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Santé publique France
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RÉPUBLIQUE FRANÇAISE
MINISTÈRE DES SOLIDARITÉS ET DE LA SANTÉ

Sentinelles network report from 04/18/2018, n° 2018w15 (data from 04/09/2018 to 04/15/2018)

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).

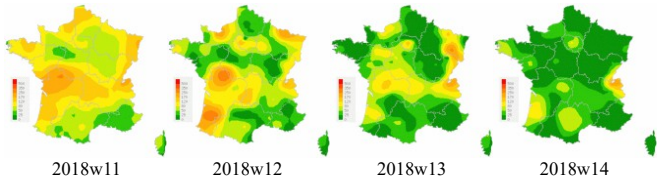
Clinical monitoring: in metropolitan France, last week (2018w15), the incidence rate of influenza-like illness seen in general practice was estimated at 30 cases per 100,000 inhabitants (95% CI [22 ; 38]).
At the regional level, the highest incidence rates were reported in: Pays de la Loire (44 cases per 100,000 inhabitants, 95% CI [0 ; 95]), Hauts-de-France (36, 95% CI [7 ; 65]) and Occitanie (35, 95% CI [12 ; 58]) : *(the regional data are presented at the end of this newsletter).*
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 (2018w15), the conclusions of the Santé publique France are :
" End of the epidemic in all regions in metropolitan France ".
Vaccine effectiveness: available preliminary results have shown a 54% influenza vaccine effectiveness (VE) (95% CI [29 ; 70]) in people from 65 years old and over, against all influenza viruses. VE was estimated to 40% (95% CI [0 ; 68]) among people below 65 years old with risk factors for influenza complications [2].
Virological monitoring: since week 2017s40, date of start of monitoring, 2,735 samples were swabbed by Sentinelles network practitioners (1,937 by general practitionners and 798 by pediatricians), all samples have been tested. Last week 23 samples were realized and tested. Among them, 11 (47.8%) were positive for at least one influenza virus. The positivity rate slightly increases this week. The B(Yamagata) flu virus was predominant last week.
The influenza viruses detected along the season were distributed as follows:
- 697 (25.5%) A(H1N1)pdm09 virus,
- 129 (4.7%) A(H3N2) virus,
- 19 (0.7%) A unsubtyped virus,
- 7 (0.3%) B/Victoria lineage virus,
- 730 (26.7%) B/Yamagata lineage virus,
- 13 (0.5%) B unknown lineage virus.

Eight 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 SyncytialVirus (RSV), the Rhinovirus (HRV) and the Metapneumovirus (hMPV). Although circulation of these three viruses remains low, HRV was mainly detected this week.
The samples were analyzed by the CNR (National Reference Centers) of respiratory infection 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 [3], and on medication deliveries (IQVIA research partnership) [4]. The activity of ILI should continue to decrease in the upcoming weeks *(see the graph hereafter)*.

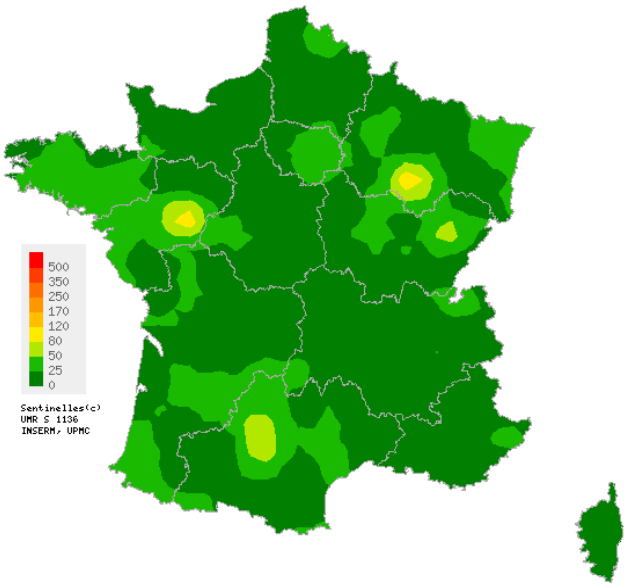
Santé publique France weekly influenza report (in french)
More information about Influenza-like illness Sentinelles surveillance

