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# COVID-19 – a rare cause of death in nursing homes

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## EDITORIAL

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## Only 1.3 % of all deaths in nursing homes in 2020 were attributable to COVID-19.

Infection monitoring is a cornerstone in analyses of endemic, epidemic and pandemic infectious diseases. During the coronavirus pandemic, the main focus has been on COVID-19, also among nursing home residents.

Danielsen et al. have estimated the incidence of COVID-19 as well as the number of hospitalisations and deaths related to the disease in the Norwegian nursing home population in 2020 [\(1\)](#). These analyses are based on the Beredt C19 emergency preparedness register. Out of a total of just over 80 000 included residents, altogether 570 tested positive for SARS-CoV-2 (0.69 %), and of the approximately 19 000 deaths, 248 (1.3 %) were related to COVID-19. Only 6 % of the residents were admitted to hospital with COVID-19 as their main diagnosis. Mortality increased with age, and was highest among long-term residents. The study did not include any information on degree of frailty or chronic end organ damage among the patients.

A strength of the study is that by linking data from multiple sources, the authors have been able to include a large number of nursing home residents. Furthermore, they have been able to distinguish between long-term and temporary residents in nursing homes. Although the precision of the register

definition applied has not been validated, it may constitute an appropriate template for future infection monitoring, quality assurance and research in nursing home medicine.

A high degree of frailty is a key risk factor for a serious course of COVID-19 (2, 3). There is also a correlation between frailty, increasing age, occurrence of chronic end organ damage and type of stay in nursing homes (long-term or temporary). Based on register data without any in-depth clinical information, it is therefore difficult to draw any firm conclusions about independent risk factors for a serious course of COVID-19 among nursing home residents.

Norwegian nursing homes were severely affected during the first phase of the pandemic, which was marked by several major outbreaks with a mortality rate in excess of 50 % (4). During this phase, the burden on nursing home residents, staff and families was extremely high. The study by Danielsen et al. shows, however, that COVID-19-related deaths accounted for a minor proportion of all deaths in nursing homes in 2020. The study thus adds important nuance to the perception of the pandemic, which quite naturally has been characterised by disquiet, fear, despair, a one-track focus on the contagium and occasionally a lack of acceptance of COVID-19-related deaths among the oldest and most frail patients.

*«In the years prior to COVID-19, acute infectious diseases in nursing homes attracted scant scientific interest, despite often being the cause of death among the oldest and most frail residents»*

In pace with the increasing vaccination coverage, better management of COVID-19 outbreaks, prophylactic anti-coagulation treatment and use of corticosteroids for respiratory failure, as well as the reduced virulence of the circulating virus variants in the first quarter of 2022, both the morbidity and mortality from COVID-19 appear to have declined dramatically in Norwegian nursing homes. As of 6 April 2022, a total of 1 477 (59 %) of all COVID-19-related deaths have occurred outside a hospital setting, the large majority of which were in nursing homes (5). Although we have no directly comparable mortality data for influenza and COVID-19, it is still worth noting that there are a minimum of 900 excess deaths during a normal influenza season, most of which are among elderly and frail persons (6).

Infections of the lower respiratory tract are common causes of both hospitalisation and death among nursing home residents (7, 8). This will also be the case now that COVID-19 is most likely to become endemic in the population, with the potential to trigger epidemics. For the large majority of the oldest and most frail patients with infections in the lower respiratory tract, appropriate palliative treatment can still provide a calm and dignified end to life, irrespective of whether the infections are caused by SARS-CoV-2, influenza viruses or other microbes.

In the years prior to COVID-19, acute infectious diseases in nursing homes attracted scant scientific interest, despite often being the cause of death among the oldest and most frail residents. Hopefully, the study by Danielsen et al. can

help inspire more research into infectious diseases among those with the lowest infection tolerance.

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