

Reports of nosocomial SARS-CoV-2 infections, March 2020-June 2022

ÿ The reporting of nosocomial infections, dematerialized via the e-SIN tool, is a system that alerts the ARS and the regional centers for the prevention of healthcare-associated infections (CPIAS) in the regions, as well as Public Health France. It remains declarative and does not tend to be exhaustive. This tool is used by healthcare establishments (HEs) to report nosocomial Covid-19 cases ([ECDC definitions](#)). Regular status updates are published. The last is mentioned in the [National Epidemiological Point Covid-19 of April 14, 2022](#).

ÿ This summary presents the results from the e-SIN data for the period from March 1, 2020 to June 17, 2022. It focuses more particularly on situations reporting grouped cases of nosocomial Covid-19 (at least three linked cases).

Key points

Monitoring of nosocomial Covid-19 reports, e-SIN, France, from March 1, 2020 to June 17, 2022

76.5% of the reports received since the start of the epidemic corresponded to grouped case situations (CG).

10 : this is the median number of cases per episode.

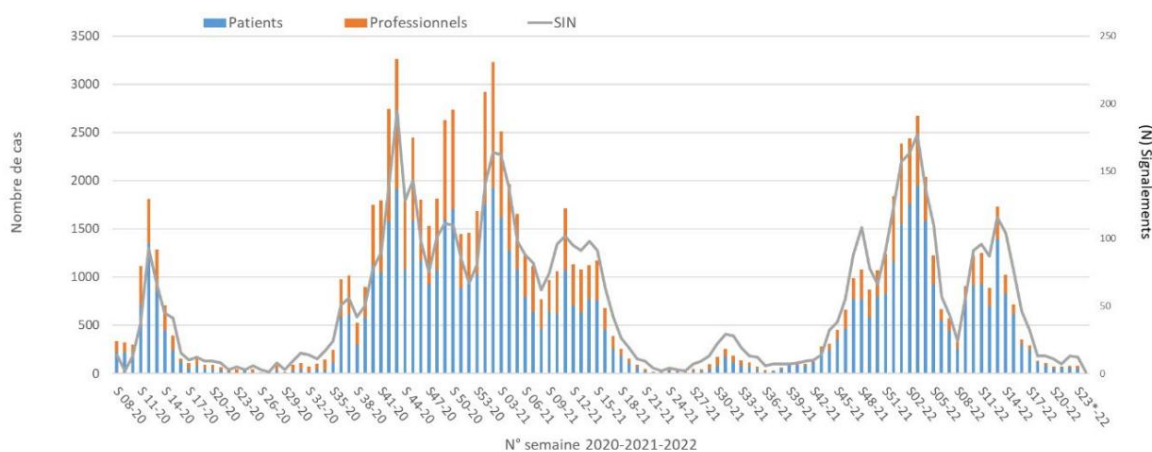
34% of professionals in CGs throughout the epidemic, gradually decreasing since wave 5 (November 2021).

The origin of the nosocomial CG is **mainly a patient** (57%).

The 2 hypotheses most frequently raised to explain the transmission are the absence of identification of a case upon admission (45%) and the occurrence of breaks in the application of barrier measures (41%), especially when caring for and welcoming families/visitors.

Results: nosocomial Covid-19 reports recorded on e-SIN from March 1, 2020 to June 17, 2022, France

Figure 1. Number of Covid-19 cases, patients and professionals, and number of nosocomial grouped case reports, by week of the 1st case, between March 1, 2020 and June 17, 2022, France (n= 6,447)



1,308 separate establishments, including 425 since the 5th wave, have carried out at least one nosocomial Covid-19 SIN. Since March 2020, 8,421 reports (SIN) of nosocomial Covid-19 cases have been identified and 6,447 (76.5%) corresponded to clustered cases. They totaled 97,492 cases divided into 64,139 patients including 310 related deaths, 33,338 professionals and 15 visitors. Throughout the first 4 waves, the average share of professionals was 39%. Since the 5th wave (S48-21), it has gradually decreased, 26% in mid-April then 21% in mid-June.

Table 1. Number (mean median, min, max) of cases per episode by year of onset, among clustered nosocomial Covid-19 cases reported between March 1, 2020 and June 17, 2022, France

Period	(N) episodes	Number of cases			
		Mean	Median	Minimum	Max
2020	2,134	19	11	3	613*
2021	2,675	13.5	9	3	235*
2022	1,638	13	10	3	126

* Reports including several episodes

Over the whole period, the median number of cases recorded in episodes of nosocomial Covid-19 CG was 10. Depending on the year, this number varied little.