Information about Sentinelles network statistical methods (in french)

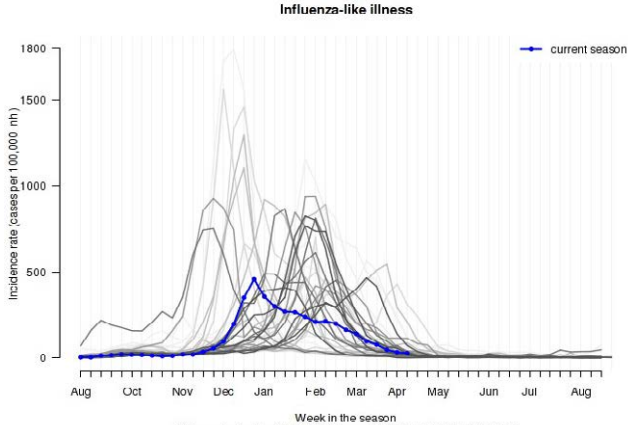
[1] Pelat C. et al. Improving regional influenza surveillance through a combination of automated outbreak detection methods: the 2015/16 season in France. Euro Surveill. 2017;22(32):pii=30593.
[2] Vilcu AM et al. Estimation of seasonal influenza vaccine effectiveness using data collected in primary care in France: comparison of the test-negative design and the screening method. Clin Microbiol Infect. 2017. doi: 10.1016/j.cmi.2017.09.003.
[3] 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.
[4] Vergu E, et al. Medication sales and syndromic surveillance, France. Emerg Infect Dis. 2006. 12(3):416-21.



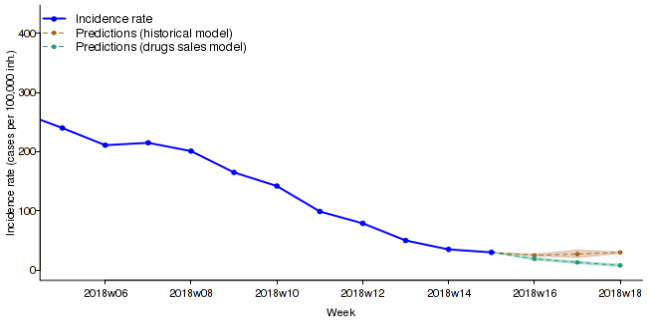
Consolidated data for the last 4 weeks



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, 2018w15
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 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

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ACUTE DIARRHEA

Moderate activity in general practice

In metropolitan France, last week (2018w15), the incidence rate of Acute diarrhea seen in general practice was estimated at 128 cases per 100,000 inhabitants (95% CI [111 ; 145]), **below** the epidemic threshold (139 cases per 100,000 inhabitants) [1].

At the regional level, the highest incidence rates were noted in: Bretagne (208 cases per 100,000 inhabitants, 95% CI [112 ; 304]), Grand Est (154, 95% CI [102 ; 206]) and Occitanie (134, 95% CI [80 ; 188]).*

Santé publique France weekly gastroenteritis report (in french)

More information about Acute Diarrhea Sentinelles surveillance

CHICKENPOX

Moderate activity in general practice

In metropolitan France, last week (2018w15), the incidence rate of Chickenpox seen in general practice was estimated at 30 cases per 100,000 inhabitants (95% CI [22 ; 38]).

