Sentinelles network report from 04/03/2019, n° 2019w13 (data from 03/25/2019 to 03/31/2019)

Influenza-like illness

Low 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 (2019w13), the incidence rate of influenza-like illness seen in general practice was estimated at 29 cases per 100,000 inhabitants (95% CI [21 ; 37]), corresponding to 19,000 new cases. The incidence rate was decreasing for the seventh consecutive week.

At the regional level, the highest incidence rates were noted in: Bretagne (73 cases per 100,000 inhabitants, 95% CI [10 ; 136]), Nouvelle-Aquitaine (39, 95% CI [8 ; 70]) and Auvergne-Rhône-Alpes (32, 95% CI [10 ; 54]) *(the regional data are presented at the end of this newsletter)*.

Regarding the cases reported last week, the median age was 32 years (11 months to 71 years). Males accounted for 41% of the cases. These cases showed no particular sign of severity: the percentage of hospitalization was estimated at 2.0% (95% CI [0.0 ; 5.8]).

Vaccine effectiveness: According to the first data collected by the Sentinel physicians, the effectiveness of influenza vaccine against all influenza viruses is estimated at: 4% (95%CI[4 ; 62]) among people aged 65 and above, and 47% (95%CI[16 ; 66]) 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 69% (95%CI[47 ; 82]) against the virus A(H1N1)pdm09 and 27% (95%CI[-3 ; 49]) against A(H3N2) virus. These estimates will be refined in the coming weeks.

Virological monitoring: since week 2018s40, date of start of monitoring, 2,432 samples were swabbed by Sentinelles network practitioners (1,806 by general practitionners and 626 by pediatricians), and 2,423 samples have been tested.

Last week 32 samples were realized and tested. Among them, 9 (28.1%) were positive for at least one influenza virus. The positivity rate was lower than the previous week.

The influenza viruses detected along the season were distributed as follows:
- 430 (17.7%) A(H1N1)pdm09 virus,
- 816 (33.7%) A(H3N2) virus,
- 19 (0.8%) A unsubtyped virus,
- 0 (0.0%) B/Victoria lineage virus,
- 0 (0.0%) B/Yamagata lineage virus,
- 2 (0.1%) B unknown lineage virus.

Two co-infections of influenza viruses A(H1N1)pdm09 and A(H3N2) were observed over the entire virological surveillance period.

Regarding the other respiratory viruses, 246 swabs were positive (10,2%) for the rhinovirus (hRV), 169 (7%) positive for the respiratory syncytial virus (RSV), and 80 (3.3%) positive for the metapneumovirus (hMPV). Last week, the rhinovirus was mainly circulating.

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 continue its decrease this week (2019w14).

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.
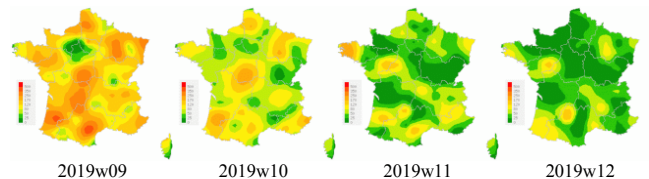
In view of all this information, the conclusions for the last week (2019w13) are:
- **End of the influenza epidemic in all metropolitan regions**
- **Sporadic detection of influenza viruses**
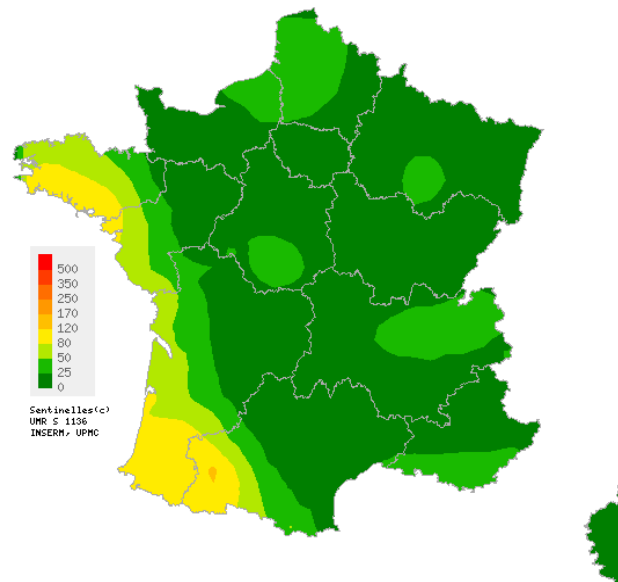- **Approximately 9,200 deaths attribuable to influenza since the start of surveillance and until week 11**

