

Influenza-like illness

Epidemic Activity in general practice

Sentinel physicians monitor the number of ILI seen in consultations (defined by sudden fever > 39°C (>102°F) with myalgia and respiratory signs).

Clinical monitoring: in metropolitan France, last week (2018w07), the incidence rate of influenza-like illness seen in general practice was estimated at 207 cases per 100,000 inhabitants (95% CI [186 ; 228]), corresponding to 136,000 new cases. During these 10 weeks of influenza epidemic, 1,877,000 people would have consulted a general practitioner for this reason.

This incidence rate has been slightly decreasing for seven weeks now.

At the regional level, the highest incidence rates were reported in: Hauts-de-France (493 cases per 100,000 inhabitants, 95% CI [391 ; 595]), Normandie (338, 95% CI [224 ; 452]) and Pays de la Loire (331, 95% CI [221 ; 441]) (the regional data are presented at the end of this newsletter).

Regarding the cases reported last week, the median age was 30 years (7 months to 95 years). Males accounted for 49% of the cases. These cases showed no particular sign of severity: the percentage of hospitalization was estimated at 0.4% (95% CI [0.0 ; 1.0]).

The Sentinelles data are now integrated into an epidemic detection tool for influenza developed by 'Santé publique France', combining information from primary care and hospital emergencies [1].

For the last week (2018w07), the conclusions of the Santé publique France report are:

- Stagnation of the flu epidemic in metropolitan France
- Majority of type B virus since early February
- Moderate to high influenza vaccine effectiveness among people aged 65 and over based on the first estimates"

Virological monitoring: since week 2017s40, date of start of monitoring, 1,964 samples were swabbed by Sentinelles network practitioners (1,376 by general practitioners and 588 by pediatricians), all samples tested. Last week 107 samples were realized and tested. Among them, 64 (59.8%) were positive for at least one influenza virus. The positivity rate remains stable this week. The B/Yamagata lineage Flu virus was the predominant virus detected last week.

The influenza viruses detected along the season were distributed as follows:

- 547 (27.9%) A(H1N1)pdm09 virus,
- 79 (4.0%) A(H3N2) virus,
- 33 (1.7%) A unsubtype virus,
- 5 (0.3%) B/Victoria lineage virus,
- 374 (19.0%) B/Yamagata lineage virus,
- 40 (2.0%) B unknown lineage virus.

Overall, 4 influenza A and B viruses co-infections have been observed over the entire virological surveillance period.

The samples were also tested for three other respiratory viruses: the Respiratory Syncytial Virus (RSV), the Rhinovirus (HRV) and the Metapneumovirus (hMPV). Last week, the detection of these three viruses was low.

The samples were analyzed by the CNR (National Reference Centers) of *influenzae* viruses (coordinating center Institut Pasteur Paris, associated center 'Hospices civils de Lyon'), and the laboratory of Virology at the University of Corsica.

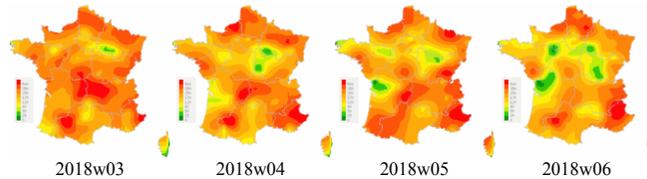
Forecast: according to the forecast models based on historical data [2], and on medication deliveries (*QVIA research partnership*) [3], the ILI incidence should continue its decrease in the upcoming weeks.