Five regional clusters were reported, **high** in Hauts-de-France (54 cases per 100,000 inhabitants, 95% CI [16 ; 92]), Pays de la Loire (47, 95% CI [14 ; 80]) and Occitanie (41, 95% CI [15 ; 67]) and **moderate** in Ile-de-France (38, 95% CI [11 ; 65]) and Normandie (37, 95% CI [0 ; 76]). *

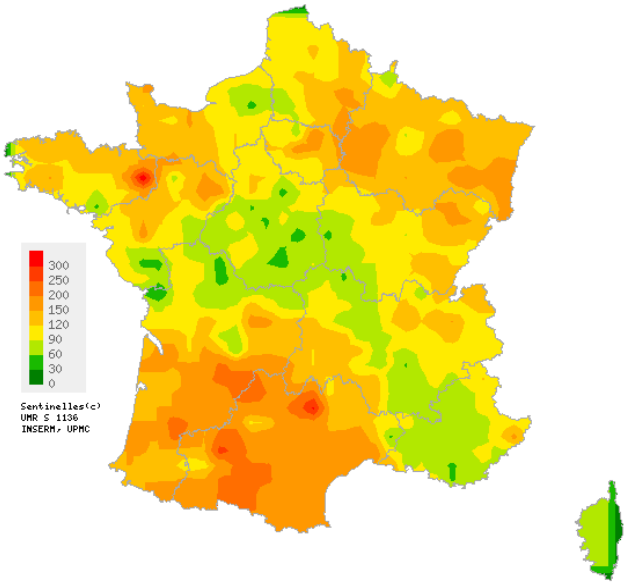
More information about chickenpox Sentinelles surveillance

Information about Sentinelles network statistical methods (in french)

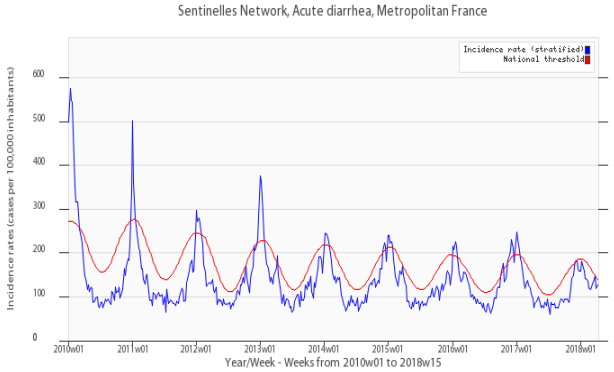
** The regional data are presented at the end of this report.*

[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.

ACUTE DIARRHEA

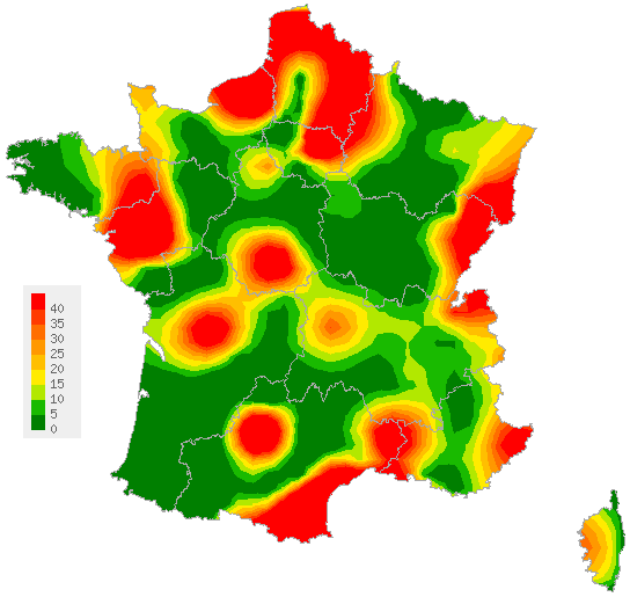


Map of spatial data interpolation based on incidence rates at the « departement » (NUTS 3) level, (per 100,000 inhabitants), Acute diarrhea, Sentinelles general practitioners, 2018w15
Maps available at http://www.sentiweb.fr

