

COVID-19 EPIDEMIOLOGICAL UPDATE

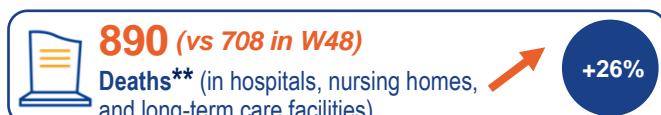
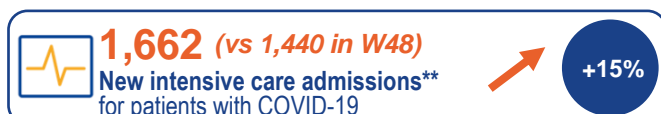
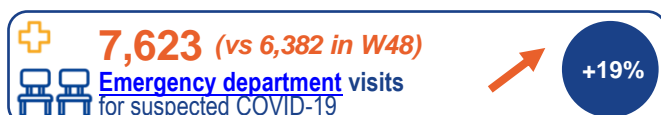
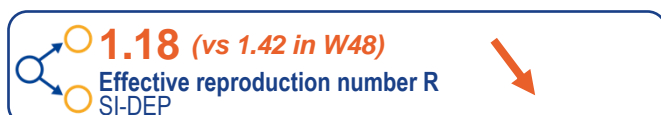
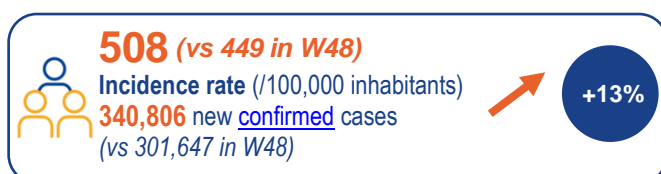
Weekly Report / Week 49 / 16 December 2021

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 16 December 2021.

Key numbers

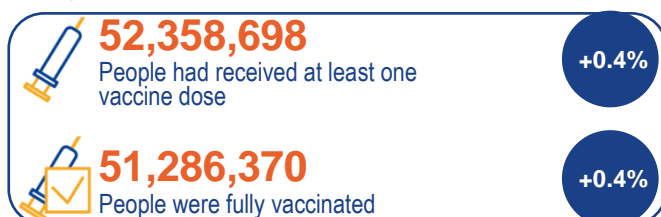
Week 49 (6-12 December 2021)

Compared to week 48 (29 November-3 December 2021)



On 14 December 2021

Compared to 7 December 2021



Key points

Epidemiological situation

In week 49, the circulation of SARS-CoV-2 continued to increase, with hospital indicators again reflecting a rise.

- Metropolitan France:
 - Incidence rate above the peaks of the second, third, and fourth waves
 - Highest incidence rate among 6-10 year-olds (>1,000/100,000) followed by 11-14 and 30-39 year-olds (>700)
 - New hospital and intensive care admissions at levels below the first three waves but rising in the majority of regions
- Overseas France: incidence rate and hospitalisations increasing in Reunion Island

Variants

- Flash Survey from week 48 (29 November): Delta variant identified in 99% of sequenced samples
- 310 confirmed cases of Omicron variant in France as of 4 pm on 16 December
- Moderate circulation of the B.1.640 variant across the country

Contact tracing

- Adaptation of the contact tracing programme to deal with the very high number of new cases: indicators to be interpreted with caution

Prevention

- CoviPrev Survey (wave 30, 30 November-7 December):
 - Overwhelming majority of adults in support of vaccination, including the booster (90%)
 - 94% of vaccinated people intend to be tested if they are a contact of a positive case versus 74% of unvaccinated people
 - Better adherence to preventive measures
- Vaccination on 14 December 2021 (Vaccin Covid data):
 - 78.0% of the French population had received at least one vaccine dose, and 76.4% were fully vaccinated
 - 60.5% of people aged 65 years and older had received a booster shot, representing 82.0% of the eligible population in this age group
- Importance of combining measures: vaccine and booster dose for the eligible population, adherence to contact tracing, and respect of preventive measures to preserve the healthcare system