[Santé publique France weekly influenza report \(in french\)](#)
[More information about Influenza-like illness Sentinelles surveillance](#)
[Information about Sentinelles network statistical methods \(in french\)](#)

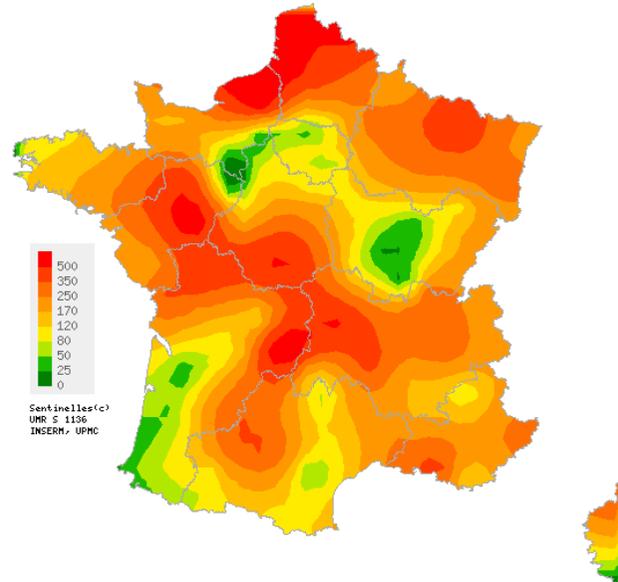
[1] Pelat C. et al. Regional Influenza study group. Improving regional influenza surveillance through a combination of automated outbreak detection methods: the 2015/16 season in France. Euro Surveill. 2017;22(32):pii=30593.

[2] Viboud C. et al. Prediction of the spread of influenza epidemics by the method of analogues. Am J Epidemiol. 2003 Nov 15;158(10):996-1006.

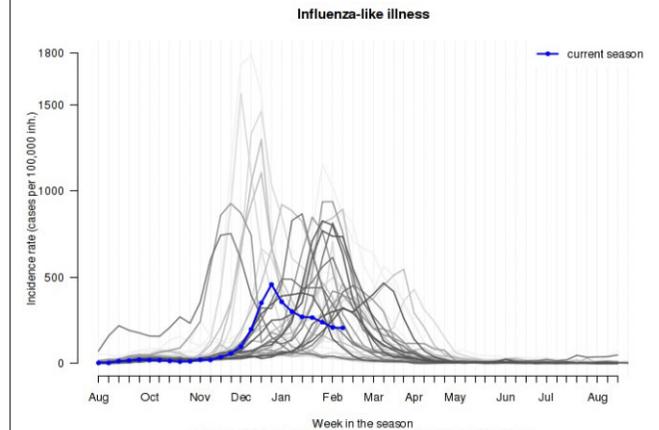
[3] Vergu E. et al. Medication sales and syndromic surveillance, France. Emerg Infect Dis. 2006. 12(3):416-21.



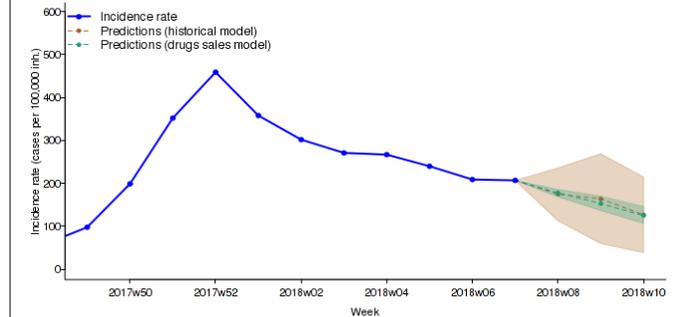
Consolidated data for the last 4 weeks



Map of spatial data interpolation based on Influenza-like illness incidence rates at the « departement » (NUTS 3) level (per 100,000 inhabitants), Sentinelles general practitioners, 2018w07
Maps available at <http://www.sentiweb.fr>



Incidence rate of influenza-like illness since 1984 (per 100,000 inhabitants), Sentinelles general practitioners.
In Blue: season 2017-2018/ In gray: seasons from 1984 to 2017 (the clearer the curve the older the data)



Predicted incidence rate for the next three weeks based on a forecast model on historical data [2] and on drug sales [3] Sentinelles general practitioners

Acute Diarrhea

Moderate to high activity in general practice

Sentinel physicians monitor the number of acute diarrhea seen in consultations (defined by recent acute diarrhea (at least 3 daily watery or nearly so stools, dating less than 14 days, motivating consultation).