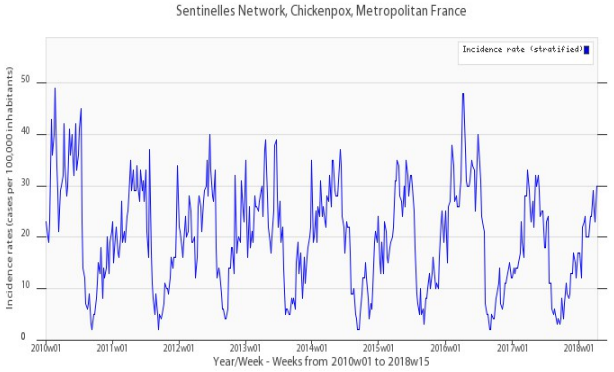


Incidence rate in blue,
epidemic threshold in red calculated by a periodic regression model [1]
(per 100,000 inhabitants), Acute diarrhea , Sentinelles general practitioners

CHICKENPOX



Map of spatial data interpolation based on incidence rates at the « departement » (NUTS 3) level, (per 100,000 inhabitants), Chickenpox, Sentinelles general practitioners, 2018w15
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	2018w15 (non consolidated)	2018w14	2018w13
	Incidence rate estimation [95% confidence interval]	Incidence rate estimation [95% confidence interval]	Incidence rate estimation [95% confidence interval]
INFLUENZA-LIKE ILLNESS	30 [22 ; 38]	35 [28 ; 42]	50 [39 ; 61]
ACUTE DIARRHEA	128 [111 ; 145]	119 [106 ; 132]	149 [129 ; 169]
CHICKENPOX	30 [22 ; 38]	23 [16 ; 30]	25 [19 ; 31]

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

Regional incidence rates for week 2018w15 (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	16 [2 ; 30]	106 [63 ; 149]	13 [0 ; 26]
Bourgogne-Franche-Comté	18 [0 ; 40]	112 [36 ; 188]	14 [0 ; 32]
Bretagne	28 [0 ; 66]	208 [112 ; 304]	19 [0 ; 50]
Centre-Val de Loire	8 [0 ; 22]	55 [21 ; 89]	14 [0 ; 28]
Corse	0 [0 ; 0]	60 [2 ; 118]	18 [0 ; 53]
Grand Est	21 [4 ; 38]	154 [102 ; 206]	15 [1 ; 29]
Hauts-de-France	36 [7 ; 65]	132 [51 ; 213]	54 [16 ; 92]
Ile-de-France	33 [13 ; 53]	130 [80 ; 180]	38 [11 ; 65]
Normandie	14 [0 ; 36]	87 [46 ; 128]	37 [0 ; 76]
Nouvelle-Aquitaine	12 [0 ; 28]	99 [51 ; 147]	5 [0 ; 14]
Occitanie	35 [12 ; 58]	134 [80 ; 188]	41 [15 ; 67]
Pays de la Loire	44 [0 ; 95]	129 [18 ; 240]	47 [14 ; 80]
Provence-Alpes-Côte d'Azur	19 [0 ; 46]	90 [32 ; 148]	17 [0 ; 37]

Table 2 : Incidence rates* estimation with 95% confidence interval, for each indicator, for each French region, for week 2018w15.

Réseau Sentinelles
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The " Réseau Sentinelles" or Sentinelles Network
(a.k.a. French Communicable Diseases Computer Network)
*is a network of **1,448** physicians working throughout the metropolitan regions of France including **581** involved in the clinical surveillance activity*
*(**464** general practitioners and **117** pediatricians)*
enabling the achievement of weekly newsletters.
This network is developped in cooperation between Inserm, Sorbonne Université (UPMC) and the Agence Santé publique France.

Regional branch	Head of network	Regional manager
Auvergne-Rhône-Alpes / Bourgogne-Franche-Comté	Marianne Sarazin	Caroline Liotard
Centre Val de Loire / Hauts-de-France	Thierry Prazuck	Mathieu Rivière
Ile-de-France	Mathilde François	Lucie Fournier
Méditerranée : Corse / Occitanie / Provence-Alpes-Côte d'Azur	Jean-Pierre Amoros Alessandra Falchi	Marion Debin Shirley Masse

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