*Due to a national strike of SOS Médecins and the disruption of data transmission, data are unavailable for weeks 47 and 48, which prevents us from monitoring their evolution. **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 49, the circulation of SARS-CoV-2 continued to increase in metropolitan France. The incidence rate exceeded the three previous epidemic peaks, with more than 500 cases per 100,000 inhabitants. Despite the stabilising trend among people aged 60 years and older, this rate continued to increase among those under 60 years, with a particularly high incidence rate observed in children aged 6 to 10 years. New hospital and intensive care admissions continued to rise and exceeded the level of the previous wave but remained below the levels of the first three waves. As of 4 pm on 16 December, the Omicron variant had been detected in 310 patients in metropolitan France and Reunion Island. On 14 December, 76.4% of the French population were fully vaccinated. Among the population aged 65 years and older, 60.5% had received a booster dose. Due to the very high number of cases, the capacity to identify and control transmission chains has been substantially impeded. Given the approach of the holiday season and the short-term outlook of the pandemic dominated by the Omicron variant, the following of vaccination recommendations, the isolation of cases, and the quarantine of incompletely vaccinated contacts are now more essential than ever to curb the spread of infections and preserve the healthcare system. This must be accompanied by the strict adherence to all preventive measures, including the reduction of contacts.

EPIDEMIOLOGICAL SITUATION

Nationally, the incidence rate reached 508 cases per 100,000 inhabitants in week 49 (vs 449 in week 48). This increase was nevertheless less pronounced (+13%) than in the previous week (+44%). On average, almost 48,700 cases were diagnosed per day. The effective reproduction rate continued to fall to 1.18, showing a slight slowdown in the circulation of the virus. The incidence rate was the highest and rising among people under 60 years, while it stabilised at a high level among the older age groups. In adults, it reached 729 (+16%) among 30-39 year-olds and 632 (+15%) among 40-49 year-olds. In children, the highest rates were still observed among 6-10 year-olds (1,082, +9%), accompanied by a particularly high screening rate (19,371, +2%). For the entire population, the screening rate (7,680/100,000) continued to increase (+10%). The positivity rate of tests reached 6.6% (+0.2 points).

The number of consultations for suspected COVID-19 rose in emergency departments (7,623, +19%). The number of new hospital admissions increased once again (7,042, +12%), as did new intensive care admissions (1,662, +15%) (unconsolidated data). On 14 December, 14,885 COVID-19 patients were hospitalised, including 2,805 in intensive care. In week 49, there were 890 deaths (+26%), with 857 in hospital and 33 in long-term care facilities. In addition, [all-cause mortality](#) increased in weeks 47 and 48.

In metropolitan France, the incidence rate exceeded 500 cases per 100,000 inhabitants in six regions. It was the highest and still escalating in Provence-Alpes-Côte d'Azur (765, +30%) followed by Auvergne-Rhône-Alpes (678, +13%). The screening rate remained the highest (above 9,000/100,000 inhabitants) in Provence-Alpes-Côte d'Azur. New hospital and intensive care admissions climbed in most regions and age groups.

In overseas France, the incidence rate as well as new hospital and intensive care admissions were on

the rise in Reunion Island, while these indicators stabilised in Martinique.

VARIANTS

The Delta variant represented 99% of interpretable sequences in the latest Flash Survey (29 November). As of 4 pm on 16 December, the Omicron variant had been detected in 310 samples in 13 regions of metropolitan France and Reunion Island. Moreover, the B.1.640 variant was detected in several metropolitan regions, Reunion Island, and French Guiana.

CONTACT TRACING

The very high incidence rate has complicated the contact tracing process. The necessary adaptation of this programme has led to a fall in key indicators, thus calling for caution when interpreting them. According to wave 30 of the CoviPrev Survey (30 November-7 December), 94% of vaccinated respondents intend to be tested if they are a contact of a positive case compared to 74% of unvaccinated respondents.

SEROPREVALENCE

The seroprevalence increased significantly in week 42 (18-24 October), reaching 79.8% versus 52.4% in week 23 (7-13 June). The increase in immunity was higher among adults, especially those aged 60 years and older, on account of the improvement in vaccination coverage.

