

COVID-19 EPIDEMIOLOGICAL UPDATE

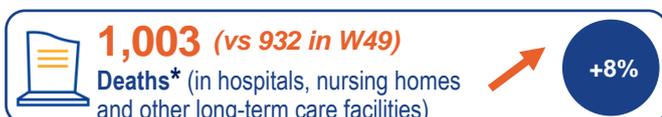
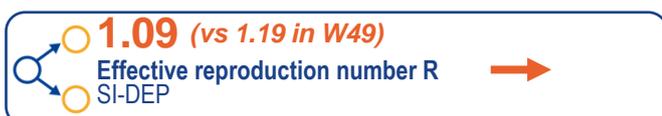
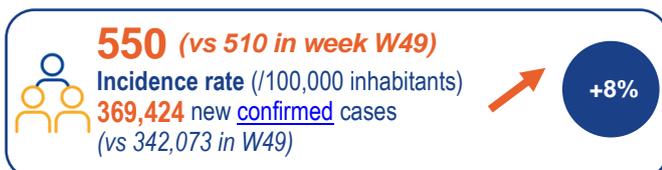
Weekly Report / Week 50 / 23 December 2021

As part of its surveillance, alert, and prevention missions, Santé publique France analyses and publishes COVID-19 data obtained from its network of partners¹ as well as its own studies and surveys. This report is based on data reported to Santé publique France up to 23 December 2021.

Key numbers

Week 50 (13-19 December 2021)

Compared to week 49 (06-12 December 2021)



On 21 December 2021

Compared to 14 December 2021



Key points

Epidemiological situation

In week 50, circulation of SARS-CoV-2 remained at a high level with regional disparities and circulation of the Omicron variant intensified

- Metropolitan France:
 - Increase in incidence rates in Provence-Alpes-Côte d'Azur (901/100,000) and Île-de-France (674)
 - Incidence rates stable or decreasing in other regions, but still at high levels
 - New hospital and intensive care admissions stabilising at a high level in the majority of regions
- Overseas: continued rise in incidence in Reunion Island

Variants

- Intensified circulation of the Omicron variant, with 10.6% of screened tests showing a compatible profile in week 50, rising to 30% by the beginning of week 51
- 1,440 cases of Omicron variant infection confirmed by sequencing in France as of 23 December

Mental health

- High-level stability of mental health indicators (states of depression and anxiety, sleep problems and suicidal thoughts) in the CoviPrev survey (wave 30, 30 November–07 December 2021)

Prevention

- Vaccination on 22 December 2021 (Vaccin Covid data):
 - 76.8% of the French population had received a complete primary vaccination series
 - 39.0% of the 18+ age group (79.4% of eligible people) and 68.1% of the 65+ age group (86.9% of eligible people) had received a booster shot
- Importance of combining different measures: complete vaccination series (including complete primary series and booster), adherence to contact tracing and preventive measures. Compliance with prevention measures, including reducing contacts and frequently ventilating enclosed spaces, is essential during the end-of-year festive period in the context of the circulation of the Omicron variant

[Dashboard](#)

[InfoCovidFrance](#)

Key figures and evolution of COVID-19 in France and worldwide

*Unconsolidated data

¹Santé publique France acknowledges the large public health network that contributes to COVID-19 surveillance: healthcare professionals working in private practice and hospitals, emergency departments, hospital and private biology laboratories, learned societies for infectious diseases, resuscitation, and emergency medicine, CNAM, INSERM, and INSEE.

SITUATION UPDATE

In week 50, the level of incidence of COVID-19 remained very high throughout French territories. Despite a smaller increase than in previous weeks at national level, sharp rises were observed in several regions, notably in Île-de-France and Provence-Alpes-Côte d'Azur. Additionally, incidence rates continued to increase among young adults and remained at a high level among children. Finally, the intensification in circulation of the Omicron variant, whose greater transmissibility has now been demonstrated, calls for the utmost vigilance, particularly in the context of end-of-year festive gatherings. New hospitalisations and admissions to intensive care seemed to stabilise at a high level, while remaining lower than in the first three waves. The significant circulation of the virus among young children over the past several weeks calls for careful monitoring of how hospital and intensive care admissions evolve for these age groups, as well as the incidence of paediatric inflammatory multisystem syndrome (PIMS). Between 20 and 22 December, 30% of screened tests showed a profile compatible with the presence of the Omicron variant and, as of 23 December, sequencing had confirmed 1,440 cases of Omicron across all metropolitan regions, Reunion Island, Guadeloupe, Saint-Martin and French Guiana. As of 21 December, 76.8% of the total population had received a complete primary vaccination series. Among people aged 18 and over, 39.0% had received a booster dose (68.1% among people aged 65 and over). As the festive season approaches, strict adherence to all precautionary measures, including reduced contacts and frequent ventilation of enclosed spaces, is more necessary than ever. Given the prospect of an epidemic dominated in the short term by the Omicron variant, it is essential that vaccination, including the booster, as well as all measures of isolation for cases and quarantine for contacts, be implemented in order to curb the spread of infection as much as possible and preserve the healthcare system.

