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Sentinelles network report from 02/13/2019, n° 2019w06 (data from 02/04/2019 to 02/10/2019)

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 (2019w06), the incidence rate of influenza-like illness seen in general practice was estimated at 622 cases per 100,000 inhabitants (95% CI [592 ; 652]), corresponding to 409,000 new cases, still increasing compared to the previous week.
At the regional level, the highest incidence rates were noted in: Provence-Alpes-Côte d'Azur (844 cases per 100,000 inhabitants, 95% CI [679 ; 1,009]), Auvergne-Rhône-Alpes (822, 95% CI [737 ; 907]), Nouvelle-Aquitaine (764, 95% CI [606 ; 922]) and Occitanie (764, 95% CI [650 ; 878]) *(the regional data are presented at the end of this newsletter)*.
Regarding the cases reported last week, the median age was 23 years (3 months to 96 years). Males accounted for 48% of the cases. These cases showed noparticular sign of severity: the percentage of hospitalization was estimated at 0.2% (95% CI [0.0 ; 0.4]).

Vaccine effectiveness: According to the first data collected by the Sentinel physicians, the effectiveness of influenza vaccine against all influenza viruses is estimated at: 55% (95%CI [17;75]) among people aged 65 and above, and 42% (95%CI [-10;69]) among people under 65 with complications risk factors. If we focus at the vaccine effectiveness (VE) by virus, VE among all people at risk of complications is 74% (95% CI [46;88]) against the virus A(H1N1)pdm09 and 21% (IC95 % [-30;51]) against A(H3N2) virus. These estimates will be refined in the coming weeks.

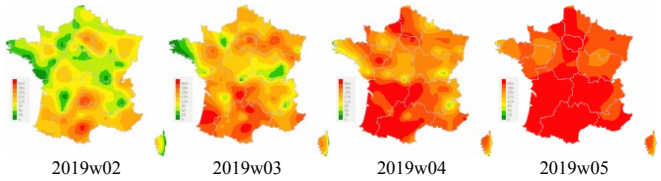
Virological monitoring: since week 2018s40, date of start of monitoring, 1,592 samples were swabbed by Sentinelles network practitioners (1,156 by general practitionners and 436 by pediatricians), and 1,591 samples have been tested.
Last week 208 samples were realized and tested. Among them, 165 (79.3%) were positive for one influenza virus. The positivity rate was still increasing last week.
The influenza viruses detected along the season were distributed as follows:
- 294 (18.5%) A(H1N1)pdm09 virus,
- 452 (28.4%) A(H3N2) virus,
- 46 (2.9%) A unsubtyped virus,
- 0 (0.0%) B/Victoria lineage virus,
- 0 (0.0%) B/Yamagata lineage virus,
- 0 (0.0%) B unknown lineage virus.

No influenza A and B viruses co-infections has been observed over the entire virological surveillance period.
Regarding the other respiratory viruses, 172 swabs (10.8%) were positive for the rhinovirus (hRV), 148 (9.4%) for the respiratory syncytial virus (RSV), and 44 (2.8%) for the metapneumovirus (hMPV). Last week, there was a low circulation of these three viruses.
The samples were analyzed by the CNR (Coordinating center: Institut Pasteur - Paris, associated center: Hospices civils de Lyon), and the laboratory of Virology at the University of Corsica.

