



# Mortality of people with disabilities during the COVID-19 epidemic

## MAIN FINDINGS

- Several international studies have shown that people with disabilities have a significantly higher risk of COVID-19-related mortality. The risk of mortality is increased especially among people with intellectual disabilities and those with Down syndrome.
- We studied the 2019 and 2020 mortality rates of persons aged 16–64 years who had received disability benefits from the Social Insurance Institution of Finland (Kela). In 2020, the first year of the COVID-19 epidemic, mortality increased more among persons with disabilities than in the rest of the population. The mortality rate of men and women on disability benefits increased by 26 and 27 per cent respectively, while in the rest of the population, the mortality rate of men increased by 12 per cent and that of women decreased by 8 per cent.
- More specific investigation of mortality among persons with disabilities in relation to the COVID-19 epidemic requires further investigations of the whole epidemic period (years 2020–2023).

According to international studies, there is increasing evidence that persons with disabilities are at increased risk of dying of COVID-19 caused by coronavirus (SARS-CoV-2) (Kuper & Smythe 2023). The vulnerability of persons with disabilities to severe COVID-19 outcomes may be increased, for example, by the higher prevalence of risk factors, such as chronic diseases, and the greater risk of exposure due to use of housing services living or the need for other assistance (Kuper & Smythe 2023).

There is no information available on COVID-19-related mortality of persons with disabilities in Finland. By mid-December 2023, a total of 6,582 deaths resulting from a coronavirus infection and 3,716 deaths in which COVID-19 had been a contributing factor had been reported based on preliminary data obtained from death certificates in Finland (COVID-19 cases in the Finnish National Infectious Diseases Register, as reported on 14 December 2023). According to Statistics Finland, the majority of those who died of COVID-19 between 2020 and 2022 were older people. Of those under 65 years of age, 42 persons died because of the disease in 2020, 133 in 2021 and 214 people in 2022 (Causes of death 2020, 2021 and 2022). An increase of almost 8 per cent compared with the previous year was observed in the mortality rate in 2022, especially as a result of an increase in COVID-19-related mortality (Causes of death 2022).

In this report, we describe the mortality rate of people with disabilities during the COVID-19 epidemic on the basis of international research literature and the Finnish causes of death statistics for the years 2019 and 2020. The publication is part reporting the results of the research project the Mortality, causes of death and morbidity of persons with disabilities during the COVID-19 epidemic carried out by the Finnish Institute for Health and Welfare (THL). The aim of the project is to investigate morbidity and mortality among persons with disabilities aged 16–64 years during the COVID-19 epidemic in Finland by using the data obtained from different registers. In the study, the definition for a person with disability is a person aged 16–64 years who has been granted a disability benefit by Kela.

International studies have linked intellectual disability, in particular, to higher risk of mortality from COVID-19.

International studies emphasise higher COVID-19-related risk of death especially among persons with intellectual disabilities. For example, in an American study, intellectual disability was reported to be the strongest independent risk factor increasing mortality from COVID-19 after age. It was observed in the study that persons with intellectual disabilities had greater risk of both a COVID-19 diagnosis and mortality related to COVID-19 than other patients with the disease (Gleason et al. 2021). In a Canadian study, it was observed that adults with an intellectual disability were more than twice as likely to die of COVID-19 (Lunsky et al. 2022) According to studies conducted in the Netherlands, mortality from COVID-19 among persons with intellectual disabilities was more than threefold compared with the rest of the population (Cuypers et al. 2023; Koks-Leensen et al. 2023). Persons with intellectual disabilities have also been reported to be at greater risk of dying of a COVID-19 infection than other people in United Kingdom (Baksh et al. 2021; Das-Munshi et al. 2021). A particularly high risk of mortality linked to COVID-19 has been detected among persons with Down syndrome (Cliff et al. 2020; Hüls et al. 2021; Koyama et al. 2021; Lunsky et al. 2022). For example, in the study by Cliff et al. (2020), a risk up to tenfold of dying of COVID-19 was linked to Down syndrome.

In a few studies, excess mortality during the COVID-19 epidemic has also been reported among persons with intellectual disabilities. In the United Kingdom, Henderson et al. (2022) observed a slight increase in total mortality among people with intellectual disabilities in 2020 compared with the period 2015–2019. A similar result was observed in the study by

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## How this study was conducted:

The survey of international research literature was implemented as database searches in July 2023, by taking advantage of two different databases (Medline Ovid and Web of Science). Among the search terms used were "people with disabilities" "disab\*", "COVID-19", "SARS-CoV-2", "mortality" and "death". A total of 26 studies were found as a result of the searches. In the studies, the examination focused primarily on mortality linked to COVID-19 among persons with disabilities or intellectual disabilities.