EPIDEMIOLOGICAL SITUATION

Nationally, the incidence rate increased by 8%, reaching 550 cases per 100,000 inhabitants in week 50 (vs 510 in week 49). On average, more than 50,000 cases were diagnosed per day. The effective reproduction rate was still significantly higher than 1, indicating a further increase in viral circulation. The incidence rate stabilised in the 60+ age group, while it continued to increase at a high level in the younger age groups, notably in 20-29 year-olds (+42%) and 30-39 year-olds (+14%), reaching 836 in this age group. Among children, the incidence rate decreased in the 0-9 years age group (578, -9%), as did the screening rate (10,874, -14%). In the population as a whole, the screening rate (7,685/100,000 in W49) continued to increase, rising to 8,136 (+6%). The positivity rate remained high at 6.8% of tests (+0.2 points).

In week 5, the number of consultations for suspected COVID-19 stabilised for SOS-Médecins associations (3,653, +3%) and emergency departments (7,826 visits, +2%), as did the number of new hospital admissions (7,118, -5%) and intensive care admissions (1,612, -7%) (non-consolidated data), after several weeks of strong increases. On 21 December, 16,142 COVID-19 patients were hospitalised, including 3,109 in intensive care. More than 1,000 deaths were reported for week 50 (+8%), including 969 in hospitals and 34 in long-term care facilities (non-consolidated data). In addition, there was an [excess of all-cause mortality](#) recorded between weeks 47 and 49, particularly in Auvergne-Rhône-Alpes and Provence-Alpes-Côte d'Azur.

In metropolitan France, the incidence rate was highest and continuously rising in Provence-Alpes-Côte d'Azur (901, +17%), followed by Auvergne-

Rhône-Alpes (730, +7%) and Île-de-France (674, +33%) where it increased by 51% (998) in Paris. The rates of new hospitalisations and admissions to intensive care stabilised in most regions and age groups, except in Corsica and Auvergne-Rhône-Alpes.

In overseas France, the rates of incidence and new hospitalisations were still on the rise in Reunion Island, while they stabilised in Martinique.

VARIANTS

The Delta variant remained dominant in the last Flash sequencing survey for which data are available (6 December). Nevertheless, a strong acceleration in circulation of the Omicron variant was observed: 11% of the tests screened in week 50 showed a compatible mutation profile and, as of 23 December at 4pm, sequencing had confirmed 1,440 cases in all regions of metropolitan France, Reunion Island, Guadeloupe, Saint-Martin and French Guiana. At the beginning of week 51, approximately 30% of screenings performed suggest an Omicron profile.