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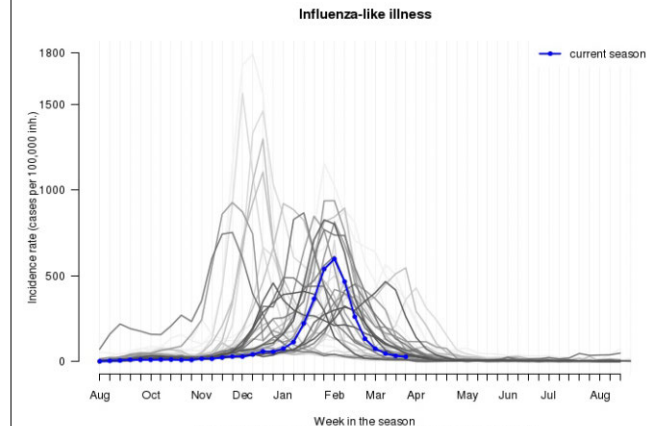

2019w09   2019w10   2019w11   2019w12

Consolidated data for the last 4 weeks

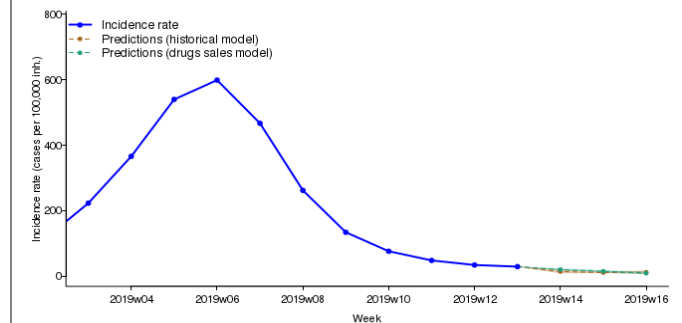Map of spatial data interpolation based on influenza-like illness incidence rates at the « departement » (NUTS 3) level (per 100,000 inhabitants), Sentinelles general practitioners, 2019w13
Maps available at http://www.sentiweb.fr

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

ACUTE DIARRHEA
Moderate to high activity in general practice

in metropolitan France, last week (2019w13), the incidence rate of acute diarrhea seen in general practice was estimated at 140 cases per 100,000 inhabitants (95% CI [123 ; 157]), just **above** the epidemic threshold (138 cases per 100,000).

At the regional level, the highest incidence rates were noted in: Grand Est (192 cases per 100,000 inhabitants, 95% CI [126 ; 258]), Hauts-de-France (191, 95% CI [123 ; 259]) and Pays de la Loire (181, 95% CI [34 ; 328]). *

More information about this surveillance
More information about acute diarrhea Sentinelles surveillance

CHICKENPOX
Moderate activity in general practice

In metropolitan France, last week (2019w13), the incidence rate of Chickenpox seen in general practice was estimated at 30 cases per 100,000 inhabitants (95% CI [22 ; 38]).

Seven regional clusters were noted, **high** in Pays de la Loire (217 cases per 100,000 inhabitants, 95% CI [0 ; 456]) and Bretagne (51, 95% CI [14 ; 88]) and **moderate** in Hauts-de-France (39, 95% CI [13 ; 65]), Occitanie (36, 95% CI [12 ; 60]), Normandie (30, 95% CI [0 ; 63]), Nouvelle-Aquitaine (25, 95% CI [0 ; 53]) and Auvergne-Rhône-Alpes (21, 95% CI [5 ; 37]). *
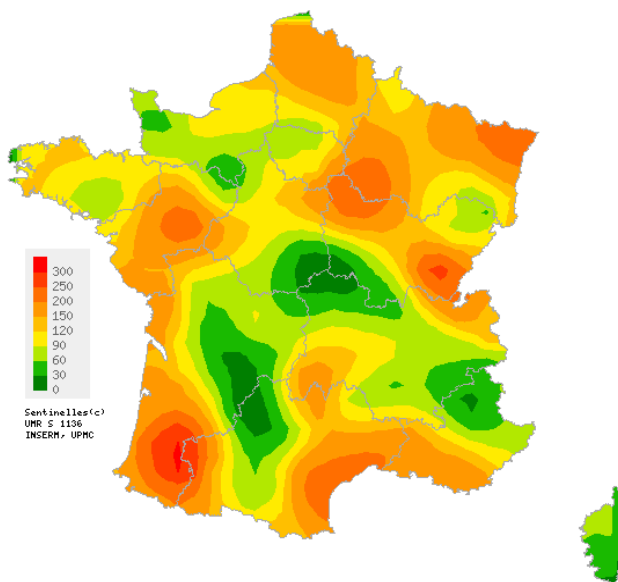
More information about this surveillance
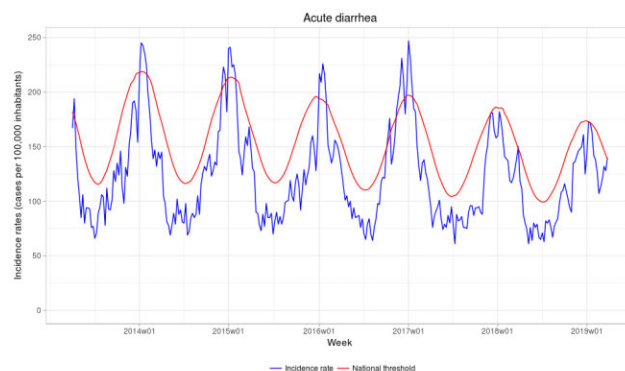*More information about chickenpox Sentinelles surveillance*

