

## Influenza-like illness

Results from the electronic surveillance of communicable diseases from 03/23/2015 to 03/29/2015.

### INFLUENZA-LIKE ILLNESS End of Influenza epidemic

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 86 cases per 100,000 inhabitants (95% CI [69 ; 103]), 55,000 new cases, **below** the epidemic threshold (113 cases per 100,000) [1]. After data consolidation, the epidemic of ILI ended the week 2015w11 (see the graph hereafter).

**At the regional level,** the highest incidence rates were noted in: Pays-de-la-Loire (172 cases per 100,000 inhabitants, 95% CI [49 ; 295]), Rhône-Alpes (155, 95% CI [101 ; 209]) and Bretagne (143, 95% CI [59 ; 227]) (the regional data are presented at the end of this newsletter).

**Results for 2015 epidemic :** the epidemic will have lasted for 9 weeks from January 12 to March 15 2015 (week 2015w03 to 2015w11), 2,847,000 people had consulted their physician GPs for influenza-like illness (95% CI [2,793,000 ; 2,900,000]). The attributable flu ratio was estimate around 2,343,000 (90% PI [1,925,000 ; 2,900,000]).

**Regarding the cases reported** last week, during the 9 weeks of epidemic, the median age was 32 years (2 months to 100 years). Males accounted for 48% of the cases. These cases showed no particular sign of severity: the percentage of hospitalization was estimated at 0.3% (95% CI [0.2 ; 0.4]).

**Vaccine effectiveness:** this year, the estimated vaccine effectiveness (VE) is weaker than in the previous years, especially in people over 65 years old (VE =5%, 95% CI [-8 ; 16] [2]). It was estimated of 61% (95% CI [51 ; 69]) in people under 65 years old with a chronic illness (estimates including data throughout the epidemic period).

#### Virological monitoring

Since week 2015w40 of resumption of monitoring, 2551 samples were collected by Sentinelles network general practitioners. Among them, 1418 influenza viruses have been identified, distributed as follows:

- 285 (20.1%) A(H1N1)pdm09 type virus,
- 794 (56.0%) (H3N2) type virus,
- 2 ( 0.1%) A non-subtyped virus,
- 21 ( 1.5%) Victoria type virus lignage,
- 316 (22.3%) B Yamagata type virus lignage,
- 5 ( 0.4%) B non-subtyped virus.

5 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 model based on historical data [3] and medication sales (IMS-Health research partnership) [4], influenza-like illness activity should continue to decline next weeks libellé bulletin seui: (see the graph hereafter).

[More information about this surveillance](#)

The Sentinelles network team

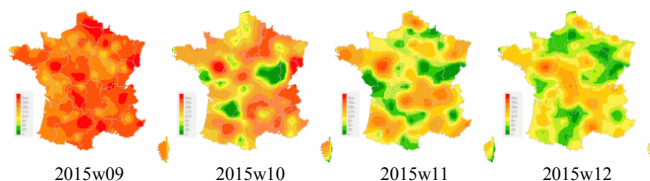
[1] Costagliola D, et al. A routine tool for detection and assessment of epidemics of influenza-like syndromes in France. *Am J Public Health.* 1991;81(1):97-9.

[2] 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.

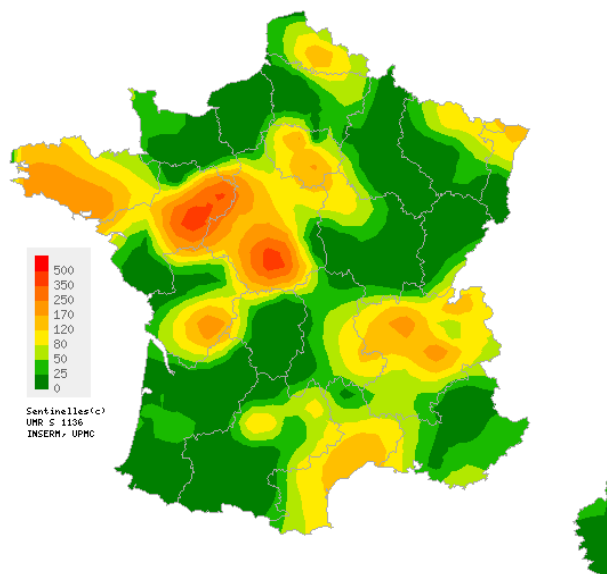
[3] Viboud C, et al. Prediction of the spread of influenza epidemics by the method of analogues. *Am J Epidemiol.* 2003 Nov 15;158(10):996-1006.