PREVENTION

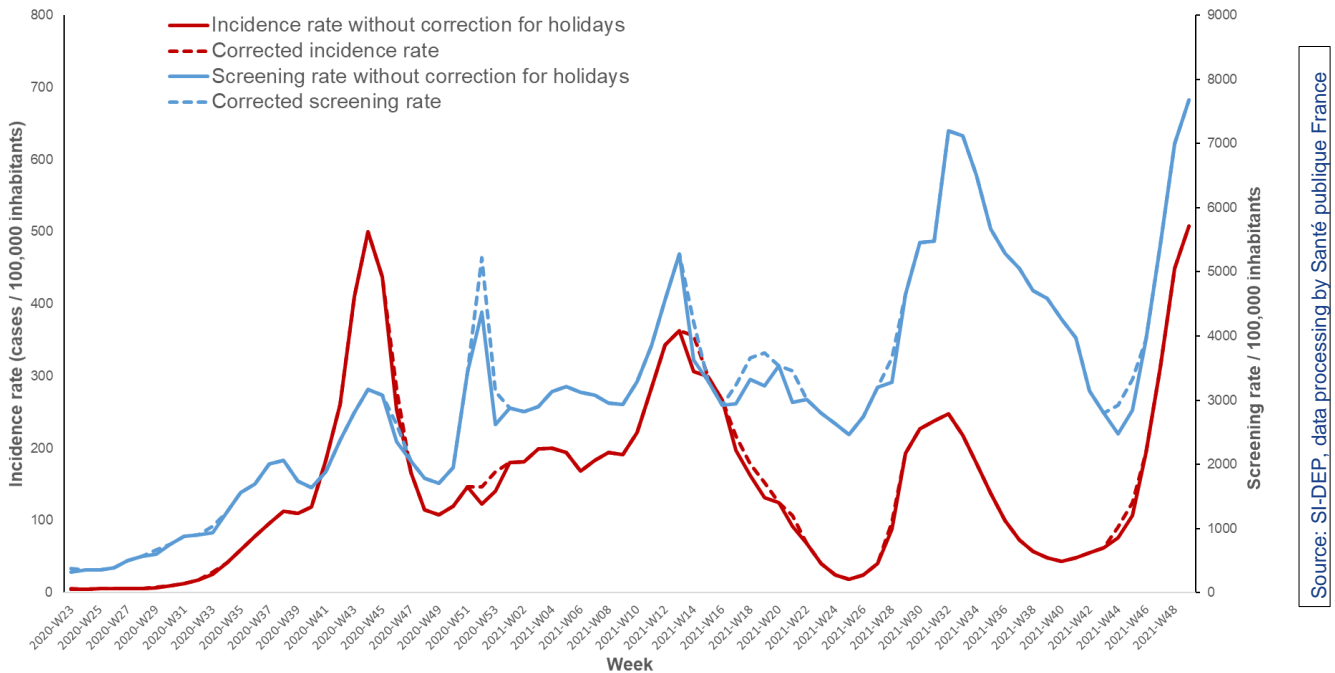
According to wave 30 of the CoviPrev Survey, the vast majority of adults are favourable to vaccination (90%). However, only 43% of parents are willing for their children aged 5-11 years to be vaccinated. An increase in the adherence to preventive measures was observed.

On 14 December, 78.0% of the total population had received at least one vaccine dose, and 76.4% were fully vaccinated. Overall, 60.5% of people aged 65 years and older had received the booster shot, representing 82.0% of those eligible at this date.

Confirmed cases, incidence, and screening

Nationally, the [incidence rate](#) continued to increase, reaching 508 cases per 100,000 inhabitants in week 49 (vs 449 in week 48, +13%). The [screening rate](#) was also on the rise (7,680/100,000 vs 6,995 in week 48, +10%), as was the [positivity rate](#) (6.6%, +0.2 points). Among the 4,669,300 tested individuals who provided information about the possible presence of symptoms, 84% were asymptomatic, a stable proportion compared to the previous week. The positivity rate increased among both symptomatic (20.6% vs 20.3% in week 48) and asymptomatic individuals (3.9% vs 3.8%). The proportion of symptomatic cases remained unchanged at 50%.