Clinical monitoring: in metropolitan France, last week (2018w07), the incidence rate of acute diarrhea seen in general practice was estimated at 145 cases per 100,000 inhabitants (95% CI [129 ; 161]), **below** the epidemic threshold (174 cases per 100,000) [1].

The dynamics of the epidemic being unusual, the predictive model based on historical Sentinelles data does not predict correctly the evolution of the gastroenteritis epidemic in the upcoming weeks, the activity of acute diarrhea should nevertheless remain stable.

At the regional level, the highest incidence rates were noted in: Pays de la Loire (290 cases per 100,000 inhabitants, 95% CI [175 ; 405]), Hauts-de-France (184, 95% CI [122 ; 246]), Grand Est (184, 95% CI [130 ; 238]) and Provence-Alpes-Côte d'Azur (173, 95% CI [90 ; 256]) (the regional data are presented at the end of this newsletter).

Regarding the cases reported last week, the median age was 24 years (5 months to 88 years). Males accounted for 51% of the cases. These cases showed no particular sign of severity: there were no hospitalized cases reported for acute diarrhea last week. / the percentage of hospitalization was estimated at 0.4% (95% CI [0.0 ; 1.2]).

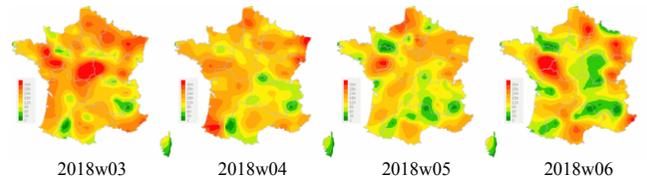
[Santé publique France weekly gastroenteritis report \(in french\)](#)

[More information about Acute Diarrhea Sentinelles surveillance](#)

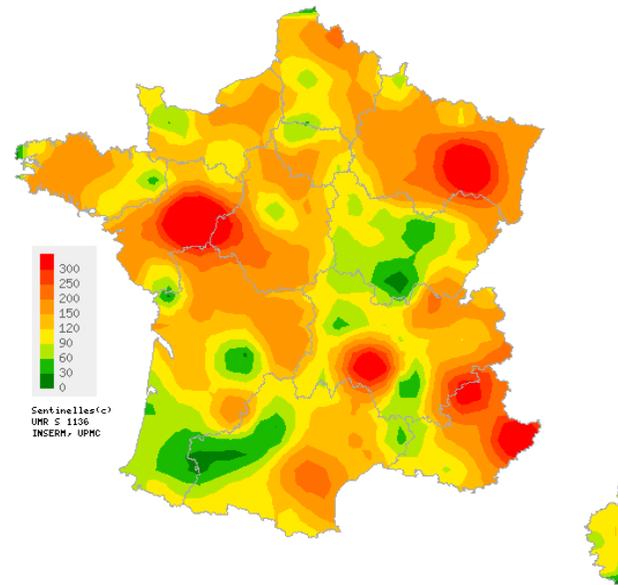
[Information about Sentinelles network statistical methods \(in french\)](#)

[1] Costagliola D, et al. A routine tool for detection and assessment of epidemics of influenza-like syndromes in France. *Am J Public Health.* 1991;81(1):97-9.

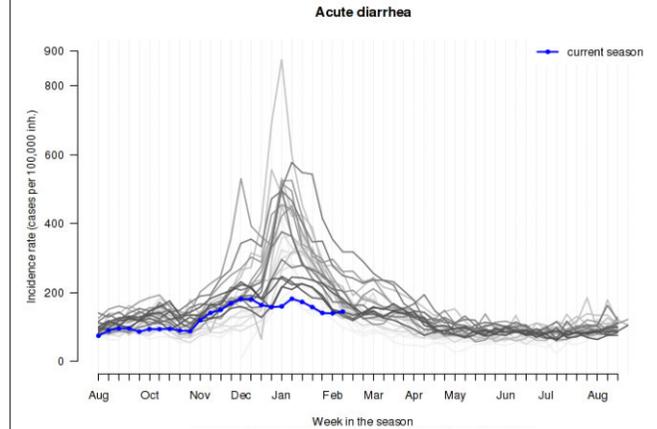
[2] Viboud C, et al. Prediction of the spread of influenza epidemics by the method of analogues. *Am J Epidemiol.* 2003 Nov 15;158(10):996-1006.



