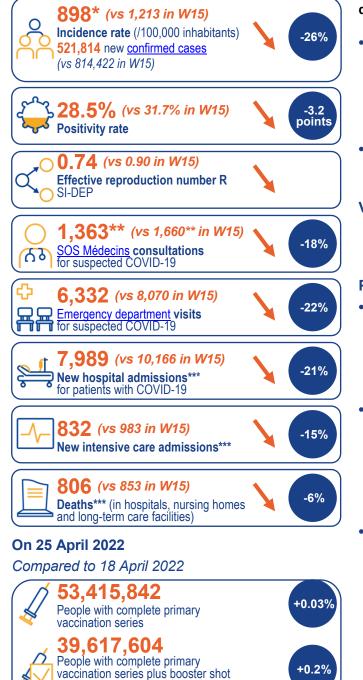
COVID-19 EPIDEMIOLOGICAL UPDATE Santé publique France Weekly Report No 113 / Week 16 / 28 April 2022

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 submitted to Santé publique France up to 26 April 2022.

Key numbers

In week 16 (18-24 April 2022)

Compared to week 15 (11-17 April 2022)



Key points

Epidemiological situation

In week 16, circulation of SARS-CoV-2 continued to decline in France, with a drop in all virological indicators

- Metropolitan France:
 - Drop in the indicators among all age groups, particularly the under-20s
 - Positivity and incidence* rates still high in all regions
 - Downward trend in new hospital admissions, but still at a high level
- Overseas France:
 - Incidence* and hospitalisation rates still very high in Reunion Island

Variants

 The Omicron BA.2 sub-lineage accounted for 99% of interpretable sequences in the Flash Survey for week 15 (11 April)

Prevention

- CoviPrev Survey wave 33 (8-15 April 2022)
 - Decline in the regular use of precautionary measures, particularly wearing masks (42% vs. 71% in February)
 - 68% of respondents who had already received the first booster shot were in favour of the second shot (77% among people aged 60 and over)
- Vaccination on 25 April 2022 (Vaccin Covid data):
 - 83.7% of people aged 65+ had received a complete primary vaccination series and a booster shot
 - 3.3% of 60-79 year-olds had received their second booster shot (32.0% of those eligible)
 - 13.2% of people aged 80+ had received their second booster shot (19.9% of those eligible)
- Protection against the SARS-CoV-2 and flu viruses still in active circulation:
 - Importance of self-isolating in the event of symptoms or a positive test for COVID-19
 - The need to continue taking individual precautions

NEW ! Covid-19 dashboard available in English
InfoCovidFrance

*Rate corrected for the effect of the public holiday (18 April). **Due to a technical problem, these indicators are limited to the 40 SOS Médecins associations compared to the usual 60 (approximately 74% of the data usually received). The interpretation of trends remains possible on this basis ***W16: unconsolidated data

¹ Santé 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.

Week 16 (18 to 24 April 2022)

SITUATION UPDATE

In week 16, all virological indicators point to a decline in the circulation of SARS-CoV-2 in France. The drop in the incidence rate (corrected to take into account the public holiday on 18 April) intensified (-26%) and the positivity rate fell by 3.2 points, although both indicators remained high. The corrected incidence rate again showed a stronger decline among 0-19 year-olds, falling below 500 cases per 100,000 inhabitants. However, it remained above 1,000 in most other age groups. The drop in the number of new hospital admissions, which started in week 15 (-6% after consolidation) seemed to continue in week 16, but needs to be confirmed next week.

In overseas France, the corrected incidence rate and new hospital admissions remained very high in Reunion Island. On 25 April, 3.3% of people aged 60-79 and 13.2% of those aged 80+ had received a second booster. Although the last CoviPrev survey showed a sharp decline in the regular use of precautionary measures since February, these measures are nonetheless still essential in the current context with SARS-CoV-2 and flu viruses still in active circulation, to protect the most vulnerable and the healthcare system. At the same time, the vaccination effort must continue, particularly the second booster shot for the very elderly, especially as the CoviPrev survey indicated a good level of acceptance among people who had already received a first dose. Compliance with other recommended measures also remains crucial in the event of symptoms, a positive test or high-risk contacts.

