted patient was significantly higher in March and April 2020 (first pandemic wave) relative to the same period in 2018 and 2019.

“This may be due to a changed patient composition in the hospitals with fewer, but more seriously ill, patients during this period. In addition, the hospitals had to discharge patients more quickly and cancel non-emergency operations compared with previous years due to the COVID-19 pandemic,” says Brian Kristensen.

Total consumption of antimicrobial agents for systemic use in somatic hospitals, Daily Defined Doses per 100 admissions, Denmark, 2018-2020



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Find out more

The DANMAP programme has monitored the use of antimicrobials for humans and animals in Denmark since 1995. The same applies to the occurrence of antimicrobial resistant bacteria in animals, humans and food.

Download the DANMAP report for 2020 from [DANMAP's website](#). The website also contains a [fact sheet on antimicrobial resistance](#).

You can also read more about the development in the consumption of veterinary antimicrobial agents in a press release on DANMAP's website: [Critically important antimicrobial agents are no longer used in production animals](#).

Contact

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