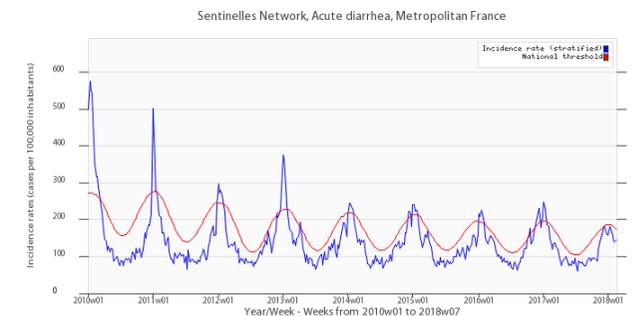
Consolidated data for the last 4 weeks



Map of spatial data interpolation based on acute diarrhea incidence rates at the « department » (NUTS 3) level (per 100,000 inhabitants), Sentinelles general practitioners, 2018w07
Maps available at <http://www.sentiweb.fr>



Incidence rate of acute diarrrhea since 1990 (per 100,000 inhabitants), Sentinelles general practitioners.
In Blue : season 2017-2018 / In gray : seasons from 1990 to 2017 (the clearer the curve the older the data)



Acute diarrrhea incidence rate in blue, epidemic threshold in red calculated by a periodic regression model [1] (per 100 000 inhabitants), Sentinelles general practitioners

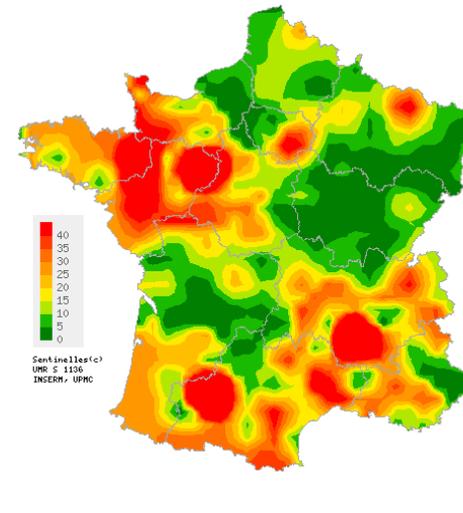
Chickenpox

Moderate activity in general practice

In metropolitan France, last week (2018w07), the incidence rate of Chickenpox seen in general practice was estimated at 21 cases per 100,000 inhabitants (95% CI [15 ; 27]).

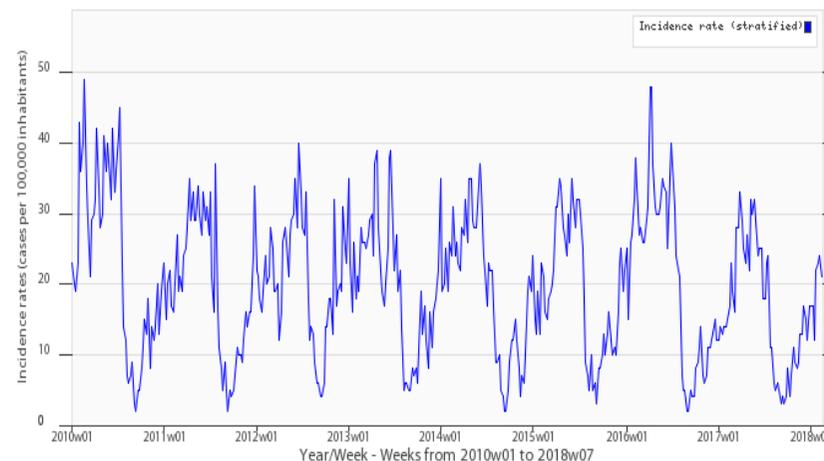
Six regional clusters were reported, **high** in Pays de la Loire (66 cases per 100,000 inhabitants, 95% CI [2 ; 130]), Bretagne (45, 95% CI [7 ; 83]) and Corse (43, 95% CI [2 ; 84]) and **moderate** in Auvergne-Rhône-Alpes (25, 95% CI [9 ; 41]), Occitanie (24, 95% CI [6 ; 42]) and Hauts-de-France (20, 95% CI [0 ; 40]). (the regional data are presented at the end of this report).

