

Trends in upper respiratory tract infections and antibiotic prescriptions during the COVID-19 pandemic – a national observational study

Marie Gisselsson-Solen¹ and Ann Hermansson¹

¹Lund Univ Hosp

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Abstract

Objectives: The purpose of this study was to compare the incidences of common upper airway infections and their complications, and of antibiotic prescription rates during 2020, when the COVID-19 pandemic struck, and the previous year. **Study design:** Retrospective national register study **Setting/source population:** The Swedish population in 2019 and 2020. **Methods:** The Swedish Board of Health and Welfare statistics data base, which includes all out- and inpatient diagnoses in specialised care was used to retrieve the number of otitis media, rhinosinusitis, pharyngotonsillitis, acute mastoiditis and peritonsillar abscess diagnoses in various age groups during 2019 and 2020. The number of prescriptions of oral antibiotics used to treat upper airway infections was collected from the Swedish E-Health Authority, which covers all prescriptions in Sweden. Population data were retrieved from Statistics Sweden. **Results:** There was strong evidence of a substantial decrease (approximately 40%) in otitis media, rhinosinusitis and pharyngotonsillitis cases in the population as a whole in 2020 compared to 2019. For otitis media, the decrease was most pronounced among children, whereas rhinosinusitis and pharyngotonsillitis incidence decreased to a similar extent in adults, as well. Furthermore, there was equally strong evidence that acute mastoiditis decreased by 40% in children and adolescents and that peritonsillitis in adults decreased by 24%. The decrease in infections was accompanied by a corresponding decrease in antibiotic prescriptions. **Conclusion:** The social distancing measures introduced during 2020 were followed by a significant decrease in upper airway infections and antibiotic prescriptions.

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