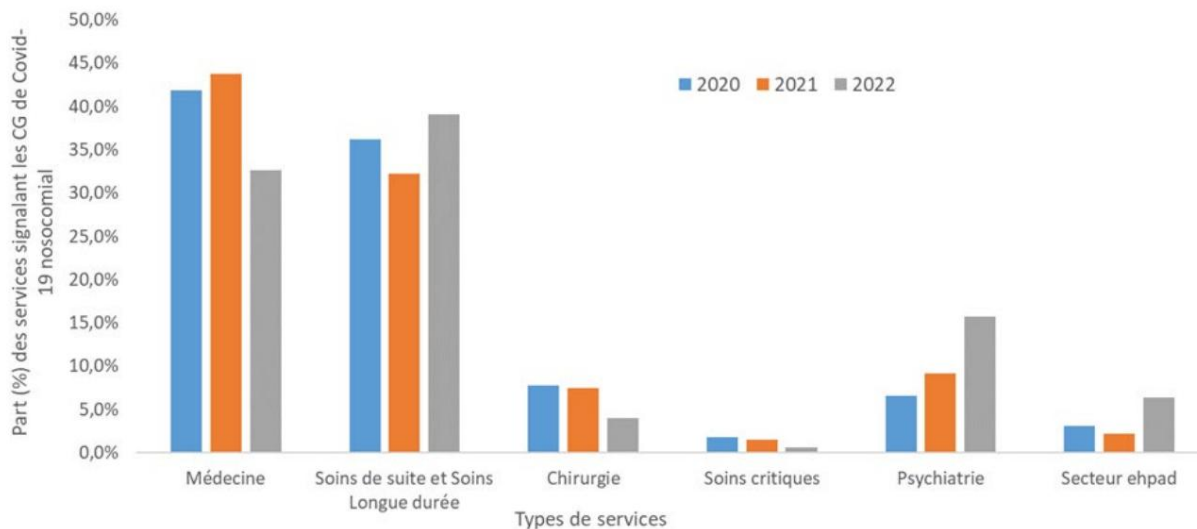
Origin of transmission

When the origin of the nosocomial focus is identified, the index case of CG is mostly a patient. In 2022, the proportion of occupational index cases has halved. On the other hand, that of visitors/family and multifactorial causes increased (Table 2).

Table 2. Origin of nosocomial focus according to year of onset, among episodes of clustered nosocomial Covid-19 cases reported between March 1, 2020 and June 17, 2022, France

Origin of nosocomial home	2020	2021	2022
	N= 2,134 %	N= 2,675 %	N= 1,638 %
Patient	55.5	63	49.5
Professional	35	27	17
Visitors/family	7	7	16
Multifactorial	2	3	18

The services most affected by the CG reported were: medical services and those of follow-up care and long-term care. In 2022, the share of psychiatric services doubled (16% vs 7.5% between 2020 and 2021) as well as that of nursing home sectors (6% vs 2.5% between 2020 and 2021) (Figure 2).

Figure 2. Distribution (%) of services reporting nosocomial Covid-19 GCs, by year of onset, between March 1, 2020 and June 17, 2022, France

Four regions mainly reported these grouped cases: Auvergne-Rhône-Alpes, Hauts-de-France, Île-de-France and Provence-Alpes-Côte d'Azur. However, in 2021, there is a peak in Occitania (10.5%) and, in 2022, a significant decrease (6% vs. 13% in 2020), in Île-de-France (Table 3).

Table 3. Regional distribution, by year of onset, of clustered nosocomial Covid-19 cases reported between March 1, 2020 and June 17, 2022, France

Regions	Year		
	2020	2021	2022
Auvergne-Rhône-Alpes	12.6%	10.6%	11.6%
Burgundy-Franche-Comte	5.5%	5.9%	6.3%
Brittany	3.6%	3.6%	5.6%
Corsica	0.05%	0.1%	0.4%
Loire Valley Center	5.3%	5.2%	6.7%
Great East	4.5%	2.9%	2.8%
Guadeloupe	N / A	N / A	0.4%
Guyana	0.1%	0.4%	N / A
Hauts-de-France	11.3%	10.5%	11.7%
Ile-de-France	13.9%	12.2%	6.2%
The meeting	0.4%	0.3%	0.4%
Martinique	0.2%	0.2%	0.7%
Mayotte	0.1%	0.1%	N / A
New Aquitaine	7.4%	7.9%	7.3%
Normandy	6.8%	9.0%	11.4%
Occitania	7.1%	10.5%	9.3%
Provence-Alpes-Côte d'Azur	13.7%	13.8%	12.9%
Loire Country	7.5%	6.6%	6.5%

Hypotheses to explain nosocomial transmission

The hypotheses mentioned most frequently to explain transmission are the absence of detection of the patient's infection during admission, breaches in the application of barrier measures, and visitors or families. During 2022, the share allocated to visitors/family increased significantly (32% vs. 15%) and that during treatment also (22% vs. 14%). The proportion of transmissions during breaks and transmissions (mainly between caregivers) was divided by three (Table 4).