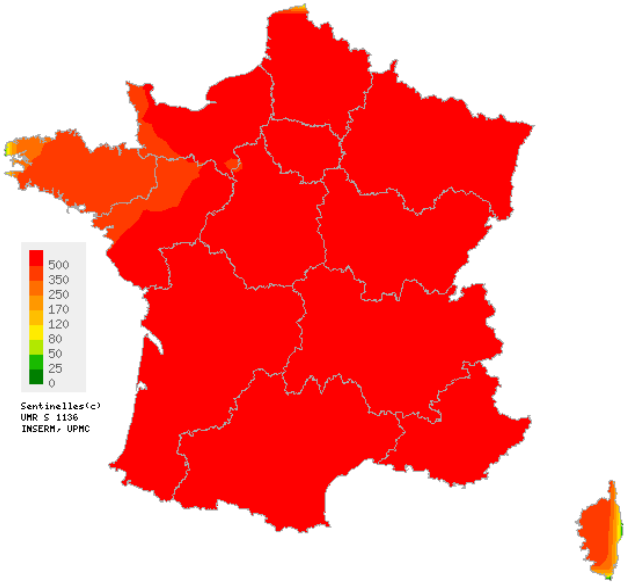
Forecast: according to the forecast models based on historical data, and on medication deliveries (IQVIA research partnership), the ILI activity should remain stable or decrease this week (*see the graph hereafter*).

In order to have a global vision of the situation in metropolitan France, all available data on winter respiratory infections are analysed jointly by Santé publique France, the National Respiratory Viruses Reference Center and the Sentinelles network.
In view of all this information, the conclusions for the last week (2019w06) are:
Small increase of the overall influenza indicators
- Large contribution of influenza viruses among hospitalizations
- Major circulation of A(H3N2) virus
- Approximately 1,800 deaths attributable to influenza since the start of surveillance and until week 04
- In this context, it is important to implement simple hygiene measures against winter viruses and to resort to antivirals for people with severe signs and at risk people

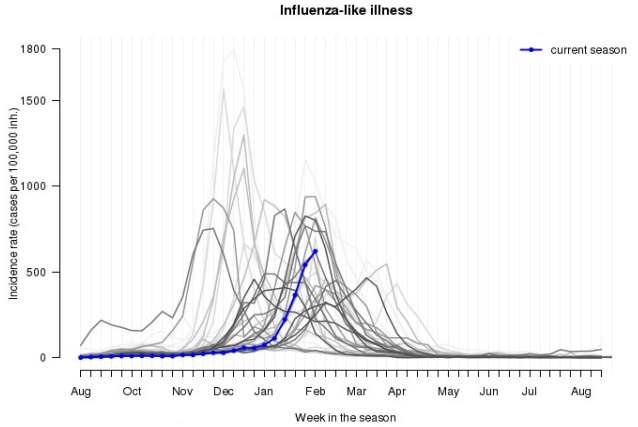
Santé publique France weekly influenza report (in french)
More information about influenza-like illness Sentinelles surveillance
Information about Sentinelles network statistical methods (in french)



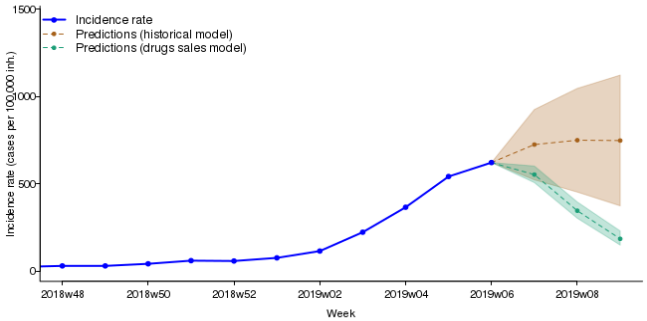
Consolidated data for the last 4 weeks



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, 2019w06
Maps available at http://www.sentiweb.fr



Incidence rate of influenza-like llness since 1984 (per 100,000 inhabitants), Sentinelles general practitioners.
In Blue: season 2018-19/ In gray: seasons from 1984-85 to 2017-18
(the clearer the curve the older the data)



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

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Sentinelles network report from 02/13/2019, n° 2019w06 (data from 02/04/2019 to 02/10/2019)

Acute diarrhea

High to moderate 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 (2019w06), the incidence rate of acute diarrhea seen in general practice was estimated at 147 cases per 100,000 inhabitants (95% CI [132 ; 162]), **below** the epidemic threshold (166 cases per 100,000) and stable compared to the previous week.

