

Fewer emergency ambulances during the Covid-19-pandemic in North Denmark Region, a cohort study

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the pandemic had any influence on the most severely acutely ill and injured, that is patients calling the emergency number and requesting an ambulance. Prehospital data, both logistic and medical journals, are present in all of Denmark's five health care regions, as are in-hospital data. The aim was to study hospital diagnoses and 1-and 30-days mortality among the ambulance-patient population in the North Denmark Region in 2020 compared to previous years.

Methods: This is a regional pilot study in preparation of a nationwide study, designed as a population based historic cohort study of patients calling the emergency number in North Denmark Region in 2020 compared to the years 2017-2019. Prehospital data were linked with patient administrative data on hospital diagnoses (ICD-10) and date of death. Outcomes were prevalence and mortality. Proportions were estimated using Poisson regression and proportions were compared by relative risks (RR) with 95% confidence intervals (CI).

Background: The Covid-19 pandemic have led to decreases in hospital admissions during the first period in the spring 2020, also among acute patients. However, it is not known if

Results: Compared with 2017-19, there were 6.5 % (95%CI 3.6;9.2) fewer patients in 2020. The proportion of hospitalizes patients increased 1% (RR 1.01, 95%CI 1.01;1.02), whereas patients not brought to a hospital decreased 5% (RR 0.95, 95%CI 0.92;0.97). Proportion of patients with respiratory diseases was reduced, from mean 2042/year to 1479 in 2020 (RR 0.76, 95%CI: 0.72;0.81), particularly during the first period of the Covid-19 pandemic in March-June. There was no difference for other major diagnoses, such as cardiovascular disease with mean 3046/year versus 3083 in 2020. There was no difference in over-all 1 and 1-30-day mortality in 2020 compared to 2017-19, neither for patients with nor without hospital contact, and no difference in mortality for respiratory and cardiovascular diseases.

Conclusion: In the North Denmark Region the overall number of emergency calls decreased during the Covid-19 pandemic. Respiratory diseases decreased markedly by 24% in 2020. Opposed to other studies we found no difference for cardiovascular diseases. This may be a regional pattern, and a nationwide study is needed to elucidate this.