[More information about this surveillance](#)



Map of spatial data interpolation based on chickenpox incidence rates at the « departement » (NUTS 3) level (per 100 000 inhabitants), Sentinelles general practitioners, 2018w07
[Maps available at http://www.sentiweb.fr](http://www.sentiweb.fr)

Sentinelles Network, Chickenpox, Metropolitan France



Chickenpox incidence rate
(per 100,000 inhabitants), Sentinelles general practitioners

National incidence rates (per 100,000 inhabitants) over the past 3 weeks	2018w07 (non consolidated)	2018w06	2018w05
	Incidence rate estimation [95% confidence interval]	Incidence rate estimation [95% confidence interval]	Incidence rate estimation [95% confidence interval]
INFLUENZA-LIKE ILLNESS	207 [186 ; 228]	209 [193 ; 225]	240 [223 ; 257]
ACUTE DIARRHEA	145 [129 ; 161]	140 [126 ; 154]	141 [128 ; 154]
CHICKENPOX	21 [15 ; 27]	24 [18 ; 30]	23 [17 ; 29]

Table 1 : Incidence rates* estimation with 95% confidence interval, for each indicator, in France, over the past 3 weeks .

Regional incidence rates for week 2018w07 (per 100,000 inhabitants)	INFLUENZA-LIKE ILLNESS	ACUTE DIARRHEA	CHICKENPOX
	Incidence rate estimation [95% confidence interval]	Incidence rate estimation [95% confidence interval]	Incidence rate estimation [95% confidence interval]
Auvergne-Rhône-Alpes	300 [239 ; 361]	130 [90 ; 170]	25 [9 ; 41]
Bourgogne-Franche-Comté	54 [15 ; 93]	35 [7 ; 63]	4 [0 ; 17]
Bretagne	225 [139 ; 311]	96 [43 ; 149]	45 [7 ; 83]
Centre-Val de Loire	167 [114 ; 220]	154 [102 ; 206]	13 [0 ; 28]
Corse	286 [183 ; 389]	61 [13 ; 109]	43 [2 ; 84]
Grand Est	289 [223 ; 355]	184 [130 ; 238]	17 [2 ; 32]
Hauts-de-France	493 [391 ; 595]	184 [122 ; 246]	20 [0 ; 40]
Ile-de-France	68 [35 ; 101]	110 [69 ; 151]	12 [1 ; 23]
Normandie	338 [224 ; 452]	144 [76 ; 212]	2 [0 ; 7]
Nouvelle-Aquitaine	165 [94 ; 236]	95 [47 ; 143]	3 [0 ; 11]
Occitanie	202 [148 ; 256]	89 [53 ; 125]	24 [6 ; 42]
Pays de la Loire	331 [221 ; 441]	290 [175 ; 405]	66 [2 ; 130]
Provence-Alpes-Côte d'Azur	281 [173 ; 389]	173 [90 ; 256]	5 [0 ; 19]

Table 2 : Incidence rates* estimation with 95% confidence interval, for each indicator, for each French region, for week 2018w07.

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*The "Réseau Sentinelles" or Sentinelles Network
(a.k.a. French Communicable Diseases Computer Network)
is a network of 1,439 physicians working throughout the metropolitan regions of
France including 578 involved in the clinical surveillance activity
(462 general practitioners and 116 pediatricians)
enabling the achievement of weekly newsletters.
This network is developed in cooperation between Inserm, Université Pierre et
Marie Curie (UPMC) and the Agence Santé publique France.*

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* Incidence rates estimate are calculated on the activity of general practitioners.