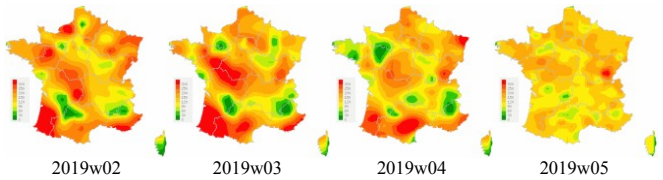
At the regional level, the highest incidence rates were noted in: Provence-Alpes-Côte d'Azur (227 cases per 100,000 inhabitants, 95% CI [133 ; 321]), Pays de la Loire (214, 95% CI [76 ; 352]) and Nouvelle-Aquitaine (212, 95% CI [124 ; 300]) *(the regional data are presented at the end of this newsletter).*

Regarding the cases reported last week, the median age was 26 years (5 months to 5 years). Males accounted for 51% of the cases. These cases showed no particular sign of severity: the percentage of hospitalization was estimated at 1.5% (95% CI [0.2 ; 2.8]).

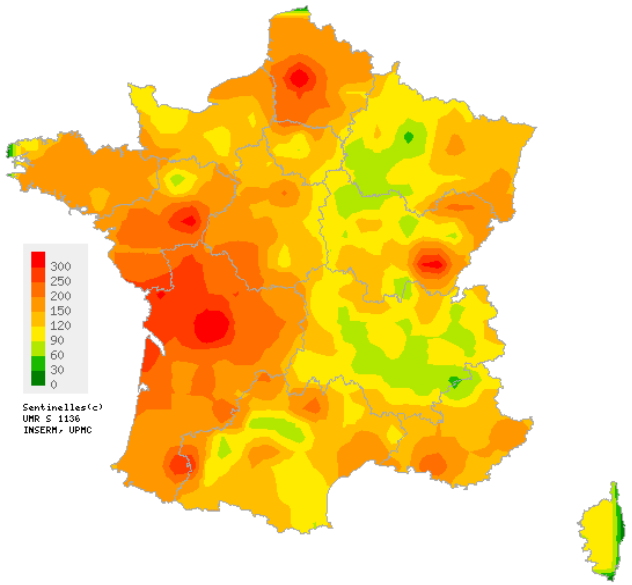
Forecast: According to the forecast model based on historical data, the level of activity of acute diarrhea should remain stable and close to the epidemic threshold in the upcoming weeks.

More information about acute diarrhea Sentinelles surveillance

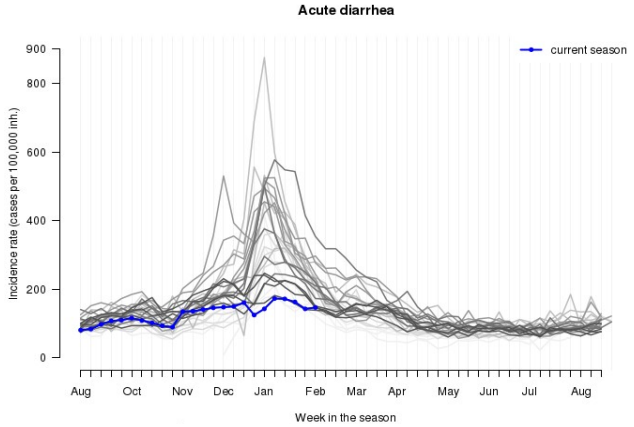
Information about Sentinelles network statistical methods (in french)