Weekly trends in the incidence and screening rates, with or without correction for the effect of public holidays, since 1 June 2020, France (data on 15 December 2021)



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

Incidence and screening rates by age group

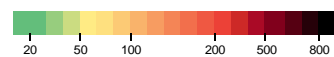
In week 49, the [incidence rate](#) once again increased in people under 60 years, although it stabilised in the older age groups. It exceeded 500 cases per 100,000 inhabitants in those under 50 years, climbing to 729 among 30-39 year-olds (+16%). A moderate rise in the [screening rate](#) was found in each age group (from +5% for 0-9 year-olds to +15% for 20-29 year-olds). It exceeded 7,000 per 100,000 inhabitants in people under 50 years and was the highest among 0-9 year-olds (12,636) and 10-19 year-olds (10,409). The [positivity rate](#) increased in people under 50 years, stabilised in 50-59 year-olds (+0.1 points), and decreased in those aged 60 years and older. It remained the highest among 40-49 year-olds (8.4%, +0.4 points) and the lowest among those aged 90 years and older (4.2%, -0.2 points). In primary school children aged 6-10 years, the incidence rate reached 1,082 (+9%), with a screening rate of 19,371 (+2%) and a positivity rate of 5.6% (+0.4 points).

Weekly evolution of the incidence rate per 100,000 inhabitants by age group since week 38, France (data on 15 December 2021)

32	35	27	29	38	48	55	80	109	143	214	224	90 yrs +
26	25	26	35	43	43	56	67	86	118	147	152	80-89 yrs
32	31	33	43	56	63	80	99	134	184	223	212	70-79 yrs
33	30	29	37	47	57	81	108	155	238	313	323	60-69 yrs
42	37	35	39	46	58	84	116	178	278	391	430	50-59 yrs
63	54	48	53	61	72	110	145	225	375	548	632	40-49 yrs
84	69	64	67	72	85	132	181	270	423	630	729	30-39 yrs
73	61	58	61	57	69	105	151	218	321	456	550	20-29 yrs
72	61	49	50	58	58	81	112	195	345	531	634	10-19 yrs
70	51	41	44	52	44	66	106	211	391	579	634	0-9 yrs
57	48	44	48	55	62	91	125	194	312	449	508	All ages

W38 W39 W40 W41 W42 W43 W44* W45* W46 W47 W48 W49

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



Source: SI-DEP

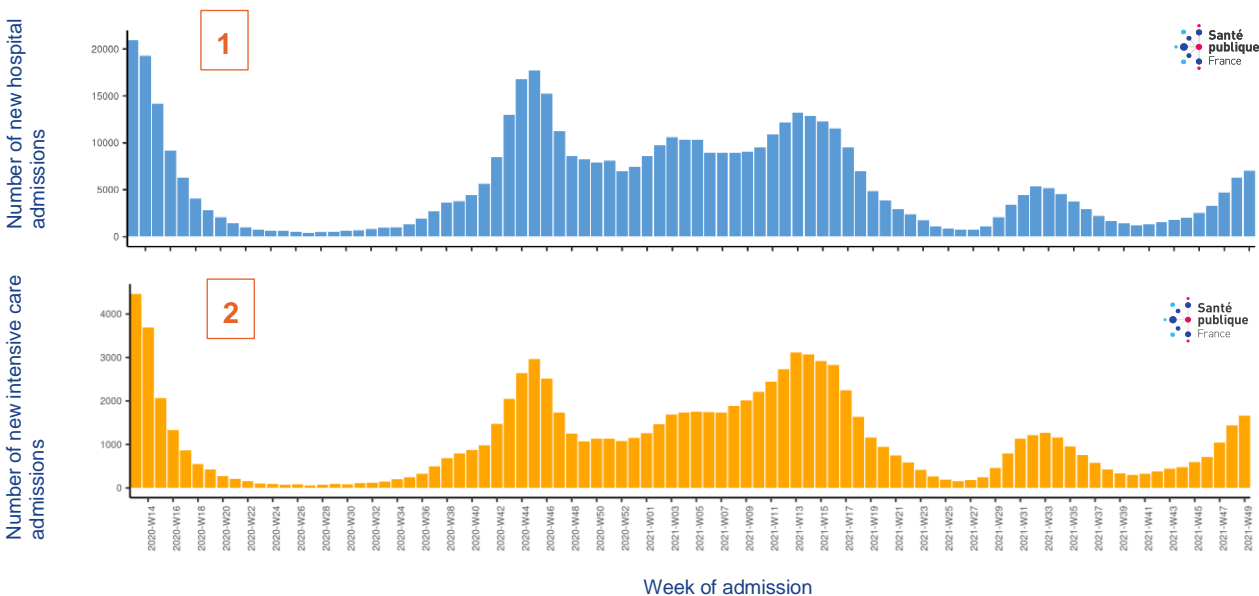
Hospitalisations, intensive care admissions, and deaths