PREVENTION

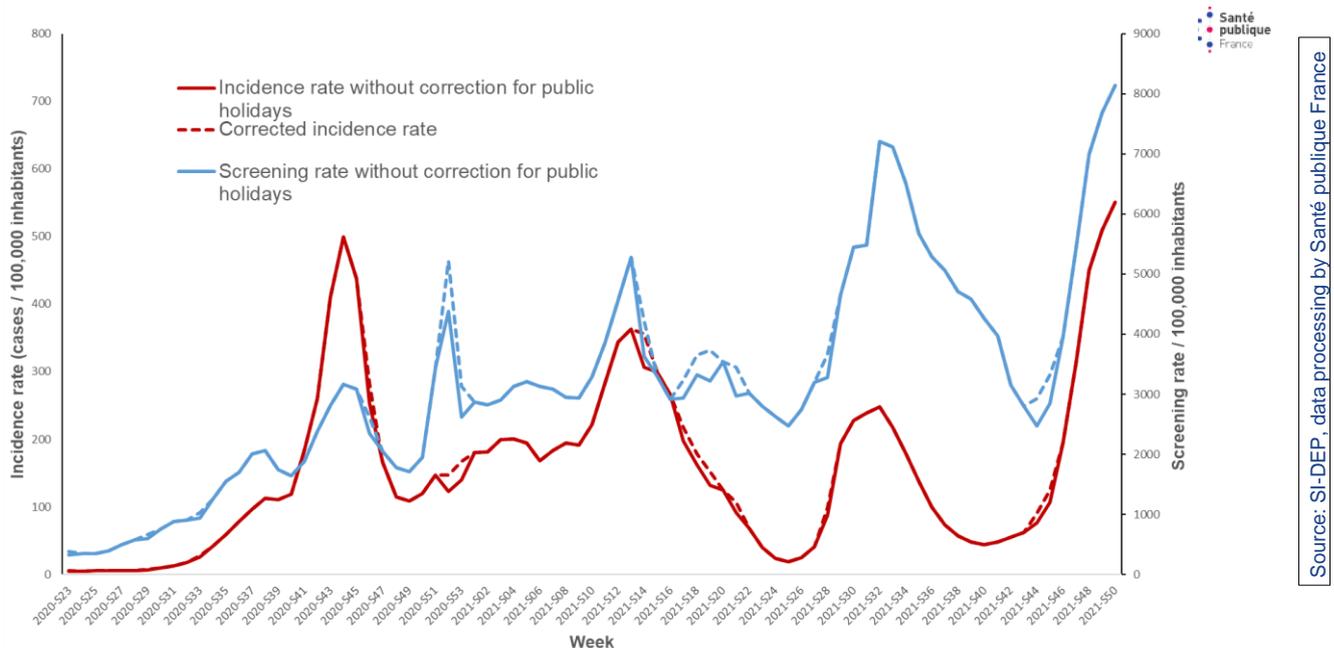
In wave 30 of the CoviPrev survey (30 November-7 December), indicators for mental health (states of depression and anxiety, sleep problems and suicidal thoughts) remained stable compared to the last waves of the survey, but at a high and worrying level.

As of 21 December, 76.8% of the total population had received a complete primary vaccination series. Among people aged 18 years and over, 39.0% had received a booster dose (representing 79.4% of those eligible at that date), and this proportion reached 68.1% among people aged 65 years and over (representing 86.9% of those eligible at that date).

Confirmed cases, incidence, and screening

Nationally, the [incidence rate](#) continued to increase and reached 550 cases per 100,000 inhabitants in week 50 (vs 510 in week 49, or +8%). The [screening rate](#) was also on the rise (8,136/100,000 vs 7,685 in week 49, +6%), as was the [positivity rate](#) (6.8%, +0.2 points). Among the 4,954,786 persons tested who reported their symptom status, 86% were asymptomatic, a slight increase compared to the previous week when the proportion was 84%. A small increase in the positivity rate was observed among both symptomatic (22.5% vs 20.7% in week 49) and asymptomatic (4.1% vs. 4.0%) cases. The proportion of symptomatic cases decreased (48% vs 50%).

Weekly trends in the incidence and screening rates, with or without correction for the effect of public holidays, since 1 June 2020, France (up to 22 December 2021)



Incidence and screening rates by age group

In week 50, the [incidence rate](#) increased in 10-59 year-olds, especially in 20-29 year-olds (+42%) and 30-39 year-olds (+14%), while it was stable or slightly decreasing in the other age groups. It was again over 500 for the under-50s and reached 836 for the 30-39 age group. The [screening rate](#) was increasing among 20-59 year olds and decreased among 0-9 year olds (-14%). It has stabilised in the other age groups. It was above 10,000 among those aged under 40, and highest among 10-19 year-olds (10,975). The [positivity rate](#) was stable or decreasing in the majority of age groups, except among 0-9 and 20-39 year-olds where it increased. It remained most significant among those aged 30-39 (8.2%, +0.2 points). Among school children aged 6-10 years, the incidence rate was 948 (-13%), with a screening rate of 16,338 (-16%) and a positivity rate of 5.8 (+0.2 points).