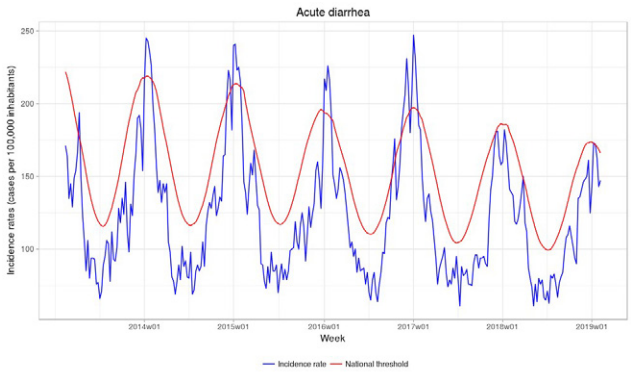
Consolidated data for the last 4 weeks



Map of spatial data interpolation
based on acute diarrhea incidence rates
at the « departement » (NUTS 3) level (per 100,000 inhabitants),
Sentinelles general practitioners, 2019w06
Maps available at http://www.sentiweb.fr



Incidence rate of acute diarrhea since 1990 (per 100,000 inhabitants),
Sentinelles general practitioners.
In Blue : season 2018-19 / In gray: seasons from 1990-91 to 2017-18
(the clearer the curve the older the data)



Incidence rate in blue,
epidemic threshold in red calculated by a periodic regression model
(per 100,000 inhabitants), Acute diarrhea , Sentinelles general practitioners

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Chickenpox

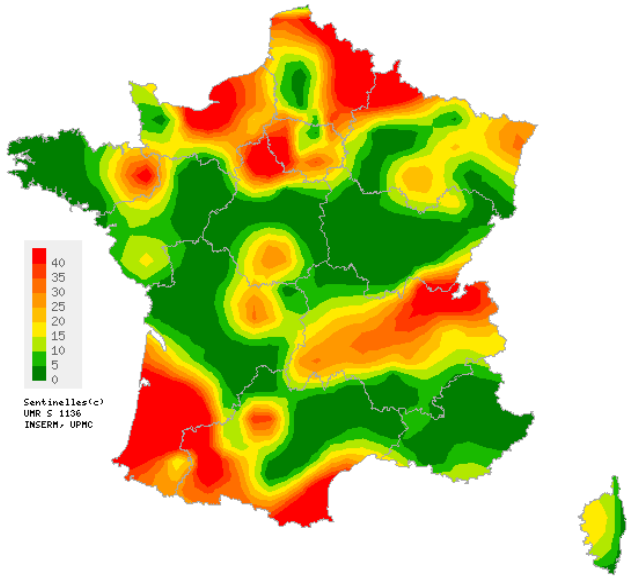
Moderate activity in general practice

In metropolitan France, last week (2019w06), the incidence rate of Chickenpox seen in general practice was estimated at 21 cases per 100,000 inhabitants (95% CI [16 ; 26]).

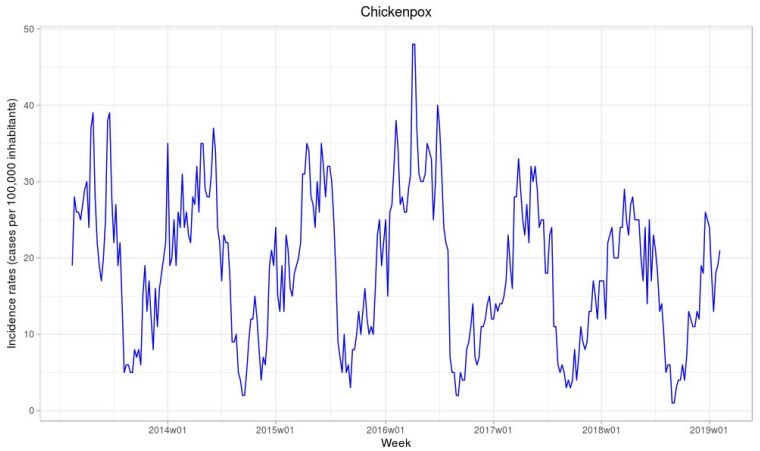
Three moderate regional clusters were noted in Hauts-de-France (37, 95% CI [14 ; 60]), Auvergne-Rhône-Alpes (31, 95% CI [14 ; 48]) and Normandie (30, 95% CI [1 ; 59]). *(the regional data are presented at the end of this report)*.