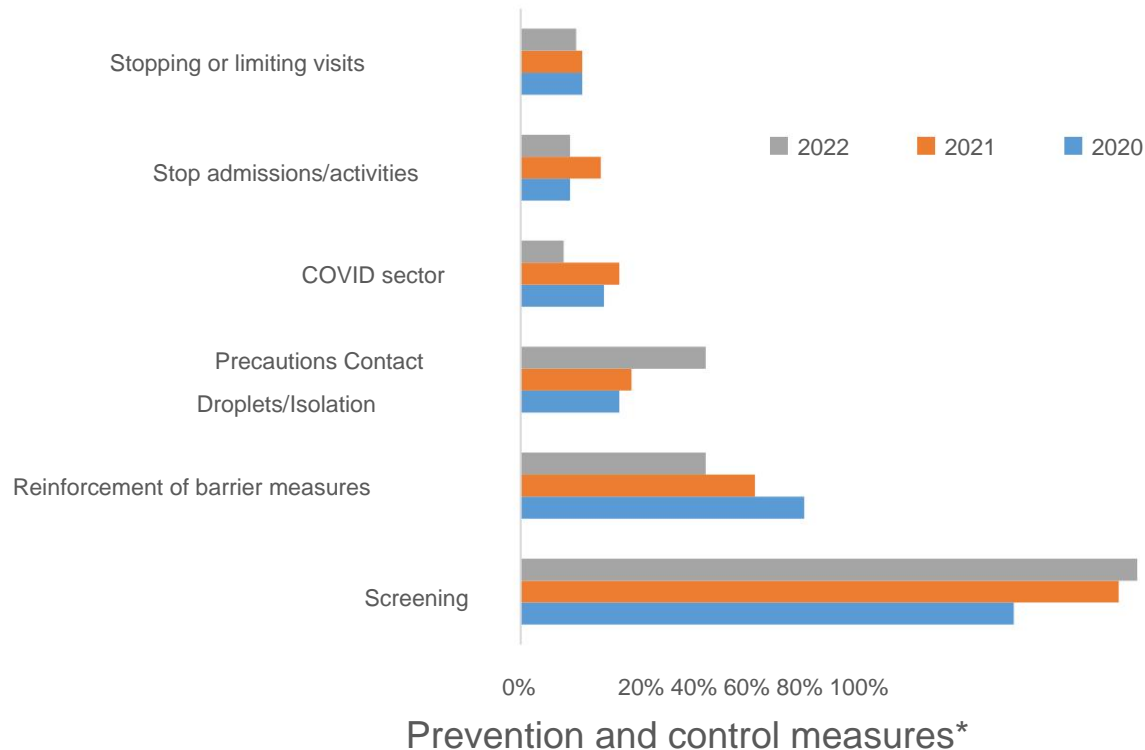
Table 4. Reported transmission hypotheses in clustered episodes of nosocomial Covid-19 cases reported, by year of onset, between March 1, 2020 and June 17, 2022, France

Hypotheses *	2020	2021	2022
	(N) CG= 2134 %	(N) CG= 2675 %	(N) CG= 1638 %
Case not identified at admission	39	53	40
Breaks in the application of barrier measures	29	47	45
Breaks/transmissions	21	12	4
Visitors/family	20	9	32
During the care	15	13	22
Double room	12.5	14.5	11
Ambulant patient	11.5	12	4
Contact of a case	9	10	9

* Several possible hypotheses

Prevention and control measures implemented

Among the measures declared, screening remains the measure most often deployed until it is systematic in 2022. The terms used for the measures put in place have changed: the use of "reinforcement of barrier measures" has decreased (30% vs 42%) in 2022 in favor of "Droplet/Isolation contact precautions" (including wearing a mask), which has almost doubled at the same time (30% vs 17%) (Figure 3).

Figure 3. Prevention and control measures reported in clustered nosocomial Covid19 case episodes reported, by year of onset, between March 01, 2020 and June 17, 2022, France

* Several measures possible



After 2 and a half years of monitoring grouped cases of nosocomial Covid-19, a clear decrease in the dynamics has been observed in recent weeks. However, from the beginning, the epidemic curve of nosocomial cases has always more or less followed that of community cases.

The notable acceleration of the indicators for monitoring the circulation of SARS-CoV-2 noted in the last [Epidemiological Update](#) therefore obliges us to remain attentive to the COVID-19 risk in health establishments. Data from reports are declarative and should be analyzed with caution. We note however, over the year 2022, despite the decline in the number of grouped cases of Covid-19 reported and the drop in transmissions between caregivers, an increase in the share of transmissions during care and those related to visitors. These findings suggest a drop in vigilance within the health establishments that made these reports.

The effect of the vaccination of health professionals has largely contributed to the decrease in the proportion of caregivers among the cases. As a reminder, the [Epidemiological Update](#) of June 16 specifies that the vaccination coverage of the booster dose of employees in health establishments was 78.4%.

The various hypotheses identified to explain nosocomial transmission of COVID-19 indicate two points of vigilance for the teams: the early identification of cases of COVID-19 upon admission or occurring during hospitalization, and adherence to strict compliance with barrier measures, in particular during care and reception of families / visitors.

<p>Cite this document: Reporting of nosocomial SARS-CoV-2 infections. e-SIN data from March 1 , 2020 to June 17, 2022. The point on. June 23, 2022. Saint-Maurice: Public Health France, 6 p. Director of publication: Pr Geneviève Chêne. Legal deposit: June 23, 2022</p>
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