Information about Sentinelles network statistical methods (in french)

* The regional data are presented at the end of this report.
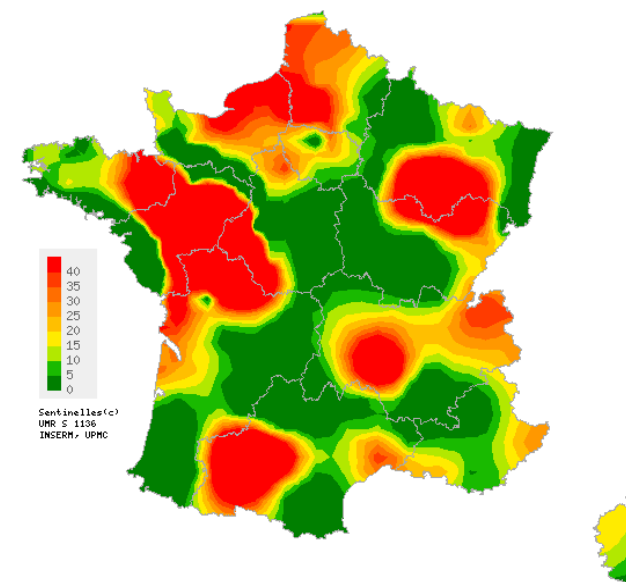
ACUTE DIARRHEA

Map of spatial data interpolation based on incidence rates at the « departement » (NUTS 3) level, (per 100,000 inhabitants), Acute diarrhea, Sentinelles general practitioners, 2019w13
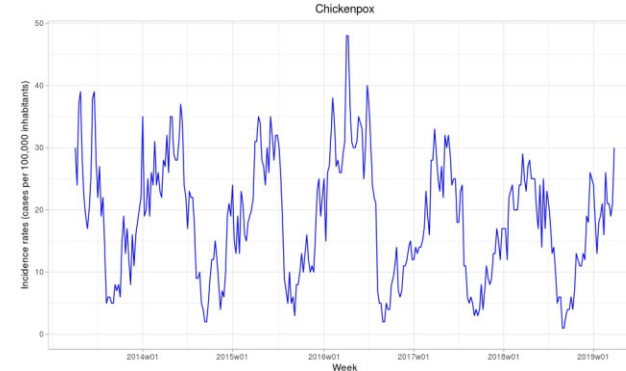Maps available at http://www.sentiweb.fr

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

CHICKENPOX

Map of spatial data interpolation based on incidence rates at the « departement » (NUTS 3) level, (per 100,000 inhabitants), Chickenpox, Sentinelles general practitioners, 2019w13
Maps available at http://www.sentiweb.fr

Incidence rate in blue,
(per 100,000 inhabitants), Chickenpox, Sentinelles general practitioners

National incidence rates (per 100,000 inhabitants) over the past 3 weeks	2019w13 (non consolidated)	2019w12	2019w11
	Incidence rate estimation [95% confidence interval]	Incidence rate estimation [95% confidence interval]	Incidence rate estimation [95% confidence interval]
INFLUENZA-LIKE ILLNESS	29 [21 ; 37]	34 [27 ; 41]	48 [40 ; 56]
ACUTE DIARRHEA	140 [123 ; 157]	128 [115 ; 141]	132 [119 ; 145]
CHICKENPOX	30 [22 ; 38]	21 [15 ; 27]	19 [14 ; 24]

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

Regional incidence rates for week 2019w13 (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	32 [10 ; 54]	90 [57 ; 123]	21 [5 ; 37]
Bourgogne-Franche-Comté	7 [0 ; 20]	115 [56 ; 174]	16 [0 ; 40]
Bretagne	73 [10 ; 136]	91 [45 ; 137]	51 [14 ; 88]
Centre-Val de Loire	21 [4 ; 38]	112 [70 ; 154]	7 [0 ; 14]
Corse	24 [0 ; 60]	49 [0 ; 101]	18 [0 ; 49]
Grand Est	19 [0 ; 38]	192 [126 ; 258]	17 [2 ; 32]
Hauts-de-France	26 [2 ; 50]	191 [123 ; 259]	39 [13 ; 65]
Ile-de-France	14 [0 ; 31]	83 [37 ; 129]	12 [1 ; 23]
Normandie	24 [0 ; 61]	86 [34 ; 138]	30 [0 ; 63]
Nouvelle-Aquitaine	39 [8 ; 70]	164 [93 ; 235]	25 [0 ; 53]
Occitanie	26 [8 ; 44]	138 [89 ; 187]	36 [12 ; 60]
Pays de la Loire	15 [0 ; 34]	181 [34 ; 328]	217 [0 ; 456]
Provence-Alpes-Côte d'Azur	29 [0 ; 64]	157 [72 ; 242]	16 [0 ; 41]

Table 2 : Incidence rates* estimation with 95% confidence interval, for each indicator, for each French region, for week 2019w13.

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