EPIDEMIOLOGICAL UPDATE

Nationally, the incidence rate, corrected for the effect of the public holiday, sharply declined and fell below 1,000 cases per 100,000 inhabitants (898, -26% compared to week 15). This trend was observed in all age groups and was again particularly striking among the under-20s, with a corrected incidence rate of less than 500: 358 (-39%) among 0-9 year-olds and 484 (-40%) among 10-19 year-olds. Conversely, this indicator remained above 1,000/100,000 in most other age groups, reaching 1,163 (-20%) among people aged 70-79 and 1,151 (-18%) in the 90+ age group.

The corrected screening rate also fell in week 16 (3,157/100,000, -17%), in particular among 0-9 yearolds (1,857, -33%) and 10-19 year-olds (2,455, -23%).

It remained highest in the 90+ age group (4,758, -8%). After rising for five weeks and remaining stable for a week, the positivity rate fell by 3.2 points but still remained high (28.5%). It declined in all age groups, ranging from 1.8 points (26.4%) among 20-29 year-olds to 5.5 points (19.7%) among 10-19 year-olds. It remained highest among 50-59 year-olds (33.0%, -3.6 points).

The fall in consultations for suspected COVID-19 observed over the past two weeks in SOS-Médecins organisations continued in week 16 (1,363, -18%). After rising for five weeks and remaining stable for a week (after consolidation), visits to emergency departments also declined (6,332, -22%).

The number of new hospital admissions (7,989, -21%), and new intensive care admissions (832, -15%) remained high in week 16. The downward trends will be confirmed in the next Epidemiological Update as the consolidated indicators in week 15 show a slight decrease in hospital admissions (-6%) but still a slight increase in intensive care admissions (+5%). In week 16, the number of deaths in hospitals and long-term care facilities reached 806 (-6%,

unconsolidated data). Excess <u>all-cause deaths</u> between weeks 12 and 15 were mainly observed among 65-84 year-olds, together with the 85+ age group in weeks 14 and 15.

In metropolitan France, the corrected incidence rate decreased in all regions. Only Corsica had a rate above 1,000/100,000 (1,308, -17%) and the lowest rate was observed in Île-de-France (746, -31%). The corrected screening rate, in decline across all regions, was highest in Corsica (4,457, -12%). A decrease in positivity rate was also observed across France, and was particularly striking in Île-de-France (18.8%, -5.0 points) and Occitanie (28.2%, -4.9 points). New hospital admission rates were highest in Bourgogne-Franche-Comté (18.8/100 000) and in Normandy (15,7). The rates of new intensive care admissions increased in Auvergne-Rhône-Alpes.

In overseas France, the corrected incidence rate remained very high in Reunion Island (1,900, +4%) and was still high in Guadeloupe (696, +4%) and Martinique (586, +14%). The new hospital admission rate was also very high in Reunion Island.

VARIANTS

The BA.2 sub-lineage of the Omicron variant was almost the only variant across the country: it represented 99% of sequences in the week 15 Flash Survey of 11/04.

PREVENTION

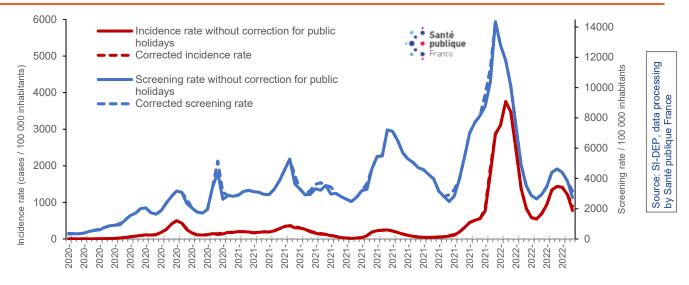
The CoviPrev survey for 8-15 April (wave 33) indicated a decline in the regular use of precautionary measures, particularly wearing masks in public (42% vs. 71% in February). 77% of respondents in the 60+ age group, who had received a first vaccine booster, were in favour of the second booster shot.