Weekly evolution of the incidence rate per 100,000 inhabitants by age group since week 39, France (data on 22 December 2021)

35	27	29	38	48	55	80	109	143	214	226	224	90 yrs +
25	26	35	43	43	56	66	86	118	148	154	151	80-89 yrs
31	33	43	56	63	80	99	134	184	224	214	201	70-79 yrs
30	29	37	47	57	81	108	155	239	313	325	314	60-69 yrs
37	35	39	46	58	83	116	178	278	392	431	454	50-59 yrs
54	48	53	61	72	110	145	225	375	549	634	670	40-49 yrs
69	64	67	72	85	132	181	270	423	631	731	836	30-39 yrs
61	58	61	57	69	105	150	218	321	457	552	785	20-29 yrs
61	49	50	58	58	81	112	195	345	531	636	665	10-19 yrs
51	41	44	52	44	66	106	211	391	580	636	578	0-9 yrs
48	44	48	55	62	91	125	194	312	450	510	550	All ages
W39	W40	W41	W42	W43	W44*	W45*	W46	W47	W48	W49	W50	

*W44 and W45: rate corrected for the public holiday effect (1 and 11 November).



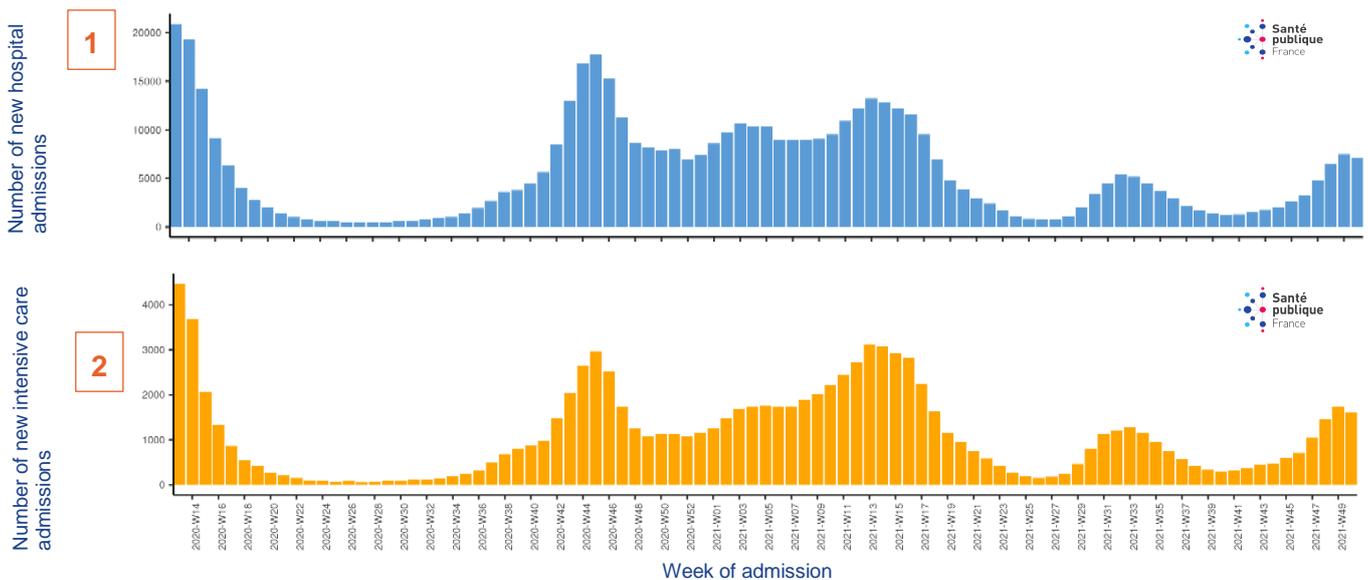
Hospitalisations, intensive care admissions, and deaths

To better understand the hospital dynamics, new hospital and intensive care admissions are analysed by date of patient admission to hospital. New deaths (in hospital and long-term care facilities) are analysed by date of occurrence. **Data from week 50, up to 21 December 2021, are not yet consolidated and may therefore be underestimated.**

On 21 December 2021, 16,142 COVID-19 patients were hospitalised in France (vs 14,885 on 14 December, or +8%), including 3,109 in intensive care units (vs 2,805 on 14 December, +11%).

