

## Immigrants to Denmark hospitalized with COVID-19 appear less likely to die than Danish-born residents

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Immigrants to Denmark and their descendants hospitalized with COVID-19 are 46% less likely to die from COVID-19 than Danish-born residents, according to a year-long nationwide study investigating



COVID-related death and use of mechanical ventilation in all adults hospitalized with COVID-19 in Denmark between February 2020 and March 2021, to be presented at this year's European Congress of Clinical Microbiology & Infectious Diseases (ECCMID) in Lisbon, Portugal (23-26 April).

The study, by Professor Marie Louise Nørredam from the University of Copenhagen and colleagues, also finds that although non-Western immigrants appear to be at markedly greater risk of requiring mechanical assisted ventilation during admission compared with Danish natives, their mortality rates once mechanically ventialted did not differ significantly.

This disparity may be tied to immigrants being a younger and healthier population and also suggests that COVID-19 information and prevention initiatives (ie, testing and vaccination) need to be strengthened, say researchers.

"We did not expect to find that the outcome of Danish-born patients hospitalized with COVID-19 would not only be worse than immigrants to Denmark and their descendants, but that they did not have a survival advantage over non-Western immigrants when treated with mechanical assisted ventilation", says Professor Nørredam.

She continues, "Other studies have shown that immigrants tend to have better health than native-born residents, probably because healthy people are more likely to choose to immigrate and the <u>immigrant population</u> is younger."

Previous research has shown that immigrants are at greater risk of COVID-19 exposure and infection than <u>native populations</u>, probably because they often work in high-risk occupations, live in overcrowded accommodation, and face barriers to healthcare and prevention



initiatives. Some studies have found that immigrants with COVID-19 are also at greater risk of hospitalization, but it is unclear whether this means that they are also at increased risk of COVID-19-related death, and data on whole populations outside the UK and USA are scarce.

To find out more, researchers analyzed nationwide hospital register data on all adults (aged 18 years and older) hospitalized with COVID-19 in Denmark between February 2020 and March 2021. They used modeling to assess the impact of patient's birthplace and migrant status (immigrant versus descendant) on their risk of dying from COVID-19 within 30 days of admission and use of mechanical ventilation, after adjusting for factors that may influence severe COVID-19 outcomes, including age, sex, comorbidity, and socioeconomic and demographic factors.

Out of 6,229 COVID-19 patients who were hospitalized, 977 patients died of COVID-19 within 30 days of admission, and 295 were treated with mechanical ventilation.

The analysis found that being an immigrant or descendant was associated with a 46% lower risk of death from COVID-19 compared with Danish natives; and being a non-Western immigrant was associated with a 52% lower odds COVID-19-related death. In contrast, mortality did not differ significantly between individuals of western countries and Danish natives.

In addition, analyses found that being a non-Western <u>immigrant</u> was associated with a 56% greater likelihood of being treated with mechanical assisted ventilation compared with Danish natives. Nevertheless, <u>mortality rates</u> did not differ significantly between non-Western immigrants and Danish natives.

"These results should help us to develop targeted <u>preventative measures</u> to reduce the risk of dying in both Danish-born residents and



immigrants", says Nørredam. "Future research should examine why immigrants have a lower risk of dying and what factors mediate that effect."

Researchers note that the study is observational, and does not prove that immigrants in Denmark face an increased risk of mortality, but only suggests the possibility of such an effect. And while they adjusted for many known patient-related, socioeconomic, and demographic characteristics, it is possible that other unmeasured factors such as disease severity on admission, vaccination status, infecting variant, physical activity, diet, and smoking, and other relevant comorbidities may have affected the results.

Provided by European Society of Clinical Microbiology and Infectious Diseases

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