On 25 April, vaccination coverage in France for the booster shot reached 83.7% in the 65+ age group. In addition, 3.3% of people aged 60-79 and 13.2% of those aged 80+ had received a second booster.

Confirmed cases, incidence, and screening rates

Nationally, the corrected <u>incidence rate</u> (due to the public holiday) declined compared to the previous week (898 cases per 100,000 inhabitants *vs.* 1,213 in week 15, i.e. -26%) as did the corrected <u>screening rate</u> (3,157/100,000 *vs.* 3,823, -17%). The <u>positivity rate</u> also declined (28.5%, -3.2 points). Among the 1,630,552 tested individuals who reported their symptom status, 67% were asymptomatic, a higher proportion than in week 15 (64%). The positivity rate was stable among symptomatic people (59%) and declined among asymptomatic people (15% *vs.* 18% in week 15). Among people that tested positive, the proportion experiencing symptoms remained 66%.

Weekly evolution in incidence and screening rates, with or without correction for the effect of public holidays, since week 23-2020, France (data on 27 April 2022)



Incidence and screening rates by age group

In week 16, the corrected <u>incidence rate</u> declined across all age groups, ranging from -18% in the 90+ age group to more than -40% among 10-19 year-olds. The highest rates were observed among 70-79 year-olds (1,163, -20%) and in the 90+ age group (1,151, -18%) whereas under-20s had rates less than 500/100,000. A decline in the corrected <u>screening rate</u> also observed across all age groups, but was less striking among the very elderly (-8% in the 80+ age group and more than -33% among 0-9 year-olds). The highest rates were observed in the 90+ age group (4,758, -8%), 20-29 year-olds (3,669, -18%) and 30-39 year-olds (3,648, -18%). The <u>positivity rate</u> declined across all age groups, particularly among 10-19 year-olds (19.7%, -5.5 points). It still exceeded 30% among 40-79 year-olds, but was less than 20% among under-20s. It was highest among 50-59 year-olds (33.0%, -3.6 points) and 60-69 year-olds (32.5%, -3.4 points). Among school-age children, the corrected incidence and screening rates fell in all age groups. The highest corrected incidence rate was observed among 15-17 year-olds (483, -40%), with a corrected screening rate of 2,630 (-21%) and a positivity rate of 18.4% (-5.6 points).

Weekly evolution of the incidence rate (per 100,000 inhabitants) by age group, since week 05-2022, France (data on 27 April 2022) 1683 1236 906 669 560 636 837 1076 1343 1416 1408 1151 90 yrs + 952 714 533 408 371 467 689 970 1166 1196 1189 955 80-89 yrs France

1683	1236	906	669	560	636	837	1076	1343	1416	1408	1151	90 yrs +	Santé publique	
952	714	533	408	371	467	689	970	1166	1196	1189	955	80-89 yrs	France	
1000	730	544	426	388	527	797	1148	1366	1456	1452	1163	70-79 yrs		sing
1195	816	580	431	384	499	726	1052	1214	1301	1275	1019	60-69 yrs		es S
1830	1142	744	528	489	634	897	1341	1568	1603	1433	1089	50-59 yrs		proc
3016	1685	1017	666	610	797	1120	1660	1796	1726	1439	1026	40-49 yrs		data pro
3423	1988	1198	786	731	898	1172	1609	1711	1695	1459	1075	30-39 yrs		EP, d lique
2713	1619	1051	792	711	785	973	1354	1484	1456	1262	967	20-29 yrs		우 을
3960	1755	909	628	598	770	1081	1650	1540	1251	807	484	10-19 yrs		
2744	1318	666	455	504	643	807	998	874	838	590	358	0-9 yrs		urce: S Santé
2459	1373	836	587	549	689	941	1343	1440	1411	1213	898	All ages		by So
W05	W06	W07	W08	W09	W10	W11	W12	W13	W14	W15	W16*			