At the national level, hospital indicators by date of admission appear to be stabilising, with 7,118 [new hospitalisations](#) in week 50 (-5% compared to week 49, vs +16% between weeks 48 and 49) and 1,612 new admissions to intensive care units (-7% compared to week 49, vs +19% between weeks 48 and 49) (data for week 50 not consolidated).

Weekly number of new hospital (1) and intensive care (2) admissions for COVID-19 patients since 23 March 2020, France (data on 21 December 2021)



W50: unconsolidated data

In week 50, weekly rates of new hospitalisations were stable or slightly decreasing in most age groups. New admissions to critical care were stable in most age groups, except for 50-79 year-olds, where they decreased, and 80-89 year-olds, where they increased.

Weekly rate of new hospital (1) and intensive care (2) admissions per 100,000 inhabitants, by age group, from week 43 to week 50, France

Age Group	New Hospital Admissions (per 100,000 inhabitants)								New Intensive Care Admissions (per 100,000 inhabitants)							
	W43	W44	W45	W46	W47	W48	W49	W50	W43	W44	W45	W46	W47	W48	W49	W50
90 yrs +	20.6	20.3	30.8	43.2	55.1	68.7	72.7	70.2	1.0	1.3	0.9	1.2	1.8	1.6	1.8	1.5
80-89 yrs	11.3	12.4	17.6	22.0	30.5	39.8	43.9	43.2	1.4	1.5	2.4	2.2	2.7	3.3	2.8	3.3
70-79 yrs	6.4	8.1	9.7	11.4	17.5	24.1	26.1	24.3	2.0	2.7	2.9	3.3	5.2	6.9	8.4	6.8
60-69 yrs	3.7	3.9	5.1	6.8	9.7	14.6	17.0	16.0	1.5	1.6	1.8	2.3	3.4	5.4	6.1	5.7
50-59 yrs	2.3	2.4	3.2	4.2	6.4	8.5	10.6	10.2	0.8	0.8	1.1	1.4	1.9	2.8	3.9	3.5
40-49 yrs	1.5	1.6	1.7	2.5	3.8	5.1	6.5	6.2	0.4	0.5	0.6	0.7	1.2	1.4	1.8	1.9
30-39 yrs	1.3	1.4	1.7	2.1	3.3	4.4	6.1	5.5	0.4	0.2	0.3	0.4	0.7	0.9	1.1	1.1
20-29 yrs	0.8	1.1	1.1	1.3	1.9	2.6	3.3	3.1	0.1	0.1	0.1	0.2	0.2	0.4	0.5	0.5
10-19 yrs	0.2	0.2	0.4	0.3	0.6	0.7	0.8	1.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
0-9 yrs	0.6	0.7	0.9	1.4	1.8	1.8	2.7	2.3	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3
All ages	2.7	3.0	3.8	4.9	7.1	9.6	11.1	10.6	0.7	0.7	0.9	1.1	1.6	2.2	2.6	2.4

At the national level, there were **969 deaths in hospital** in week 50 (+8% from week 49; data from week 50 non-consolidated). In the previous week, this number had increased by 30% compared to week 48. There were also 34 deaths in long-term care facilities (vs 36 in week 49 and 30 in week 48).

Situation at the regional level

Incidence, positivity, and screening rates

In **metropolitan France**, the incidence rate was rising in four regions, especially in Île-de-France (+33%) and Provence-Alpes-Côte d'Azur (+17%). It was stable or slightly lower in the rest of the country. The incidence rate was above 300/100,000 in all regions except Normandy (297) and Brittany (291). The positivity rate ranged from 5.1% in Normandy and Brittany to 8.9% in Auvergne-Rhône-Alpes. The screening rate exceeded 10,000/100,000 inhabitants in Provence-Alpes-Côte d'Azur, Corsica and Île-de-France. In week 50, the incidence rate was above 800 in nine departments (vs four in week 49) and exceeded 600 in 26 departments, as in week 49. The highest incidence rates were observed in the Drôme (1127, +9%), in Paris (998, +51%), Ardèche (962, +3%), and in the Alpes-Maritimes (950, +28%).

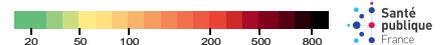
Overseas, the incidence rate increased in Reunion Island (577, +47%), French Guiana (117, +13%) and Guadeloupe (61, +24%). In contrast, it stabilised in Martinique (176, +2%).