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

### Current activity



Consolidated data for the last 4 weeks



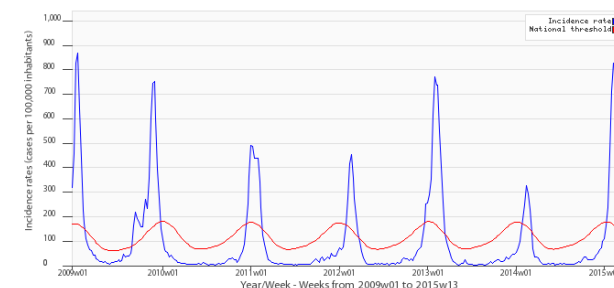
Week 2015w13

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

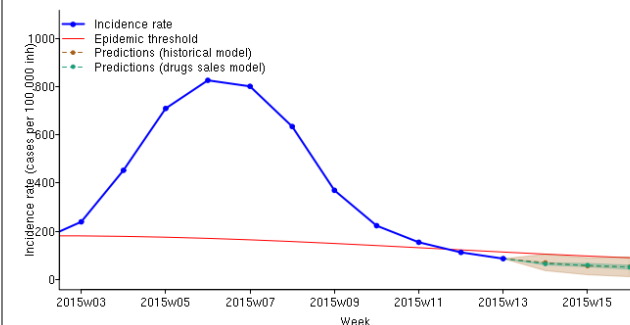
Maps available at <http://www.sentiweb.fr/>

### 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 03/23/2015 to 03/29/2015.

### 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 176 cases per 100,000 inhabitants, 95% CI [149 ; 203], (114,000 new cases), below the epidemic threshold (188 cases per 100,000) [1].

**At the regional level**, the highest incidence rates were noted in: Poitou-Charentes (382 cases per 100,000 inhabitants, 95% CI [57 ; 707]), Nord-Pas-de-Calais (270, 95% CI [125 ; 415]) and Bretagne (261, 95% CI [159 ; 363]).

**Regarding the cases reported** last week, the median age was 23 years (6 months to 86 years). Males accounted for 47% of the cases. These cases showed no particular sign of severity: the percentage of hospitalization was estimated at 1.2% (95% CI [0.0 ; 2.7]).

**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).

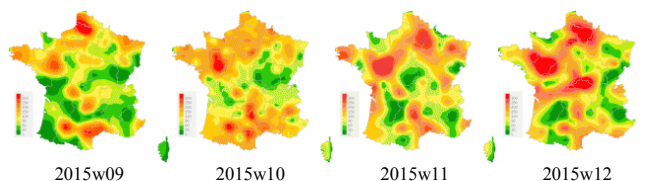
[More information about this surveillance](#)

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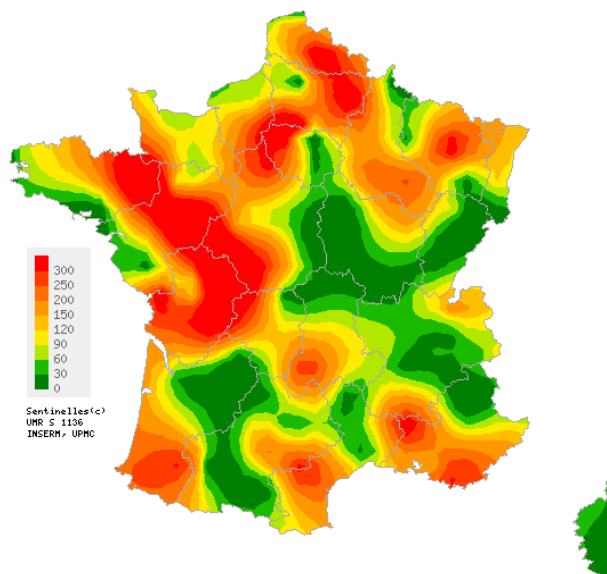
[1] Costagliola D, et al. A routine tool for detection and assessment of epidemics of influenza-like syndromes in France. *Am J Public Health*. 1991;81(1):97-9.