* Rates corrected for the effect of the public holiday

Hospitalisations, intensive care admissions, and deaths

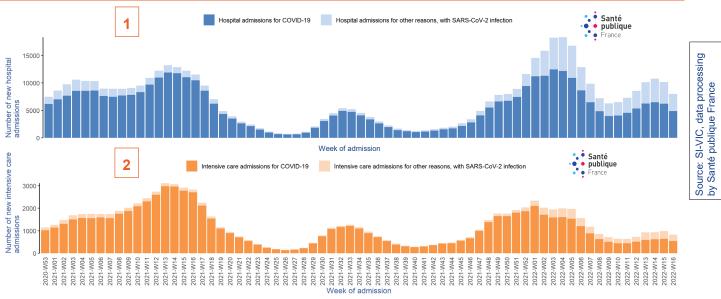
For a better interpretation of hospital indicators, new hospital and intensive care admissions are analysed by date of patient admission to hospital. New deaths (in hospitals and long-term care facilities) are analysed by date of occurrence. **Data for week 16, collected until 26/04/2022, are not yet consolidated and may be underestimated.**

On 26 April 2022, 24,778 COVID-19 patients were hospitalised in France (vs 25,352 on 19 April, -2%), including 1,681 in intensive care (vs 1,695 on 19 April, -1%).

Nationally, <u>new hospital admissions</u> reached 7,989 in week 16, i.e. -21% (unconsolidated data) *vs.* -6% between weeks 14 and 15 (after consolidation). New intensive care admissions reached 832, i.e. -15% (*vs.* +5% between weeks 14 and 15). A total of 4,861 patients were admitted for COVID-19 management and 3,128 patients with SARS-CoV-2 were admitted for other reasons (-22% and -21%, respectively). Regarding intensive care units, 546 patients were admitted for COVID-19 in week 16 (-16%) and 286 for other reasons (-15%).

In week 16, the proportion of patients carrying SARS-CoV-2 but hospitalised for a reason other than COVID-19 was stable across all hospital services (39%), as well as for inpatients of intensive care units (34%) and resuscitation rooms (25%).

Weekly number of new hospital (1) and intensive care (2) admissions for COVID-19 patients since 03 January 2020, France (data on 26 April 2022)



W16: unconsolidated data

In week 16, the weekly rate of new hospitalisations was decreasing in all age groups. The intensive care admission rate was stable or declined across all age groups except among 50-59 year-olds, where a slight rise was recorded.

Weekly rate of new hospital (1) and intensive care (2) admissions per 100,000 inhabitants, by age group, from week 9 to week 16-2022, France

	99,8	109,8	118,8	149,7	178,0	176,2	174,5	136,8	90 yrs +	3,0	2,6	2,2	2,8	3,5	3,7	5,5	3,7	90 yrs +		
1	50,8	53,7	61,7	72,2	85,4	95,2	85,5	68,6	80-89 yrs	3,5	3,3	3,7	4,0	5,3	5,4	5,5	4,7	80-89 yrs	2	
•	21,3	21,2	24,2	28,7	35,2	37,7	35,7	27,7	70-79 yrs	3,6	2,7	2,6	3,4	4,6	4,4	4,9	4,5	70-79 yrs		
	9,3	9,6	9,8	11,3	14,4	14,4	15,4	11,3	60-69 yrs	1,9	1,9	1,8	1,6	2,2	2,2	2,6	1,9	60-69 yrs		
	4,9	4,7	5,9	6,0	7,0	8,3	7,7	6,3	50-59 yrs	0,9	0,8	1,0	0,9	1,2	1,3	1,1	1,3	50-59 yrs		
	2,8	2,9	3,3	4,2	4,6	4,8	4,6	3,5	40-49 yrs	0,5	0,4	0,5	0,6	0,5	0,6	0,6	0,5	40-49 yrs		
	4,2	3,9	4,5	4,9	5,9	5,9	5,6	4,6	30-39 yrs	0,3	0,3	0,2	0,4	0,4	0,4	0,5	0,3	30-39 yrs		
	3,8	4,3	3,7	4,6	5,3	5,6	5,0	4,3	20-29 yrs	0,2	0,3	0,2	0,2	0,3	0,4	0,2	0,3	20-29 yrs		
	1,6	1,7	2,0	2,4	2,5	2,8	1,7	1,4	10-19 yrs	0,1	0,2	0,2	0,2	0,3	0,4	0,1	0,2	10-19 yrs		
	3,9	4,4	5,0	5,6	5,7	5,8	5,6	4,1	0-9 yrs	0,5	0,5	0,4	0,6	0,6	0,6	0,6	0,3	0-9 yrs		
	9,3	9,7	10,9	12,7	15,1	16,1	15,1	11,9	All ages	1,1	1,0	1,0	1,1	1,4	1,4	1,5	1,2	All ages		
	W09	W10	W11	W12	W13	W14	W15	W16	Santé publique France	W09	W10	W11	W12	W13	W14	W15	W16	Santé publique		

