

Risks of hospitalization and death  
related to COVID-19 in people with  
intellectual disabilities (ID) or autism  
spectrum disorder (ASD)

English summary

Une production de l'Institut national  
d'excellence en santé  
et en services sociaux (INESSS)



# SUMMARY

Risks of hospitalization and death related to COVID-19 in people with intellectual disabilities (ID) or autism spectrum disorder (ASD)

The COVID-19 pandemic has had a significant impact on the health of the entire population, particularly among the elderly and those with vulnerabilities such as intellectual disabilities (ID) or autism spectrum disorder (ASD) [Baweja *et al.*, 2022; Lunsy *et al.*, 2022; Friedman, 2021].

According to the international literature, people with an ID or ASD have generally been at greater risk than the general population for SARS-CoV-2 infection, as well as for complications and serious adverse events associated with the disease. This can be explained in particular by the prevalence of certain health conditions (e.g., comorbidities) and by difficult living conditions (e.g., the need for social support, limited social network, poverty, adaptation difficulties, poor health literacy) [Baweja *et al.*, 2022; Koyama *et al.*, 2022; Lunsy *et al.*, 2022; Ball *et al.*, 2021; Das Munshi *et al.*, 2021; Friedman, 2021; McCarron *et al.*, 2021; Williamson *et al.*, 2021; Turk and McDermott, 2020]. For some individuals, these impacts have been accentuated by a limited ability to understand and apply the health measures intended to curtail the spread of infection and to adapt to the many changes that have occurred during this pandemic. [Turk and McDermott, 2020].

In addition, the literature reports that the various pandemic-related restrictions have had significant consequences on the well-being of people with an ID or ASD (e.g., social isolation, economic insecurity, stress, anxiety, depression), in particular because of disruptions in their daily routines and in the provision of certain services required to maintain their health and quality of life [Baweja *et al.*, 2022; Ball *et al.*, 2021; Emes *et al.*, 2021; Friedman, 2021; Hedley *et al.*, 2021; Illouz *et al.*, 2021; Landes *et al.*, 2021; McCarron *et al.*, 2021; Pettinicchio *et al.*, 2021].

In order to examine the specific situation in Quebec, an analysis was carried out on the risks of hospitalization and death from COVID-19 in people with a confirmed SARS-CoV-2 infection and presenting an ID or ASD, as compared to the general population. The individuals in the ID-ASD cohort were identified from Quebec's clinical administrative databases. It is important to note that this data does not reflect the situation of everyone in Quebec with an ID or ASD but rather the situation of the population covered by the Quebec Health Insurance Plan between March 1, 2020 and December 4, 2021 and who have a diagnosis or have received services related to an ID or ASD.

## **ID-ASD Cohort Characteristics**

- The cohort of individuals with an intellectual disability (ID) or autism spectrum disorder (ASD) (ID-ASD cohort)<sup>1</sup> was identified using the diagnostic and service codes found in Quebec's clinical administrative databases.
- This cohort includes approximately 69,000 people with an ID, 58,000 people with ASD and 20,000 people with both conditions (ID and ASD).
- The analysis includes all cases of infection with the SARS-CoV-2 virus between March 1, 2020 (start of the first wave) and December 4, 2021 (end of the fourth wave).
- Data for the fifth wave was not considered in the analysis because, as of the onset of this wave, the health and social services system stopped providing accurate counts of the number of cases of infection.

## **Hospitalization**

- After adjustment,<sup>2</sup> the risk of hospitalization for people in the ID-ASD cohort with a confirmed COVID-19 infection varied according to their health condition. Compared to COVID-19 cases in the rest of the population:
  - there was no difference in the risk of being hospitalized among people with ASD;
  - people with an ID were 1.75 times more at risk of being hospitalized;
  - people presenting both an ID and ASD were 3.23 times more at risk of being hospitalized.

## **Death**

- After adjustment, the risk of death for people in the ID-ASD cohort with a confirmed COVID-19 infection varied according to their health problems. Compared to COVID-19 cases in the rest of the population:
  - there was no difference in the risk of death among people with ASD;
  - people presenting an ID were 1.39 times more at risk of dying;
  - people with both an ID and ASD were 1.97 times more at risk of dying.

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<sup>1</sup> The ID-ASD cohort includes individuals who were identified using the ICD-9 and ICD-10 diagnostic codes in the hospitalization file (MED-ÉCHO) and the medical examinations file (SMOD), as well as those identified using the intervention profile codes in the CLSC clientele and services information system file (I-CLSC).

<sup>2</sup> The results on the risks of hospitalization and death were adjusted for age, gender, region of residence, type of residence and number of illnesses and other health conditions.

This increased risk of death in individuals with an ID can be explained, at least in part, by the severity of the comorbidities that many of them present. In fact, nearly 30% of people with a confirmed infection and an ID were housed in a long-term care facility (CHSLD) or in an intermediate or family-type residence (RI-RTF), and they generally presented serious comorbidities. The results of the analyses were adjusted to take into account the number of health problems, but not their severity, because this variable is poorly captured in the databases used.

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