

IMPACT OF THE COVID-19 PANDEMIC ON *CLOSTRIDIoidES DIFFICILE* INFECTIONS IN BELGIAN ACUTE CARE HOSPITALS IN 2020.

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Background

Rationale

- The COVID-19 pandemic and its response led to changes in the occurrence of healthcare-associated infections, including *Clostridioides difficile* infections (CDI).
- Hypothesis:

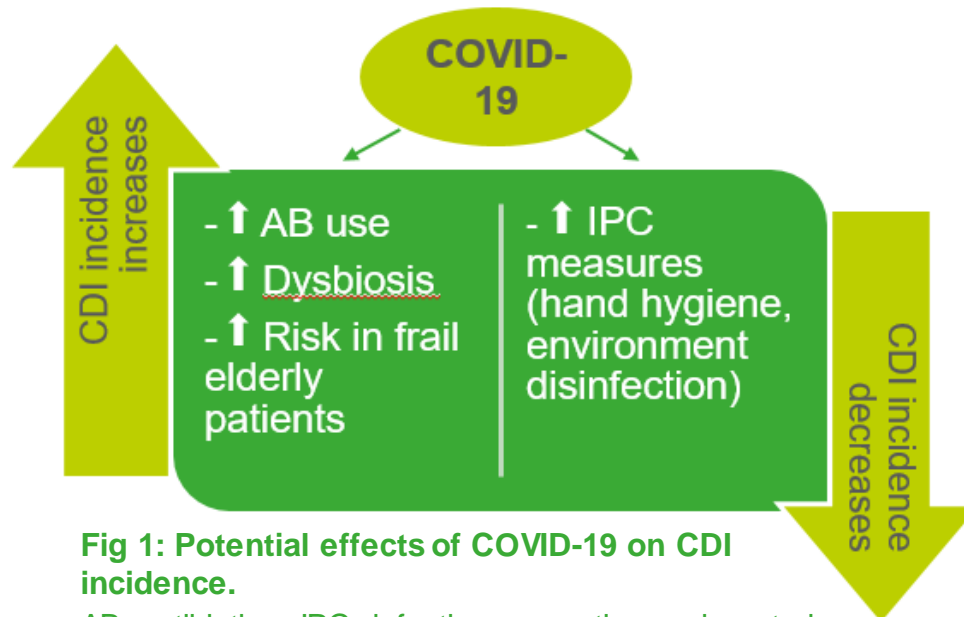


Fig 1: Potential effects of COVID-19 on CDI incidence.

AB: antibiotics, IPC: infection prevention and control.

Aim: To investigate the impact of COVID-19 on CDI incidence in Belgian acute care hospitals in 2020.

Methods

Data sources:

1. National surveillance of CDI:

- Voluntary participation.
- Reporting of all CDI episodes in hospitalised patients for at least one semester per year.
- Inclusion of hospitals who participated all year long only.

2. Hospital stay data:

- Inclusion of all stays classified as “Enterocolitis due to Clostridioides difficile” by the International classification of diseases (ICD9-10), as primary or secondary diagnosis.
- Comprehensive data:
 - better estimates of CDI burden
 - validation of surveillance data.

Definitions:

- “COVID-19 period”: months of March to June and September to December 2020 (Belgian first and second waves)
- “Control period”: all other months since January 2018.

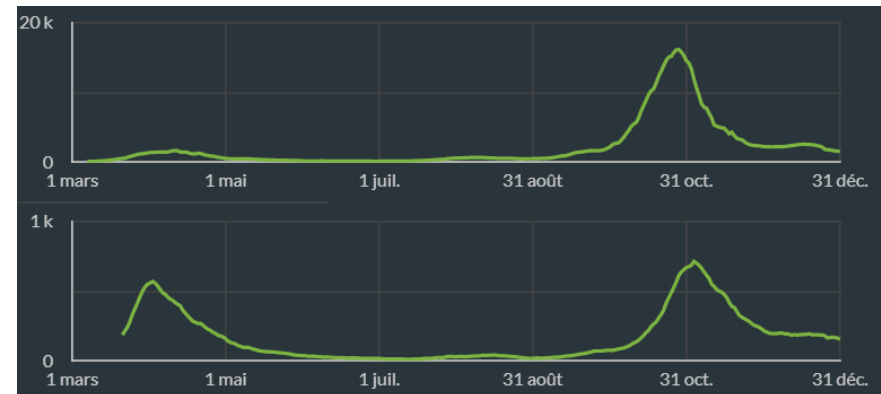


Fig 2: Number of COVID-19 cases and hospital admissions, Belgium, 2020.

Analysis:

- Poisson regression model, adjusting for the effect of year, of trimester, a lag effect of one month, and the number of hospitalisation-days.

Results

1. National surveillance of CDI:

- statistically significant decrease in CDI incidence during the COVID-19 period compared to the control period (IRR= 0.86, 95%CI 0.77-0.95).

2. Hospital stay data:

- no significant change in CDI incidence during the COVID-19 period compared to the control period (IRR=1.03, 95%CI 0.96-1.11).

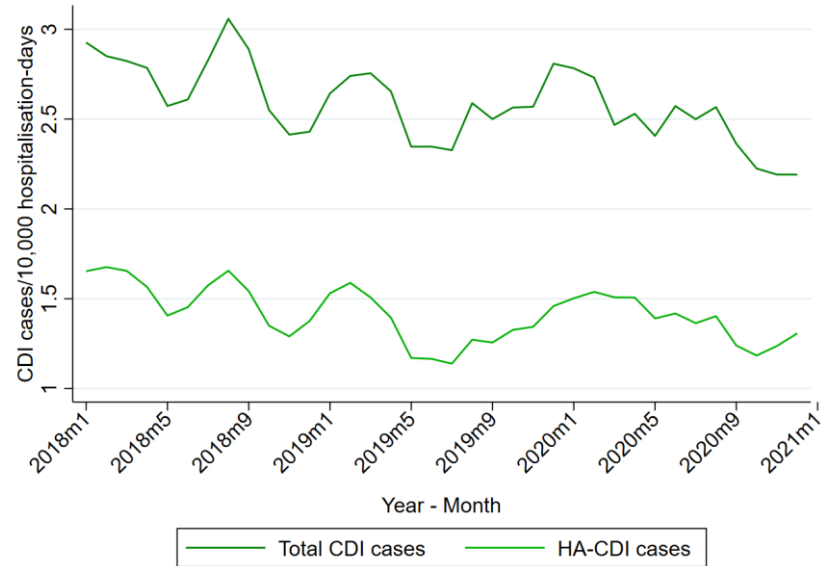


Fig 3: Monthly incidence (3 months moving average) of total CDI and hospital-associated CDI (HA-CDI) per 10,000 hospitalisation-days, Belgium, 2018-2020. Source: national surveillance.

Conclusion & recommendations

- During the two first COVID-19 waves, CDI incidence in Belgian acute care hospitals remained stable, or slightly decreased.
- Increased focus on IPC measures, such as environmental disinfection, hand hygiene, or use of personal protective equipment have certainly helped preventing *C. difficile* transmission.
- These measures should be sustained in the fight against HAI.