Evolution of the incidence, positivity, and screening rates by region since week 45, France (data on 22 December 2021)

Regions	Incidence rate per 100,000 inhabitants						Positivity rate (%)			Screening rate per 100,000 inhabitants	
	W45*	W46	W47	W48	W49	W50	W50 vs W49 (%)	W50	W50 vW W49 (points)	W50	W50 vs W49 (%)
Auvergne-Rhône-Alpes	130	219	394	603	680	730	7	8.9	0.3	8,216	3
Bourgogne-Franche-Comté	95	175	311	489	557	498	-11	7.6	-0.4	6,585	-6
Brittany	113	142	215	298	301	291	-3	5.1	-0.2	5,668	0
Centre-Val de Loire	102	158	211	311	348	332	-5	6.1	-0.4	5,441	1
Corsica	218	306	387	447	634	646	2	6.3	-1.1	10,298	20
Grand Est	124	204	313	448	484	468	-3	6.2	-0.1	7,598	-2
Hauts-de-France	123	194	304	417	448	434	-3	6.0	-0.2	7,194	1
Île-de-France	117	191	312	449	508	674	33	6.6	0.7	10,251	19
Normandy	76	120	180	239	270	297	10	5.1	0.3	5,822	4
Nouvelle-Aquitaine	124	193	303	427	440	389	-12	6.1	-0.5	6,373	-5
Occitanie	117	191	332	495	586	588	0	7.2	-0.1	8,136	1
Pays de la Loire	156	199	268	370	393	363	-8	5.9	-0.3	6,162	-3
Provence-Alpes-Côte d'Azur	160	244	419	589	767	901	17	8.6	0.4	10,484	12
Guadeloupe**	69	44	42	37	49	61	24	1.2	-0.4	5,271	72
French Guiana	118	78	90	90	103	117	13	4.0	0.2	2,906	7
Martinique**	138	165	152	176	172	176	2	2.2	-0.6	7,953	29
Mayotte	34	36	25	24	30	39	27	1.4	0.3	2,692	-1
Reunion Island	196	223	255	312	394	577	47	8.0	2.0	7,240	11

*Data corrected for the public holiday (11 November)

**Data non-interpretable due to social movements in Guadeloupe (W46 & W47) and in Martinique (W47)



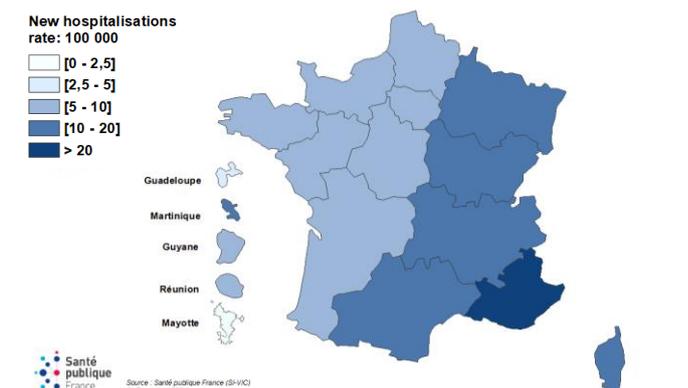
Source: SI-DEP

Hospital and intensive care admissions by date of admission

In metropolitan France in week 50, the weekly rates of [new hospital](#) and intensive care admissions were stable or decreasing in all regions except Corsica and Auvergne-Rhône-Alpes where they were rising (+17% and +3% respectively for hospitalisation rates). The highest rates of new hospitalisations occurred in Provence-Alpes-Côte d'Azur.

In overseas France, the weekly rates of new hospital and intensive care admissions were the highest in Martinique, followed by French Guiana. Both indicators were on the increase in Guadeloupe and French Guiana. Rates of new hospitalisations were also on the rise in Reunion Island.

Weekly rate of newly hospitalised COVID-19 patients per 100,000 inhabitants, by region, in week 50, France



Source: SI-VIC, data processing by Santé publique France

For further information on the epidemic situation in the regions, consult the [Regional Epidemiological Updates](#).