The Finnish research data was formed by combining Kela's data on disability benefits with Statistics Finland's data on the causes of death, THL's Finnish National Infectious Diseases Register and the Care Register for Social Welfare. Mortality of persons with disabilities during 2020, the first year of the COVID-19 epidemic, was compared with mortality in the preceding year 2019 and examined in proportion to mortality in the whole population. In the study, a person with disabilities was defined as a person receiving Kela's disability benefit(s). The examination included persons who received disability benefits in 2019–2020. The study population was limited to 16–64-year-olds with disabilities.

Anderson et al. (2023), in which an increase was observed in mortality among persons with intellectual disabilities in 2020 compared with the preceding year.

In a study conducted in the Netherlands, the examination focused on the first two years of the epidemic in comparison with the years preceding the epidemic (Cuypers et al. 2023). In the study, an increase in total mortality during the epidemic had been more common among persons with intellectual disabilities than in the rest of the population. In addition, COVID-19 was reported in the study to be the most common cause of death among persons with intellectual disabilities between 2020 and 2021 (Cuypers et al. 2023). Landes et al. (2022) investigated mortality related to the coronavirus infection on the basis of death certificates issued in 2020 and reported COVID-19 as the leading cause of death among persons with intellectual disabilities in 2020, whereas in the population, COVID-19 emerged as the third most common cause of death.

It has been observed in studies that the risk of mortality from COVID-19 among persons with intellectual disabilities is emphasised in younger age groups. For example, in the study conducted by Turk et al. (2020), clearly more variation was observed in COVID-19-related mortality among people with intellectual disabilities aged under 18 years and 18–74 years than in the rest of the population. Hüls et al. (2021) in turn observed that there was a rapid increase in mortality among persons with Down syndrome who had reached the age of 40 years. Koks-Leensen et al. (2023) reported that there were more COVID-19-related deaths of 40–69-year-olds among persons with intellectual disabilities, whereas in the population, mortality was highest among people over the age of 70 years. Higher mortality of persons with intellectual disabilities in younger age groups has also been reported in other studies (Perera et al. 2020; Lunsy et al. 2022; Castilho et al. 2023; Cuypers et al. 2023).

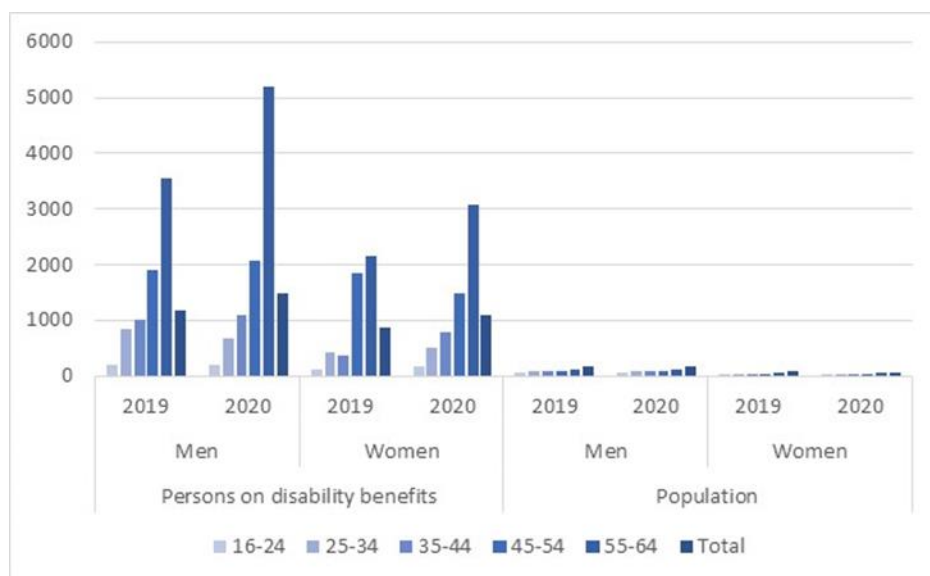
In some of the studies, links between housing and COVID-19-related mortality among persons with intellectual disabilities have been examined. For example, an increased risk of mortality was observed in studies by Landes et al. (2020 & 2021a-b) among those persons with intellectual disabilities who lived in a group home or in service housing. Correspondingly, in the study by Tessler et al. (2023), COVID-19-related mortality was reported to be higher among customers in service housing than among persons with intellectual disabilities who lived in a private home. Williamson et al. (2023) also detected that service housing was linked to hospitalisations and mortality among persons with intellectual disabilities.

