

Influenza-like illness

Results from the electronic surveillance of communicable diseases from 02/23/2015 to 03/01/2015.

INFLUENZA-LIKE ILLNESS

Epidemic activity, decreasing.

After 7 weeks of epidemic, 2,679,000 people would have consulted their GP

Sentinel physicians monitor the number of ILI seen in consultations (defined by sudden fever > 39°C (>102°F) with myalgia and respiratory signs). Using the number of ILI cases, it is possible to estimate the number of cases due to influenza viruses.

Clinical monitoring: in metropolitan France, last week, the incidence rate of influenza-like illness seen in general practice was estimated at 482 cases per 100,000 inhabitants (95% CI [440 ; 524]), 311,000 new cases, above the epidemic threshold (147 cases per 100,000) [1].

Since the crossing of the epidemic peak in week 6 (Feb. 2), the incidence of ILI is declining for 3 weeks with an activity still high. The epidemic observed this year is larger than last year and similar to that observed 2 years ago (see the graph hereafter).

At the regional level, the highest incidence rates were reported in: Limousin (1,142 cases per 100,000 inhabitants, 95% CI [729 ; 1555]), Alsace (782, 95% CI [458 ; 1106]) and Champagne-Ardenne (752, 95% CI [541 ; 963]) Nearly all the regions have their incidence above the national epidemic threshold (the regional data are presented at the end of this newsletter).

Regarding the cases reported last week, the median age was 40 years (3 months to 95 years). Males accounted for 50% of the cases. These cases showed no particular sign of severity: the percentage of hospitalization was estimated at 0.7% (95% CI [0.0 ; 1.3]).

Virological monitoring

Since week 2015w40 of resumption of monitoring, 2122 samples were collected by Sentinelles network general practitioners. Among them, 1188 influenza viruses have been identified, distributed as follows:

- 256 (21.5%) A(H1N1)pdm09 type virus,
- 728 (61.3%) A(H3N2) type virus,
- 2 (0.2%) A non-subtyped virus,
- 9 (0.8%) B Victoria type virus lineage,
- 173 (14.6%) B Yamagata type virus lineage,
- 25 (2.1%) B non-subtyped virus.

Five influenza viruses co-infections have been observed. The samples were analyzed by the CNR (National Reference Centers) of *influenzae* viruses (CC Paris, CA 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 sales (MS-Health research partnership) [3], the forecast models indicate the activity of ILI would continue to decrease next weeks (see the graph hereafter).

Attributable ratio estimate to the Flu

During the week 2015w09, we estimated that there were around 263,000 consultations due to influenza viruses seen in general practice (90% prediction interval [217,000 ; 309,000]). In seven weeks of epidemic, the number of consultations for influenza was estimated at 2,256,000 (90% PI [1,931,000 ; 2,581,000]).

Vaccine effectiveness: This year, the estimated vaccine effectiveness (VE) is weaker than in the previous years, especially in people over 65 years old (VE =7%, 95% CI [-7 ; 19]) [4]. It was estimated of 62% (95% CI [52 ; 70]) in people under 65 years old with a chronic illness (weekly estimates updated with the latest available data).

[More information about this surveillance](#)

The Sentinelles network team

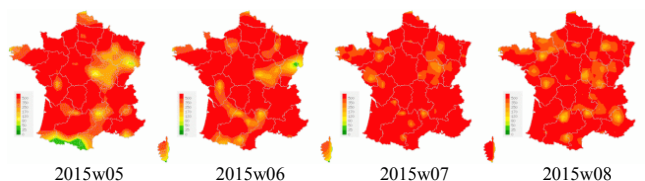
[1] Costagliola D, et al. A routine tool for detection and assessment of epidemics of influenza-like syndromes in France. *Am J Public Health*. 1991;81(1):97-9.

[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.

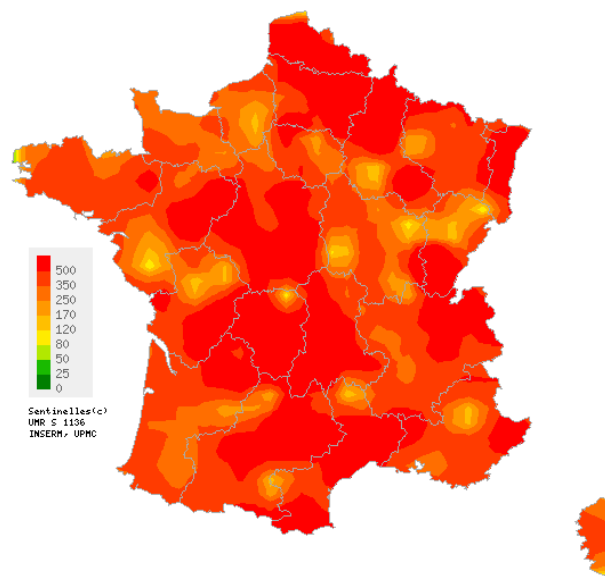
[3] Vergu E, et al. Medication sales and syndromic surveillance, France. *Emerg Infect Dis*. 2006. 12(3):416-21.