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 49, up to 14 December 2021, are not yet consolidated and may thus be underestimated.**

On 14 December 2021, 14,885 COVID-19 patients were hospitalised in France (vs 12,778 on 7 December, +16%), including 2,805 in intensive care (vs 2,364 on 7 December, +19%).

At the national level, hospital indicators based on the date of admission increased, with 7,042 [new hospital admissions](#) in week 49 (+12% from week 48, vs +34% between weeks 47 and 48) and 1,662 new intensive care admissions (+15% from week 48, vs +38% between weeks 47 and 48) (unconsolidated data from week 49).

Weekly number of new hospital (1) and intensive care (2) admissions for COVID-19 patients since 23 March 2020, France (data on 14 December 2021)



W49: unconsolidated data.

In week 49, the weekly rates of new hospitalisations increased in the majority of age groups. New intensive care admissions also increased across all age groups, with the exception of a decrease among 80-89 year-olds.

Weekly rate of new hospital (1) and intensive care (2) admissions per 100,000 inhabitants, by age group, from week 42 to week 49, France

	W42	W43	W44	W45	W46	W47	W48	W49		W42	W43	W44	W45	W46	W47	W48	W49	
1	17.1	20.4	19.5	30.4	42.5	54.7	68.4	66.7	90 yrs +	0.8	1.0	1.3	0.9	1.1	1.8	1.6	1.8	90 yrs +
	8.8	11.2	12.4	17.5	21.7	30.0	38.6	40.5	80-89 yrs	1.2	1.4	1.5	2.4	2.2	2.7	3.3	2.4	80-89 yrs
	5.7	6.4	8.0	9.6	11.3	17.3	23.5	24.6	70-79 yrs	1.8	2.0	2.7	2.9	3.3	5.2	6.8	7.9	70-79 yrs
	3.0	3.7	3.9	5.1	6.7	9.6	14.4	16.2	60-69 yrs	1.2	1.5	1.5	1.8	2.3	3.4	5.4	5.9	60-69 yrs
	2.0	2.3	2.4	3.1	4.1	6.3	8.3	10.2	50-59 yrs	0.7	0.8	0.8	1.1	1.4	1.9	2.8	3.7	50-59 yrs
	1.2	1.5	1.5	1.7	2.5	3.7	5.0	6.3	40-49 yrs	0.4	0.4	0.5	0.6	0.7	1.2	1.4	1.8	40-49 yrs
	1.2	1.3	1.4	1.7	2.0	3.3	4.3	5.5	30-39 yrs	0.4	0.4	0.2	0.3	0.4	0.7	0.9	1.0	30-39 yrs
	0.8	0.8	1.1	1.1	1.3	1.9	2.6	3.1	20-29 yrs	0.2	0.1	0.1	0.1	0.2	0.2	0.4	0.5	20-29 yrs
	0.2	0.2	0.2	0.4	0.3	0.6	0.7	0.7	10-19 yrs	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	10-19 yrs
	0.5	0.6	0.7	0.9	1.4	1.8	1.8	2.5	0-9 yrs	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0-9 yrs
	2.3	2.6	2.9	3.8	4.9	7.0	9.4	10.5	All ages	0.6	0.7	0.7	0.9	1.1	1.6	2.1	2.5	All ages

At the national level, there were **857 deaths in hospital** in week 49 (+26% from week 48; unconsolidated data from week 49). In the previous week, this number had risen by 46% compared to week 47. There were also **33 deaths in long-term care facilities** in week 49 (vs 29 in week 48 and 15 in week 47).