In week 16 (unconsolidated data), 763 deaths in hospital were recorded nationwide (-3% compared to week 15, vs +6% between weeks 14 and 15). There were also 43 deaths recorded in long-term care facilities (vs 65 in week 15).

Situation at the regional level

Incidence, positivity, and screening rates

In metropolitan France, the corrected incidence rate (for the effect of the public holiday) declined across the whole country, ranging from -17% in Corsica to -31% in Île-de-France. It remained above 900/100,000 in six regions. It was highest in Corsica (1,308), Occitanie (976, -23%) and Bourgogne-Franche-Comté (974, -29%). The corrected screening rate also decreased across all regions. It was highest in Corsica (4,457, -12%), Île-de-France (3,977, -12%) and Occitanie (3,465, -10%). The positivity rate, also in decline across the country, was highest in Brittany (40.6%, -2.0 points) and Pays de la Loire (38.2%, -1.4 points). In week 16, the corrected incidence rate was above 1,000/100,000 in 18 departments (*vs.* 87 in week 15). The highest rates were observed in Corse-du-Sud (1,339, -19%), Haute-Corse (1,281, -15%), Aude (1,129, -13%), Jura (1,123, -20%) and Cantal (1,114, -28%).

In overseas France, the corrected incidence rate remained very high in Reunion Island (1,900, +4%). It increased in Martinique (586, +14%) and stabilised in Guadeloupe (696, +4%). It decreased in French Guiana (149, -11%) and remained low in Mayotte (21 *vs.* 24 in week 15).

Evolution of the incidence, positivity, and screening rates by region since week 11-2022, France (data on 27 April 2022)

Regions		1	nciden	ce rate	per 100,	000 inh:	abitants	Po	ositivity rate (%)	Screening rate per 100,000 inhabitants			
Regions	W11	W12	W13	W14	W15**	W16*	W16* vs W15** (%)	W16	W16 vs W15 (point)	W16*	W16* vs W15** (%)		
Auvergne-Rhône-Alpes	671	1044	1198	1320	1290	928	-28	32,5	-1,6	2 856	-25		
Bourgogne-Franche-Comté	776	1200	1372	1438	1364	974	-29	35,5	-1,9	2 747	-25		
Brittany	1338	1811	1791	1648	1297	961	-26	40,6	-2,0	2 365	-22		
Centre-Val de Loire	943	1366	1494	1511	1223	868	-29	37,2	-2,9	2 333	-23		
Corsica	1238	1750	1992	1818	1572	1308	-17	29,4	-1,7	4 457	-12		
Grand Est	1303	1661	1585	1424	1111	858	-23	31,3	-2,2	2 741	-17		
Hauts-de-France	1071	1472	1558	1471	1132	834	-26	31,4	-1,6	2 657	-23		
Île-de-France	693	1240	1367	1283	1073	746	-31	18,8	-5,0	3 977	-12		
Normandy	1122	1645	1753	1689	1314	961	-27	37,2	-2,1	2 580	-23		
Nouvelle-Aquitaine	980	1148	1137	1132	1038	752	-28	31,1	-2,8	2 416	-21		
Occitanie	828	1210	1356	1358	1270	976	-23	28,2	-4,9	3 465	-10		
Pays de la Loire	915	1342	1466	1456	1151	842	-27	38,2	-1,4	2 205	-24		
Provence-Alpes-Côte d'Azur	899	1185	1348	1330	1170	891	-24	26,4	-1,6	3 371	-19		
Guadeloupe	970	946	825	722	670	696	4	17,9	-0,4	3 889	6		
French Guiana	107	143	141	168	168	149	-11	9,7	-0,4	1 530	-7		
Martinique	1688	1072	745	585	514	586	14	16,6	1,1	3 540	6		
Mayotte	16	13	21	31	24	21	-10	2,7	-0,4	800	2		
Reunion Island	1111	1347	1511	1669	1834	1900	4	41,5	0,2	4 577	3		