[4] Falchi A, et al. Field seasonal influenza vaccine effectiveness: Evaluation of the screening method using different sources of data during the 2010/2011 French influenza season. *Hum Vaccin Immunother*. 2013. 9(11):2453-9.

Current activity



Consolidated data for the last 4 weeks



Week 2015w09

Map of data spatial interpolation.

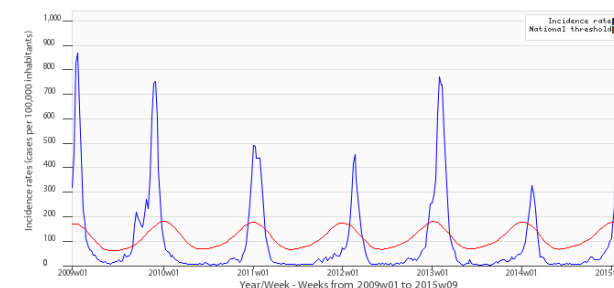
The interpolation is based on the departmental incidence.

(cases per 100,000 inhabitants)

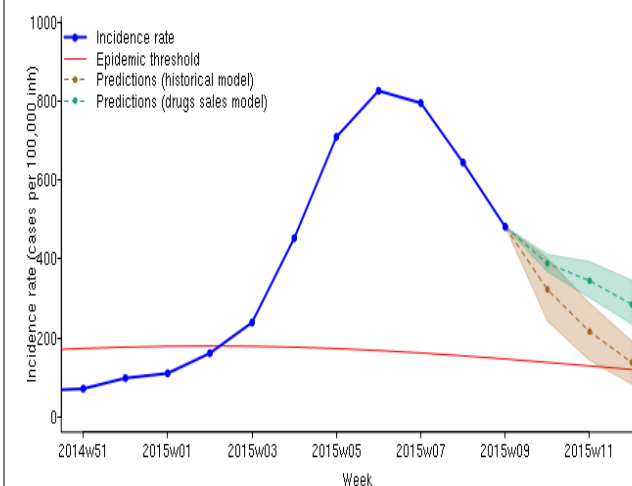
Maps available at <http://www.sentiweb.fr/>

Predictions

Sentinelles Network, Influenza-like illness, Metropolitan France



Incidence rate in blue,
epidemic threshold in red calculated by a periodic regression model [1]
(in cases per 100,000 inhabitants)



Predicted incidence rate for the next three weeks
based on a forecast model on historical data [2] (in brown),
and on drug sales [3] (in green)
(IMS-Health partnership)

Acute diarrhea

Results from the electronic surveillance of communicable diseases from 02/23/2015 to 03/01/2015.

ACUTE DIARRHEA Moderate activity

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, the incidence rate of acute diarrhea seen in general practice was estimated at 149 cases per 100,000 inhabitants, 95% CI [127 ; 171], (96,000 new cases), **below** the epidemic threshold (228 cases per 100,000) [1].

At the regional level, the highest incidence rates were noted in: Picardie (332 cases per 100,000 inhabitants, 95% CI [102 ; 562]), Lorraine (249, 95% CI [118 ; 380]) and Limousin (237, 95% CI [[66 ; 408]) (the regional data are presented at the end of this newsletter).

Regarding the cases reported last week, the median age was 25 years (4 months to 90 years). Males accounted for 56% of the cases. These cases showed no particular sign of severity: the percentage of hospitalization was estimated at 0.7% (95% CI [0.0 ; 1.8]).

Forecast: according to the forecast model based on historical data [2], the level of activity of acute diarrhea should remain steady next weeks (see the graph hereafter).