Situation at the regional level

Incidence, positivity, and screening rates

In **metropolitan France**, the incidence rate increased in all regions except for Brittany (300, +1%). Moreover, it exceeded 300 cases per 100,000 inhabitants in all regions except for Normandy (269). The positivity rate ranged from 4.8% in Normandy to 8.5% in Auvergne-Rhône-Alpes. The screening rates also climbed in all regions, being the highest in Provence-Alpes-Côte d'Azur and Île-de-France. In week 49, the incidence rate exceeded 400 cases per 100,000 inhabitants in 56 departments (vs 47 in week 48) and 600 in 26 departments (vs 17 in week 48). The highest rates were found in Drôme (1,033, +25%), Ardèche (929, +6%), and Vaucluse (841, +39%).

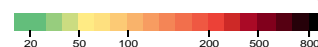
In **overseas France**, the incidence rate increased in Reunion Island (394, +26%), French Guiana (103, +14%), and Guadeloupe (49, +34%) but was stable in Martinique (169, -3%).

Evolution of the incidence, positivity, and screening rates by region since week 44, in France (data on 15 December 2021)

Regions	Incidence rate per 100,000 inhabitants						Positivity rate (%)			Screening rate per 100,000 inhabitants	
	W44*	W45*	W46	W47	W48	W49	W49 vs W48 (%)	W49	W49 vs W48 (points)	W49	W49 vs W48 (%)
Auvergne-Rhône-Alpes	85	130	219	394	603	678	13	8.5	0.2	7,953	10
Bourgogne-Franche-Comté	73	95	175	311	488	556	14	8.0	0.2	6,982	11
Brittany	77	113	142	215	298	300	1	5.3	-0.2	5,663	5
Centre-Val de Loire	77	102	158	211	311	347	12	6.4	0.1	5,387	9
Corsica	131	218	306	387	447	632	41	7.4	1.2	8,547	19
Grand Est	85	124	204	313	448	482	8	6.2	0.0	7,719	7
Hauts-de-France	86	123	194	304	417	446	7	6.3	0.1	7,136	6
Île-de-France	96	117	191	311	448	505	13	5.9	0.2	8,617	9
Normandy	55	76	120	180	238	269	13	4.8	0.3	5,589	6
Nouvelle-Aquitaine	85	124	193	303	427	438	3	6.6	-0.2	6,673	6
Occitanie	79	117	191	332	494	584	18	7.3	0.2	8,039	14
Pays de la Loire	108	156	199	268	370	393	6	6.2	0.0	6,373	6
Provence-Alpes-Côte d'Azur	107	160	244	419	588	765	30	8.1	1.0	9,388	14
Guadeloupe**	57	69	44	42	37	49	34	1.6	0.0	3,063	34
French Guiana	158	118	78	89	90	103	14	3.8	0.1	2,714	10
Martinique**	114	139	165	152	174	169	-3	2.7	-1.7	6,152	55
Mayotte	50	34	36	24	24	30	25	1.1	-0.2	2,713	52
Réunion Island	120	196	223	255	312	394	26	6.0	0.9	6,546	8

*Data corrected for public holidays (1 & 11 November)

**Data non-interpretable due to social movements in Guadeloupe (W46 & W48) and in Martinique (W47)



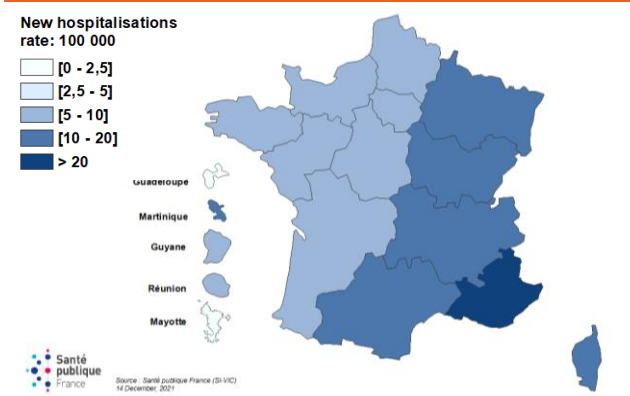
Source: SI-DEP

Hospital and intensive care admissions by date of admission

In metropolitan France in week 49, the weekly rate of [new hospitalisations](#) increased in all regions with the exception of Corsica and Pays de la Loire, where they were stable. New intensive care admissions rose in all regions except for Corsica and Auvergne-Rhône-Alpes, where they were stable, and Pays de la Loire, where they fell. The highest rates of new hospitalisations were observed in Provence-Alpes-Côte d'Azur, Bourgogne-Franche-Comté, and Auvergne-Rhône-Alpes.