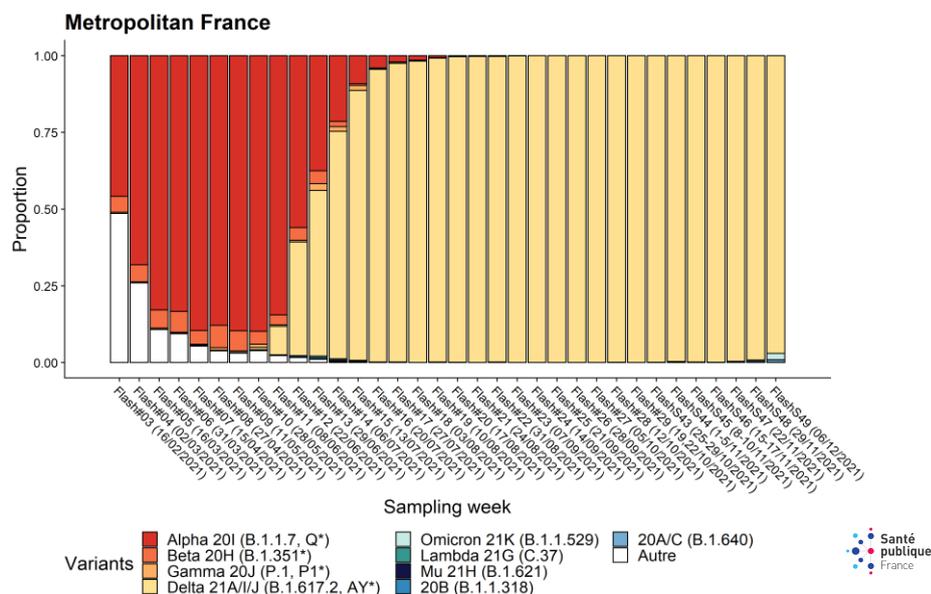
Variants

The **screening strategy** deployed in France tracks mutations that may have an impact on the characteristics of the virus. Since June 2021, the E484K, E484Q and L452R mutations are targeted (see the [risk assessment from 02/06/2021](#)). However, since the emergence of the Omicron variant, which does not carry any of these mutations, reinforced monitoring of the results from screened samples has been introduced in order to identify specimens that raise suspicions of its presence (profile coded A0B0C0, representing 10.5% of interpretable sequences in week 50). This tracking is not specific to Omicron, however, as other variants share this screening profile (e.g. B.1.640). Therefore, a **new code (D)** was recently added to collect the results of complementary screenings targeting several Omicron-specific mutations.

In week 50, the **L452R** mutation (primarily driven by the Delta variant) was detected in 89.5% of screened positive samples (vs 97.2% in week 49). Meanwhile, the proportion of **A0B0C0** samples has increased significantly (**10.6%** vs. 2.8% in week 49), with regional disparities. In week 50, 980 results indicated the presence of an Omicron target mutation (D1), representing 9% of interpretable results (vs 1% in week 49). At the beginning of week 51 (20-22 December inclusive), the proportion of D1s was 32% (1,568 D1s out of 4,904 interpretable results). However, the search for mutations included in D is not yet widespread and these results should be interpreted with caution. Nevertheless, all indicators suggest a strong acceleration in the diffusion of Omicron.

The [sequencing data](#) indicate that the **Delta variant** is still dominant; it was identified in **99% of interpretable sequences** in France during Flash Survey of week 48 (dated 29 November, on 4,222 interpretable sequences) and **97%** in the Flash Survey of week 49 (dated 6 December, on 1,986 interpretable sequences, unconsolidated data). However, a downward trend in the proportion of Delta is confirmed by the same data.

Evolution of the proportion of classified variants (VOC, VOI, and VUM) in Flash Surveys, metropolitan France (data on 20 December 2021; data from Flash Surveys in weeks 47, 48, and 49 non-consolidated)



*VOC: variant of concern; VOI: variant of interest; VUM: variant under monitoring.

Circulation of the variant **20A/C (B.1.640)**, classified as VUM* since the [risk assessment from 12/11/2021](#), seems to be continuing in metropolitan France: it represented **0.5% of interpretable sequences** in the Flash Survey of week 48 and **0.9%** in the Flash Survey of the week 49 (non-consolidated data). The regions reporting the highest number of cases as of 20 December 2021 are Hauts-de-France (149), Île-de-France (136) and Normandy (134), according to the EMERGEN database.