[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.

### Current activity



Consolidated data for the last 4 weeks

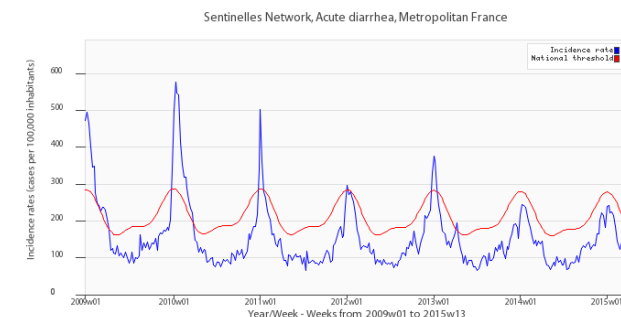


Week 2015w13

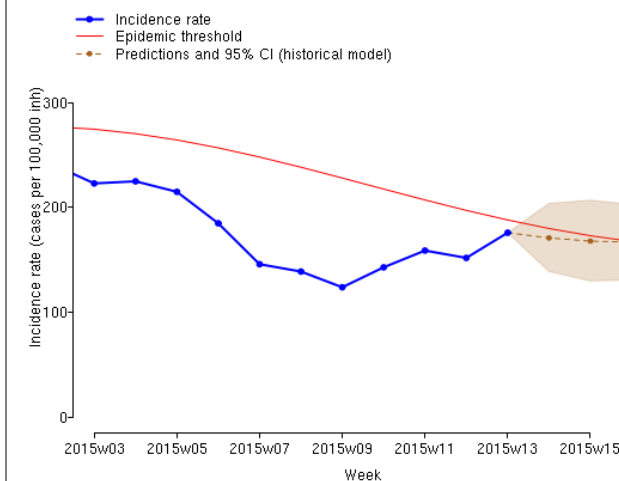
Map of data spatial interpolation.  
The interpolation is based on the departmental incidence.  
(cases per 100,000 inhabitants)

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)



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 03/23/2015 to 03/29/2015:

### CHICKENPOX Moderate activity

In metropolitan France, last week, the incidence rate of Chickenpox seen in general practice was estimated at 21 cases per 100,000 inhabitants (95% CI [13 ; 29]).

**Eight regional clusters** were reported, **high** in Bretagne (58 cases per 100,000 inhabitants), Languedoc-Roussillon (56), Alsace (51) and Corse (43) and **moderate** in Auvergne (36), Nord-Pas-de-Calais (33), Haute-Normandie (24) and Basse-Normandie (21).

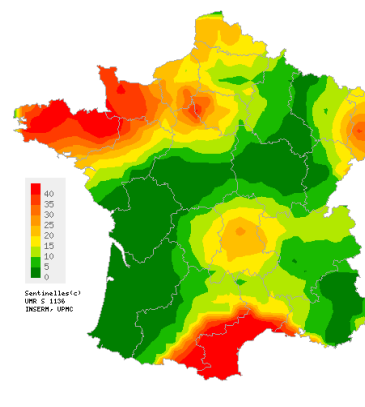
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\* The regional data are presented at the end of this report.

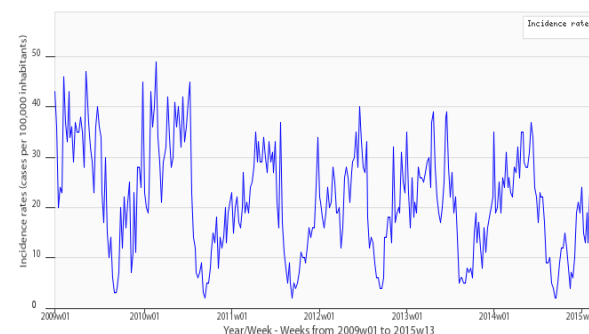
### Observed situations and National incidence trend

Week 2015w13 (in cases per 100,000 inhabitants)