In overseas France, new hospital and intensive care admissions were the highest in Martinique. Both hospital indicators deteriorated in Reunion Island.

Weekly rate of newly hospitalised COVID-19 patients per 100,000 inhabitants, by region, in week 49, 2021, France



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

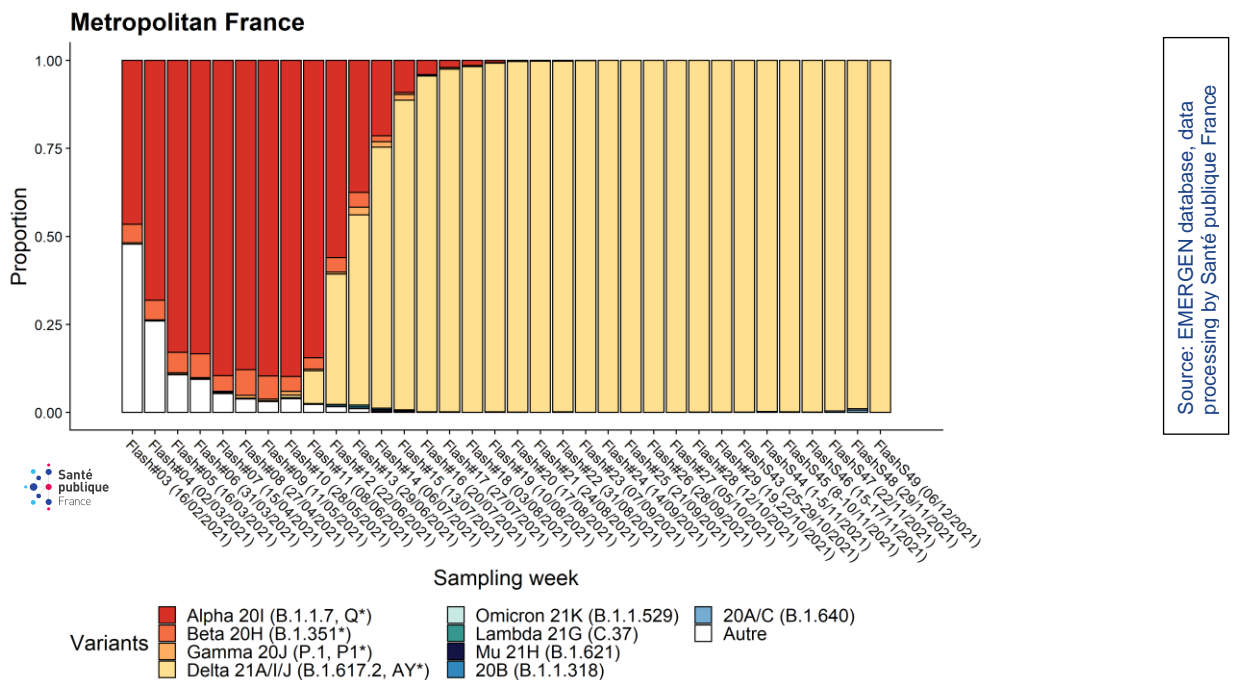
For further information on the epidemic situation in the regions, consult the [Regional Epidemiological Updates](#).

Variants

The **L452R** mutation (primarily driven by the Delta variant) was detected in 97.1% of screened positive samples in week 49 (vs 97.4% in week 48). [Sequencing data](#) confirmed the very clear predominance of the **Delta variant**, which was respectively identified in **99.5% and 99.0% of interpretable sequences** in France in Flash Surveys from week 47 (22 November, with 3,466 interpretable sequences) and week 48 (29 November, with 2,574 interpretable sequences, unconsolidated data). **Delta** was also the dominant strain **at the international level**, representing 98% of 354,610 samples sequenced between 15 November and 14 December according to the international database GISAID.

