



# Coronavirus infection on the frontline

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## LEDER

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More than 5600 employees in the health and care services in Norway were infected with SARS-CoV-2 in 2020. The quality of health services depends on having enough healthy employees who can go to work.

It is important to have knowledge about SARS-CoV-2 infection among health service employees for many reasons. Employees who are infected can transmit the virus to both patients and colleagues and cause local outbreaks. When many employees take sick leave or go into quarantine due to COVID-19, this can affect patient services and increase the workload of those employees not in quarantine.

In the Journal of the Norwegian Medical Association, Molvik and Danielsen et al. from the Norwegian Institute of Public Health present the incidence of confirmed SARS-CoV-2 infections in 382 332 employees in the health and care services in Norway during 2020 (1). The study is based on data from Beredt C19, the Norwegian emergency preparedness register for COVID-19, which was established to obtain knowledge that can support decisions about public health measures (2). The study shows that at least 5673 health service employees in Norway were infected with SARS-CoV-2 in 2020. The actual number is higher, partly because GPs and other self-employed practitioners are not included in the dataset and partly because some of those infected were not tested.

In line with international studies, the Norwegian study shows a higher incidence of registered SARS-CoV-2 infections in health service employees than in the population as a whole (3). The incidence among all health service employees in 2020 was 1.48 % compared with 1.11 % for the rest of the working-age population in the same period.

The high number of employees infected has undoubtedly affected the various parts of the Norwegian health service. Employees at nursing homes and hospitals had the highest incidence rate and the highest number of infections among the services studied. At least 1534 of those infected were nursing home staff. While hospital capacity in Norway has been depleted less than feared during the pandemic, many nursing homes have had dramatic outbreaks of the virus. Nursing home residents are among the eldest and frailest people in society, and many such outbreaks have unfortunately resulted in serious illness and death (4). Moreover, many nursing homes have faced major operational challenges because their

employees have been ill or quarantined.

There is widespread discussion about which segments of the population should be prioritised to receive the SARS-CoV-2 vaccine, and many have argued that health service employees should be moved further up the queue. The high number of infected employees, combined with the potentially serious consequences of an outbreak in nursing homes, suggests that nursing home staff should be prioritised for early vaccination. Data from the emergency preparedness register may be helpful when such decisions are taken, and it is commendable that these data are being published on an ongoing basis, as in the article by Molvik and Danielsen et al.

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However, the study leaves several questions unanswered. No distinction is made between transmission inside and outside of the workplace, and as such, the risk from occupational exposure among health service employees remains unknown. Although ambulance personnel were the occupational group with the highest incidence of SARS-CoV-2 infection, the study does not definitively show which occupational groups have the highest risk of infection. The impact of the pandemic on health service staff is more complex than indicated by the number of infections. A large number have been infected at work, and some have become ill. Many have become infected following contact with COVID-19 patients in spite of strict infection control measures and proper use of personal protective equipment. Other factors affecting the health of employees include working under the risk of becoming ill themselves, the changing conditions and an increased workload caused by a pandemic that has lasted almost one year.

Hopefully, the emergency preparedness register can also tell us how many employees in the Norwegian health service have been sick with COVID-19 and how many have needed medical assistance during the ongoing pandemic.

Although access to vaccines and widespread infection control measures offer hope for a brighter future, it is not inconceivable that the capacity of the health services could be put to the test again, including in Norway. Consequently, closer examination is needed of the causes of the high infection numbers, not least among nursing home employees. Some factors that could play a role are the employees' socioeconomic background, the proportion of unskilled employees and simultaneous employment at multiple institutions. The capacity of the Norwegian health service depends partly on the number of employees who are healthy and can go to work.

Epidemiological data from links between various registers, such as the emergency preparedness register, can provide support for measures to reduce the vulnerability of the health services, should there be a new infection wave in 2021.

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