*Data corrected for the effect of the public holiday on Monday 18 April 2022

**Data corrected for the effect of the public holiday on Friday 15 April 2022 in Guadeloupe and Martinique only.

Hospital and intensive care admissions

In metropolitan France, the weekly rate of <u>new hospital</u> <u>admissions</u> declined across all regions, except in Bourgogne-Franche-Comté, where it was stable. The highest rates were observed in Bourgogne-Franche-Comté (18.8/100,000) and Normandy (15.7).

The rate of new intensive care admissions declined or was stable in all regions, except in Auvergne-Rhône-Alpes, where it was seen to rise.

In overseas France, the rate of new hospital admissions declined in French Guiana and Guadeloupe, but increased in Martinique. The rate of new intensive care admissions was stable across all overseas regions. The highest indicators continued to be observed in Reunion Island (13.0 and 1.5, respectively).





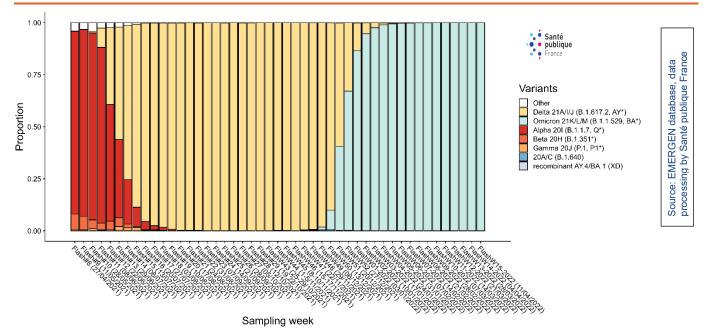
For further information on the epidemic situation in the regions, consult the <u>Regional Epidemiological Updates</u>.



The <u>screening strategy</u> deployed in France aims to reactively detect mutations that impact the transmissibility, severity or immune escape of SARS-CoV-2. Certain mutation profiles suggest the presence of particular variants. In week 16, the proportion of samples in France with a **screening result compatible with Omicron was 99.7% for the** <u>A0C0</u> **proxy** (*vs.* 99.8% in week 15) and **98.4% for the** <u>D1</u> **proxy** (*vs.* 98.5% in week 15).

Furthermore, <u>sequencing data</u> confirm the **dominance of Omicron in France**: In metropolitan France, it represented **100% of interpretable sequences in the week 15 Flash Survey** (11/04, based on 2,027 interpretable sequences), and over 99.9% in the week 14 Flash Survey (04/04, based on 2,489 interpretable sequences). In the French overseas regions and departments, Omicron is the only variant detected since the week 6 Flash Survey (07/02, based on a total of 1,338 interpretable sequences from the overseas regions and departments in Flash Surveys between weeks 6 and 15). These data show that Omicron is practically the only variant circulating across the whole of France.

Evolution of the proportions for each classified variant (VOC, VOI, and VUM*) in Flash Surveys, metropolitan France (data on 25 April 2022; Flash Surveys from weeks 14, 15 unconsolidated)



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

The Omicron variant includes five sub-lineages BA.1, BA.2, BA.3, BA.4 and BA.5. Following the circulation of BA.1 and BA.2, they were in turn divided into further sub-lineages. **The BA.2 sub-lineage is dominant in France, accounting for 99% of the 2,027 sequences in the week 15 Flash Survey (11/04).** While BA.2 has been shown to be more transmissible than BA.1, the two sub-lineages are similar in terms of immune escape and severity. Two new Omicron sub-lineages, BA.4 and BA.5, have been defined and are being more closely monitored based on their genetic profile. At this stage, they have not been associated with any epidemiological or clinical data of concern. As of 26/04/2022, one case of BA.4 and two cases of BA.5 have been identified in France. More information on these sub-lineages is available in the <u>variants risk analysis of 20/04/2022</u>.