The **B.1.640 variant**, classified as VUM* since the [risk assessment on 12 November 2021](#), was identified in several regions of metropolitan France, Reunion Island, and French Guiana. The proportion of B.1.640 detected in the Flash Surveys increased from <0.1% up until week 43 to 0.4% in week 47 (metropolitan France, unconsolidated data).

Evolution of the proportion of classified variants (VOC, VOI, and VUM) in the Flash Surveys, Metropolitan France (data on 13 December 2021; unconsolidated data from weeks 47, 48, and 49)



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

The **Omicron** variant (21K, B.1.1.529) was classified as VOC* by the WHO on 26 November. Preliminary studies from the United Kingdom and South Africa suggest that Omicron is around three times more transmissible than Delta, although these results may be biased due to the increased monitoring that is currently underway. In vitro studies were conducted to estimate vaccine effectiveness against symptomatic infection. According to these data, the protection conferred by previous infection or two vaccine doses significantly diminishes with Omicron compared to the other variants. Nevertheless, this protection seems to be maintained, though at lower levels than for the other variants, in fully vaccinated people who either had received the booster shot or were previously infected.

In France, the Omicron variant is the subject of enhanced monitoring, which is detailed in the methodological focus of the [Epidemiological Update from week 47](#). As this variant does not have any of the three mutations currently identified by screening (coded as A0B0C0 in SI-DEP), the proportion of screened samples with **A0B0C0** is now being monitored. In week 49, this proportion remained stable at **2.6%** (vs 3.2% in week 48), although it is under close monitoring. A **new code (D)** has been included in SI-DEP to collect the results of complementary screening that targets the mutations carried by the Omicron variant. In week 49, **93 results with one of these three target mutations (D1)** were confirmed, representing 1% of interpretable results. Although these two screening strategies can indicate possible infections with this variant, only sequencing can provide confirmation. As of 4pm on 16 December, **310 confirmed cases of infection with the Omicron variant** had been detected in the country, being identified in 13 regions of metropolitan France as well as Reunion Island (according to the sequencing database EMERGEN). More than half of the investigated cases involved people who had returned from an international trip in the 14 days preceding the diagnosis. The number of confirmed cases with this variant is updated daily on the dashboard [InfoCovidFrance](#).

Vaccination

On 14 December 2021, vaccination coverage based on Vaccin Covid was estimated at 78.0% for at least one dose, **76.4% for full vaccination**, and 23.8% for the booster dose. Among the eligible population aged 12 years and older, 90.7% had received at least one vaccine dose, and 88.9% were fully vaccinated. Among the population aged 65 years and older, 60.5% had received the booster shot, representing 82.0% of those eligible in this age group.

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

Age group (years)	Vaccination coverage for booster shot (%)	Percentage of eligible population that has received a booster shot (%)
18-24	7.7	41.4
25-29	10.0	47.6
30-39	12.3	52.7
40-49	18.1	58.4
50-59	29.1	62.2
60-64	40.8	66.6
65-69	51.3	79.0
70-74	65.6	83.7
75-79	71.6	85.9
80+	59.2	80.4

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

On 7 December, 94.1% of **residents in nursing homes and long-term care facilities** had received at least one vaccine dose, 92.8% were fully vaccinated, and 63.1% had received the booster shot. Moreover, 72.4% of residents who were eligible for the booster on 14 December 2021 had received it (vs 71.0% on 7 December 2021).

In addition, 54.6% of **professionals** working in nursing homes and long-term care facilities who were eligible for the booster dose on 14 December 2021 had received it (vs 40.8% on 7 December 2021). This percentage was 76.3% (vs 71.7%) for healthcare professionals in private practice and 64.4% for healthcare employees.

Vaccination coverage of healthcare professionals in France from 7 to 14 December 2021 (in %)

	At least one dose (%)		Full vaccination (%)		Booster dose (%)	
	7 December	14 December	7 December	14 December	7 December	14 December
Professionals in nursing homes and long-term care facilities	92.7	92.8	91.9	92.0	18.5	28.4
Professionals in private practice	97.0	97.1	96.6	96.7	47.0	57.0
Healthcare employees in health facilities	92.7	92.8	92.0	92.1	22.0	31.6

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.

Check out the surveys of the week

Update on the [adherence to preventive measures with CoviPrev Survey, wave 30](#)

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 open access data on [Géodes](#)