Map of spatial data interpolation based on incidence rates at the « département » (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	2015w13 (non consolidated)	2015w12	2015w11
	Incidence rate estimation [95% confidence interval]	Incidence rate estimation [95% confidence interval]	Incidence rate estimation [95% confidence interval]
INFLUENZA-LIKE ILLNESS	86 [69 ; 103]	112 [98 ; 126]	154 [138 ; 170]
ACUTE DIARRHEA	176 [149 ; 203]	152 [135 ; 169]	159 [142 ; 176]
CHICKENPOX	21 [13 ; 29]	20 [14 ; 26]	19 [13 ; 25]

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

Regional incidence rates for week 2015w13 (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	71 [0 ; 172]	122 [0 ; 285]	51 [0 ; 180]
Aquitaine	5 [0 ; 22]	88 [0 ; 176]	6 [0 ; 39]
Auvergne	55 [0 ; 119]	92 [10 ; 174]	36 [0 ; 100]
Basse-Normandie	21 [0 ; 52]	87 [11 ; 163]	21 [0 ; 49]
Bourgogne	23 [0 ; 68]	49 [0 ; 132]	0 [0 ; 0]
Bretagne	143 [59 ; 227]	261 [159 ; 363]	58 [7 ; 109]
Centre	124 [30 ; 218]	153 [73 ; 233]	12 [0 ; 27]
Champagne-Ardenne	0 [0 ; 0]	158 [0 ; 339]	14 [0 ; 45]
Corse	28 [0 ; 81]	36 [0 ; 94]	43 [0 ; 114]
Franche-Comté	0 [0 ; 0]	18 [0 ; 60]	0 [0 ; 0]
Haute-Normandie	0 [0 ; 0]	163 [39 ; 287]	24 [0 ; 62]
Ile-de-France	112 [55 ; 169]	113 [46 ; 180]	17 [0 ; 41]
Languedoc-Roussillon	129 [0 ; 271]	130 [53 ; 207]	56 [8 ; 104]
Limousin	0 [0 ; 0]	155 [0 ; 323]	10 [0 ; 48]
Lorraine	55 [0 ; 125]	206 [56 ; 356]	0 [0 ; 0]
Midi-Pyrénées	25 [0 ; 51]	118 [44 ; 192]	16 [0 ; 43]
Nord-Pas-de-Calais	101 [12 ; 190]	270 [125 ; 415]	33 [0 ; 83]
Pays-de-la-Loire	172 [49 ; 295]	236 [93 ; 379]	4 [0 ; 14]
Picardie	19 [0 ; 80]	195 [17 ; 373]	0 [0 ; 0]
Poitou-Charentes	51 [0 ; 205]	382 [57 ; 707]	0 [0 ; 0]
Provence-Alpes-Côte-d'Azur	34 [0 ; 83]	203 [75 ; 331]	3 [0 ; 10]
Rhône-Alpes	155 [101 ; 209]	64 [30 ; 98]	14 [0 ; 29]

Table 2 : Incidence rates estimation with 95% confidence interval, for each indicator, for each French regions, for week 2015w13 .

## Réseau Sentinelles

### Inserm-UPMC UMR-S 1136

**Institut Pierre Louis d'Epidémiologie et de Santé Publique (IPLESP)**  
**Faculté de Médecine Pierre et Marie Curie, site Saint-Antoine**  
**27, rue Chaligny / 75571 Paris cedex 12**  
Phone. : 01 44 73 84 35 / Fax : 01 44 73 84 54  
Email : [sentinelles@upmc.fr](mailto:sentinelles@upmc.fr)

*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 1305 physicians, including 425 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).*

**Head of RS :** Thomas Hanslik  
**Deputy head of RS :** Thierry Blanchon  
**E-Surveillance system manager:** V. Roussel, N. Baroux  
**Information systems, biostatistics :** Clément Turbelin  
**Editor :** Yves Dorléans

Regional branch	Head of network	Regional manager
<b>Méditerranée</b>	Jean-Pierre Amoros	Lisandru Capai Alessandra Falchi
<b>Auvergne Rhône-Alpes Midi-Pyrénées</b>	Marianne Sarazin	Mélina Jacquet
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