The **XD variant (AY.4/BA.1 recombinant** is classified as a VUM* since the <u>variant risk assessment of 23/03/2022</u> due to its genetic characteristics derived from the parental VOC* (Delta AY.4 and Omicron BA.1). The XD variant represents less than 0.1% of interpretable sequences in the Flash Surveys from week 1 (03/01) to week 14 (04/04), and wasn't detected during the week 15 Flash Survey. More information is available in the <u>variants risk analysis of 20/04/2022</u>.

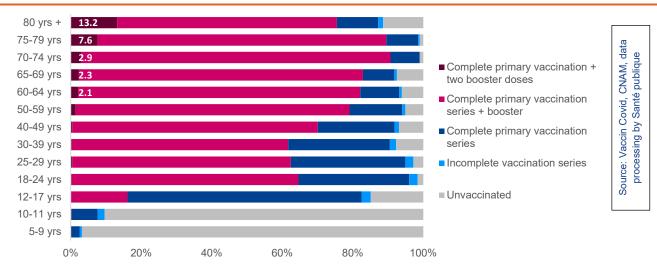


On 25/04/2022, vaccination coverage in France based on Vaccin Covid was estimated at 79.6% for a complete primary vaccination series* and 59.0% for the booster shot.

Vaccination coverage for the booster shot reached 73.7% among adults over 18 years of age and 83.7% in the 65+ age group. In addition, 9.6% of children aged 10-11 years had received a first dose of vaccine (3.2% for 5-9 year-olds).

People aged 80 years and over as well as residents of nursing homes and long-term care facilities are eligible for a second booster shot, from three months after the first booster shot, in accordance with the <u>opinion of the Conseil</u> <u>d'orientation de la stratégie vaccinale (Vaccine Strategy Council) of 18 February 2022</u>. In addition, following the <u>recommendations</u> of 7 April, 2022, eligibility for the second booster shot was extended to people ages 60-79, to be given six months after the last injection.

In the 60-79 age group, 3.3% had received a booster shot (2.7% on 18/04/2022), representing 32.0% of those eligible** for it at the time. In the 80+ age group, 13.2% had received a second booster shot (11.2% on 18/04/2022), representing 19.9% of those eligible for it at the time.



Vaccination coverage, by age group, France (data on 25 April 2022)

On 25/04/2022, 93.5% of **residents in nursing homes and long-term care facilities** had completed a primary vaccination series, 72.6% had received one booster shot and 11.8% had received a second booster shot. Among those eligible for the second booster shot at that date**, 17.0% had received it (12.4% on 18/04/2022).

As regards **health professionals**, vaccination coverage for the booster shot was 78.6% for those working in nursing homes or long-term care facilities, 86.9% for professionals in private practice and 77.6% for employees in healthcare institutions.

Vaccination coverage of the booster shots among residents in nursing homes and long-term care facilities and among health professionals may be underestimated due to changes in the cohorts since their initial constitution (March 2021).

Data on vaccination coverage by department are published on <u>Géodes</u>; data concerning the second booster shot for people aged 60+ and residents of nursing homes or long-term care facilities are also available.

*The definition of a complete primary vaccination series was <u>published</u> previously.

**Eligibility for the second booster shot comes after a period of 3threemonths since the first booster shot for those aged 80 and over, and for residents of nursing homes or long-term care facilities, and a period of six months for 60-79 year-olds. To give time to eligible individuals to make arrangements to get vaccinated, eligibility is measured with one extra month from the last injection, i.e. four months for those aged 80 and over and for residents of nursing homes and long-term care facilities, and seven months for 60-79 years-olds.

This week's surveys

Update on commitment to preventive measures (CoviPrev wave 33)

To find out more about COVID-19, monitoring systems and vaccination refer to the file <u>Santé publique France</u> and the website <u>Vaccination Info Service</u>. For more information on the regional data, see the <u>Regional Epidemiological Updates.</u> Find all the open access data on <u>Géodes</u>