In addition to intellectual disabilities, international studies also indicate a higher risk of the more severe COVID-19 outcomes among persons with general disabilities (Bosworth et al. 2021; Jeon et al. 2022; Brown et al. 2022; Clarke et al. 2023; Deal et al. 2023; Kuper & Smythe 2023). For example, Kuper and Smythe (2023) combined in their study the findings of 56 studies in which the relative risk of COVID-19-related mortality among persons with disabilities was examined in comparison with persons who had neither disability nor functional restriction. The findings of the study showed that persons with disabilities had an almost threefold risk of dying from COVID-19 (Kuper & Smythe 2023).

## Mortality among persons with disabilities increased more from 2019 to 2020 than in the rest of the population in Finland

We looked at mortality among persons aged 16–64 years and receiving disability benefits from Kela during 2020, the first year of COVID-19, compared with mortality in 2019. We identified 20,328 recipients of disability benefits, 47.7 per cent (n= 9,689) of them men and 52.3 per cent (n=10,689) women.

In 2020, 143 men on disability benefits died (mortality rate 1,476/100,000) and 118 women (mortality rate 1,104/100,000) (Figure 1). Correspondingly, the mortality figures for the year 2019 were 1,175/100,000 among men and 875/100,000 among women on disability benefits. The figures for 2019 did not statistically deviate from the figures for 2018. In the population of the same age, mortality among men was 187/100,000 and 75/100,000 among women in 2020 and 167/100,000 among men and 81/100,000 among women in 2019.



**Figure 1. Mortality of persons on disability benefits and rest of the population per 100,000 inhabitants in 2019 and 2020 (Source: THL 2023).**

Among men and women on disability benefits, mortality increased more from 2019 to 2020 than in the rest of the population (Table 1). Among men on disability benefits, the increase in mortality was 26 per cent from the preceding year and among women, 27 per cent in 2020. In the population, mortality among men aged 16–64 years increased by 12 per cent but declined by 8 per cent among women. Among people on disability benefits, the increase in mortality was highest among women aged 35–44 and 16–24 years and men aged 55–64 years.

**Table 1: Change in mortality of people on disability benefits and the rest of the population from 2019 to 2020 (Source: THL 2023)**

Age (years)	Men on disability benefits	Women on disability benefits	Population men	Population women
16–24	-6%	68%	22%	-12%
25–34	-23%	20%	0%	-28%
35–44	9%	103%	2%	2%
45–54	8%	-20%	-5%	11%
55–64	47%	41%	-9%	-6%
<b>Total</b>	<b>26%</b>	<b>27%</b>	<b>12%</b>	<b>-8%</b>

## Summary

This report looked at international research data on the mortality linked to COVID-19 among persons with disabilities and investigated the mortality of 16–64-year-olds on disability benefits in 2019 and 2020 in comparison with mortality in the rest of the population in Finland. International research has reported consistent findings that both persons with intellectual disabilities and persons with a general disability are at greater risk of dying of COVID-19. In addition, a few other studies have reported excess mortality among persons with intellectual disabilities during the epidemic in comparison with the preceding years. When mortality among Finnish 16–64-year-olds on disability benefits was examined, it was observed that mortality increased among both men and women during the first epidemic year 2020, being higher among people on disability benefits than in the rest of the population of the same age.

It is important to examine the mortality of persons with disabilities during the COVID-19 epidemic in more detail to be able to better identify the higher mortality of persons on disability benefits than the rest of the population at the beginning of the epidemic. It is also important to examine the development between 2021 and 2023 from the point of view of COVID-19 mortality and morbidity. An examination of the entire period of COVID-19 could help to understand the impacts of the measures taken during the epidemic from the point of view of people with disabilities. Equity and fairness in society require identification of the special needs of the different population groups and responding to them, even in emergency conditions.

In future, THL's research project *Mortality, causes of death and morbidity of persons with disabilities during the COVID-19 epidemic* will examine mortality and the most common causes of death among persons with disability during the entire epidemic. In addition, the aim is to determine in more detail the morbidity and deaths from COVID-19 among those persons with disabilities who live in institutional or service housing provided by social welfare services. However, further examinations require confirming additional funding to the project.

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