More information about this surveillance

Information about Sentinelles network statistical methods (in french)



Map of spatial data interpolation based on chickenpox incidence rates at the « departement » (NUTS 3) level (per 100 000 inhabitants), Sentinelles general practitioners, 2019w06
Maps available at http://www.sentiweb.fr



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

National incidence rates (per 100,000 inhabitants) over the past 3 weeks	2019w06 (non consolidated)	2019w05	2019w04
	Incidence rate estimation [95% confidence interval]	Incidence rate estimation [95% confidence interval]	Incidence rate estimation [95% confidence interval]
INFLUENZA-LIKE ILLNESS	622 [592 ; 652]	542 [517 ; 567]	366 [345 ; 387]
ACUTE DIARRHEA	147 [132 ; 162]	143 [130 ; 156]	163 [149 ; 177]
CHICKENPOX	21 [16 ; 26]	19 [15 ; 23]	18 [14 ; 22]

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

Regional incidence rates for week 2019w06 (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	822 [737 ; 907]	97 [69 ; 125]	31 [14 ; 48]
Bourgogne-Franche-Comté	485 [317 ; 653]	88 [39 ; 137]	2 [0 ; 8]
Bretagne	471 [358 ; 584]	156 [95 ; 217]	17 [0 ; 38]
Centre-Val de Loire	601 [502 ; 700]	146 [94 ; 198]	17 [6 ; 28]
Corse	343 [231 ; 455]	66 [17 ; 115]	16 [0 ; 40]
Grand Est	658 [559 ; 757]	132 [88 ; 176]	16 [0 ; 32]
Hauts-de-France	671 [573 ; 769]	188 [136 ; 240]	37 [14 ; 60]
Ile-de-France	425 [347 ; 503]	103 [64 ; 142]	15 [0 ; 30]
Normandie	668 [520 ; 816]	88 [40 ; 136]	30 [1 ; 59]
Nouvelle-Aquitaine	764 [606 ; 922]	212 [124 ; 300]	16 [0 ; 35]
Occitanie	764 [650 ; 878]	143 [97 ; 189]	18 [2 ; 34]
Pays de la Loire	405 [211 ; 599]	214 [76 ; 352]	6 [0 ; 17]
Provence-Alpes-Côte d'Azur	844 [679 ; 1009]	227 [133 ; 321]	4 [0 ; 14]

Table 2 : Incidence rates* estimation with 95% confidence interval, for each indicator, for each French region, for week 2019w06.

Réseau Sentinelles
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*The " Réseau Sentinelles" or Sentinelles Network (a.k.a. French Communicable Diseases Computer Network) is a network of **1,464** physicians working throughout the metropolitan regions of France including **605** involved in the clinical surveillance activity (**489** general practitioners and **116** pediatricians) enabling the achievement of weekly newsletters. This network is developped within an agreement between Inserm, Sorbonne Université and Santé publique France.*

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Deputy head of RS: Thierry Blanchon
Monitoring managers: Louise Rossignol
Information systems, biostatistics: Corentin Hervé, Titouan Launay, Cécile Souty, Clément Turbelin, Ana Vilcu
Publication: Yves Dorléans

Regional branch	Head of network	Regional manager
Auvergne-Rhône-Alpes / Bourgogne-Franche-Comté	Marianne Sarazin	Caroline Liotard
Centre Val de Loire / Pays de la Loire / Hauts-de-France	Thierry Prazuck	Charly Kengne-Kuetche Mathieu Rivière
Ile-de-France	Mathilde François	Lucie Fournier
Méditerranée : Corse / Provence-Alpes-Côte d'Azur	Jean-Pierre Amoros Alessandra Falchi	Shirley Masse Natacha Villechenaud
Sud-Ouest : Nouvelle-Aquitaine / Occitanie	Louise Rossignol Thierry Blanchon (no regional branch)	Marion Debin
Normandie		Laetitia Vaillant
Bretagne		Jennifer Morice
Grand Est		Caroline Guerrisi

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