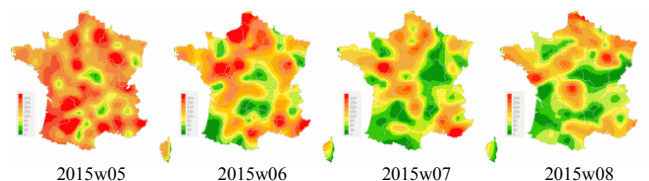
[More information about this surveillance](#)

The Sentinelles network team

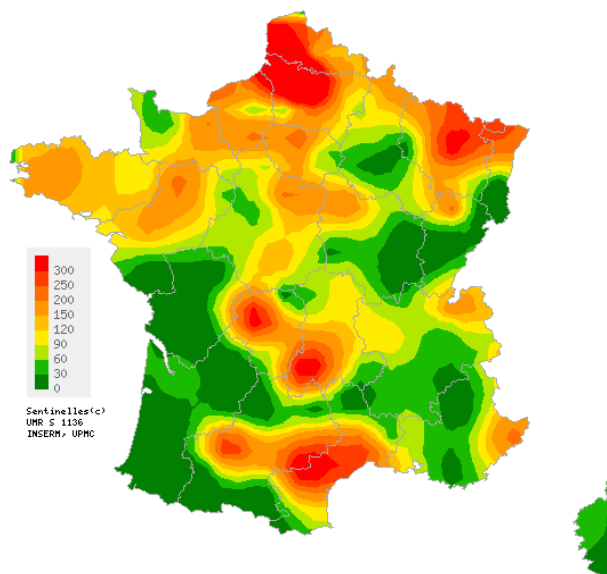
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Current activity



Consolidated data for the last 4 weeks

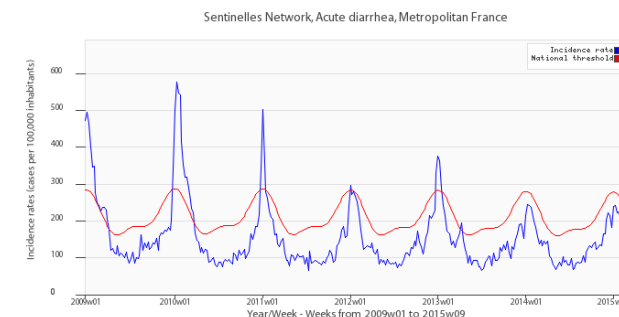


Week 2015w09

Map of data spatial interpolation.
The interpolation is based on the departmental incidence.
(cases per 100,000 inhabitants)

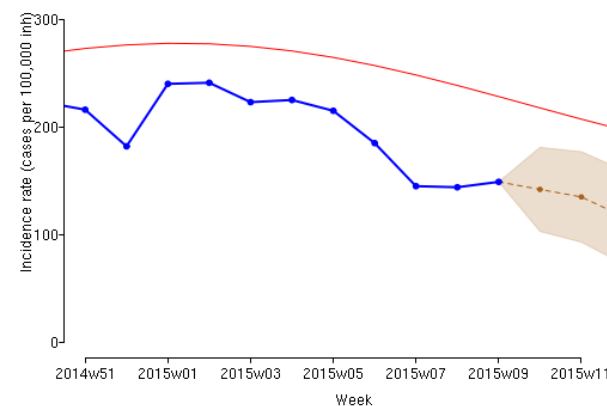
Maps available at <http://www.sentiweb.fr/>

Predictions



Incidence rate in blue,
epidemic threshold in red calculated by a periodic regression model [1]
(in cases per 100,000 inhabitants)

— Incidence rate
— Epidemic threshold
— Predictions and 95% CI (historical model)



Predicted incidence rate for the next three weeks
based on a forecast model on historical data [2] (in brown)

Chickenpox

Results from the electronic surveillance of communicable diseases from 02/23/2015 to 03/01/2015:

CHICKENPOX Low activity

In metropolitan France, last week, the incidence rate of Chickenpox seen in general practice was estimated at 16 cases per 100,000 inhabitants (95% CI [9 ; 23]). *

Five regional clusters were reported, **high** in Haute-Normandie (91 cases per 100,000 inhabitants) and Provence-Alpes-Côte-d'Azur (52) and **moderate** in Nord-Pas-de-Calais (38), Corse (38) and Languedoc-Roussillon (31). *

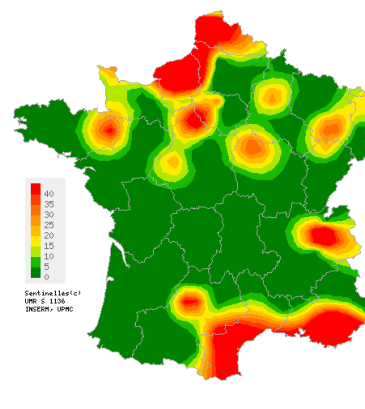
[More information about this surveillance](#)