As of 23 December at 4pm, **1,440 confirmed cases of infection with the Omicron variant** have been detected in France, across the 13 regions of metropolitan France, Reunion Island, Guadeloupe, Saint-Martin and French Guiana (according to the EMERGEN sequencing database and feedback from regional cells). Data from the Flash Surveys confirm a rapid increase in the detection of Omicron, which represented **0.3% of interpretable sequences** in the Flash Survey of week 48 and **2.1%** in the Flash Survey of week 49 (non-consolidated data). As in several other European countries, community transmission of Omicron is confirmed to be rising in France.

Epidemiological analyses carried out in the UK, Norway and Denmark on the Omicron variant confirm its increased transmissibility compared to Delta. Significant escape of Omicron from the immune response has been demonstrated, although some protection against symptomatic forms appears to be retained after a booster dose. Early results from studies on the severity of Omicron infection would suggest a lesser level than Delta infections, but longer monitoring is needed to draw firm conclusions.

A full update on Omicron and B.1.640 (available knowledge and epidemiological situation) is available in the [updated risk assessment from 15/12/2021](#).

Vaccination

On 21 December 2021, vaccination coverage in France based on Vaccin Covid was estimated at 76.8% for a complete primary vaccination series* and 30.7% for the booster dose**. Among the population aged 12 years and older, 89.3% had received a complete primary vaccination series. Among the population aged 18 years and older, 39.0% had received a booster shot, representing 79.4% of those eligible for it at that time. Among the population aged 65 years and older, 68.1% had received a booster shot, representing 86.9% of those eligible for it at that time.

Vaccination coverage (%) for the booster shot and percentage of the eligible population who received the booster, by age group, France, 21 December 2021

Age group (years)	Vaccination coverage for booster shot (%)	Percentage of eligible population that has received a booster shot
18-24	14.6	56.9
25-29	16.2	60.4
30-39	19.4	65.2
40-49	27.8	71.0
50-59	41.1	74.3
60-64	53.2	78.5
65-69	62.2	86.8
70-74	74.2	89.0
75-79	76.9	89.2
80+	63.7	83.9

Source: Vaccin Covid, CNAM, data processing by Santé publique

On 21 December, 92.9% of **residents of nursing homes and long-term care facilities** had completed a primary vaccination series and 65.5% had received a booster shot. Moreover, 73.9% of residents who were eligible for the booster on 21 December 2021 had received it (vs 72.4% on 14 December 2021).

Vaccination coverage for the booster shot was 39.8% (vs 28.4% on 14 December) for **professionals working in nursing homes or long-term care facilities**, 65.2% (vs 57.0%) for **independent professionals** and 41.0% for **healthcare employees** (vs 31.6%).

Vaccination coverage of the booster dose among residents in nursing homes and long-term care facilities and among health professionals may be underestimated due to the date the cohorts were established.

As of 21 December 2021, 71.7% of **professionals** working in nursing homes and long-term care facilities who were eligible for the booster dose had already received it (vs 54.6% on 14 December 2021). The percentage is 84.5% (vs 76.3%) for independent health professionals and 76.4% for healthcare employees (vs 64.4%).

On the same date, 75.9% of **people living in precarious conditions aged 15 years +** had completed a primary vaccination series and 30.4% had received a booster dose.

Data from a survey on COVID-19 vaccination coverage among care home residents as well as among active health care workers and medical professionals are available in the dedicated "[Point sur](#)" feature (in French).

**The following are defined as having completed a primary vaccination series: persons vaccinated with two doses of vaccines requiring a double dose for primary vaccination (Pfizer, Moderna or AstraZeneca vaccines), persons vaccinated with one dose of vaccines requiring a single dose for primary vaccination (Janssen vaccine), persons vaccinated with one dose of vaccines in the event of a prior COVID-19 infection, and persons vaccinated with three doses of vaccines excluding the booster shot (particularly immunocompromised persons).*

***The objectives and calculation methods for the two indicators relating to booster vaccination coverage and the percentage of the eligible population who received the booster shot have been [described](#) previously.*

This week's surveys

Update on the evolution of mental health ([CoviPrev Survey, wave 30](#))

Update on [COVID-19 vaccination coverage among health professionals and care home residents](#)

For more information on COVID-19, the surveillance systems in place, and vaccination, consult the websites of [Santé publique France](#) and [Vaccination Info Service](#).

For more information on the regional data, see [Regional Epidemiological Updates](#).

Find all the data in open access on [Géodes](#).