The Sentinelles network team

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

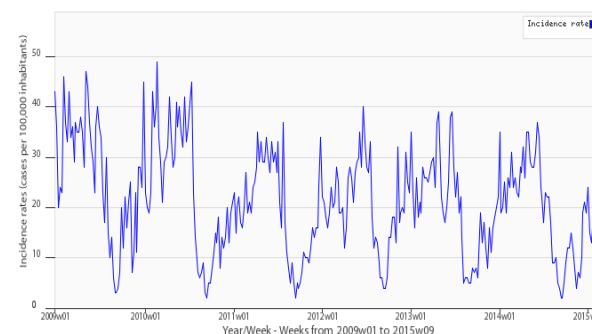
Observed situations and National incidence trend

Week 2015w09 (in cases per 100,000 inhabitants)



Map of spatial data interpolation based on incidence rates at the « departement » (NUTS 3) level.
Maps available at <http://www.sentiweb.fr>

Sentinelles Network, Chickenpox, Metropolitan France



Incidence rate in blue
(in cases per 100,000 inhabitants).

National incidence rates (per 100 000 inhabitants) over the past 3 weeks	2015w09 (non consolidated)	2015w08	2015w07
	Incidence rate estimation [95% confidence interval]	Incidence rate estimation [95% confidence interval]	Incidence rate estimation [95% confidence interval]
INFLUENZA-LIKE ILLNESS	482 [440 ; 524]	645 [611 ; 679]	796 [760 ; 832]
ACUTE DIARRHEA	149 [127 ; 171]	144 [127 ; 161]	145 [129 ; 161]
CHICKENPOX	16 [9 ; 23]	15 [10 ; 20]	20 [14 ; 26]

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

Regional incidence rates for week 2015w09 (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]
Alsace	782 [458 ; 1106]	143 [1 ; 285]	12 [0 ; 54]
Aquitaine	313 [162 ; 464]	30 [0 ; 75]	0 [0 ; 0]
Auvergne	559 [329 ; 789]	140 [31 ; 249]	0 [0 ; 0]
Basse-Normandie	287 [153 ; 421]	130 [36 ; 224]	7 [0 ; 28]
Bourgogne	86 [32 ; 140]	45 [6 ; 84]	9 [0 ; 26]
Bretagne	436 [279 ; 593]	131 [47 ; 215]	14 [0 ; 42]
Centre	618 [479 ; 757]	119 [59 ; 179]	18 [0 ; 36]
Champagne-Ardenne	752 [541 ; 963]	89 [16 ; 162]	14 [0 ; 43]
Corse	265 [92 ; 438]	42 [0 ; 125]	38 [0 ; 103]
Franche-Comté	385 [80 ; 690]	44 [0 ; 104]	4 [0 ; 22]
Haute-Normandie	149 [13 ; 285]	104 [7 ; 201]	91 [0 ; 204]
Ile-de-France	366 [265 ; 467]	179 [109 ; 249]	9 [0 ; 27]
Languedoc-Roussillon	614 [385 ; 843]	197 [87 ; 307]	31 [0 ; 71]
Limousin	1142 [729 ; 1555]	237 [66 ; 408]	0 [0 ; 0]
Lorraine	317 [174 ; 460]	249 [118 ; 380]	7 [0 ; 24]
Midi-Pyrénées	658 [480 ; 836]	117 [48 ; 186]	9 [0 ; 25]
Nord-Pas-de-Calais	589 [392 ; 786]	159 [65 ; 253]	38 [0 ; 85]
Pays-de-la-Loire	431 [70 ; 792]	121 [0 ; 261]	0 [0 ; 0]
Picardie	592 [272 ; 912]	332 [102 ; 562]	0 [0 ; 0]
Poitou-Charentes	454 [25 ; 883]	0 [0 ; 0]	0 [0 ; 0]
Provence-Alpes-Côte-d'Azur	419 [255 ; 583]	81 [17 ; 145]	52 [0 ; 133]
Rhône-Alpes	478 [375 ; 581]	85 [41 ; 129]	8 [0 ; 18]

Table 2 : Incidence rates estimation with 95% confidence interval, for each indicator, for each French regions, for week 2015w09 .

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*The " Réseau Sentinelles" or Sentinelles Network
(a.k.a. French Communicable Diseases Computer Network)
is a network of general practitioners,
working throughout the metropolitan regions of France.
This group includes 1297 physicians, including 421 involved in the clinical
surveillance activity, enabling the achievement of weekly newsletters.
This network is developped in cooperation between Inserm, Université
Pierre et Marie Curie (UPMC) and the Institut de Veille Sanitaire (InVS).*

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