Acute Diarrhea

ACUTE DIARRHEA
Epidemic threshold crossed

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 207 cases per 100,000 inhabitants (95% CI [181 ; 233]), higher than the previous week and **above** the epidemic threshold (183 cases per 100,000) [1]. The data available show a moderate increase in acute diarrhea activity last week, with an incidence rate above the epidemic threshold for two weeks. Current activity is slightly higher than the average activity observed in recent years at the same time. The persistence of exceeding the epidemic threshold is to be confirmed in the coming weeks to declare the onset of the winter epidemic of gastroenteritis.

At the regional level, the highest incidence rates were noted in: Provence-Alpes-Côte d'Azur (625 cases per 100,000 inhabitants, 95% CI [54 ; 1,196]), Grand Est (349, 95% CI [240 ; 458]) and Bretagne (273, 95% CI [131 ; 415]) *(the regional data are presented at the end of this newsletter)*.

Forecast: Based on the historical data [2], the level of acute diarrhea activity is expected to increase moderately over the next few weeks *(see the graph hereafter)*.

More information about this surveillance

Information about the statistical methods

[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.

2016w43   2016w44   2016w45   2016w46
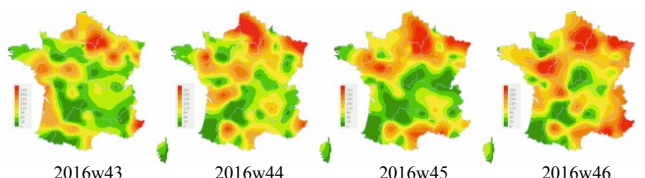
Consolidated data for the last 4 weeks
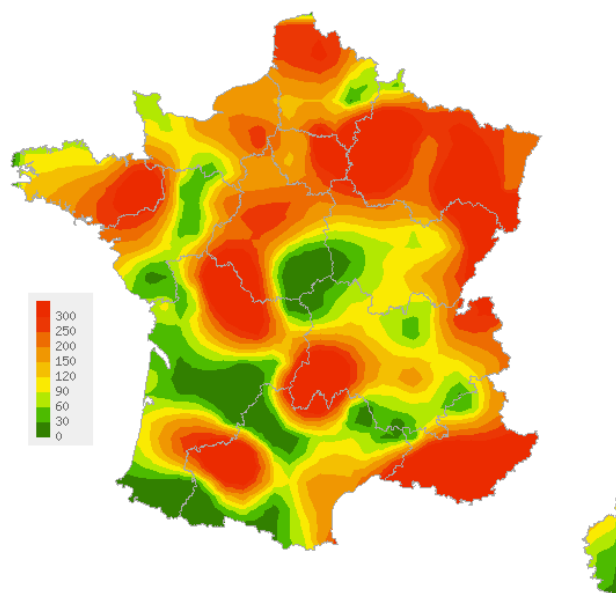
Map of spatial data interpolation
based on acute diarrhea incidence rates
at the « departement » (NUTS 3) level (per 100 000 inhabitants),
Sentinelles general practitioners, 2016w47
Maps available at http://www.sentiweb.fr
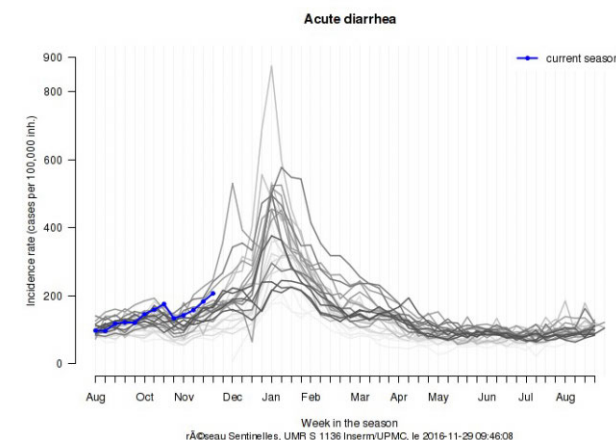
Incidence rate of acute diarrhea since 1990 (per 100 000 inhabitants), Sentinelles general practitioners.
In Blue : season 2016-2017 / in gray: seasons from 1990 to 2016 (the clearer the curve the older the data)
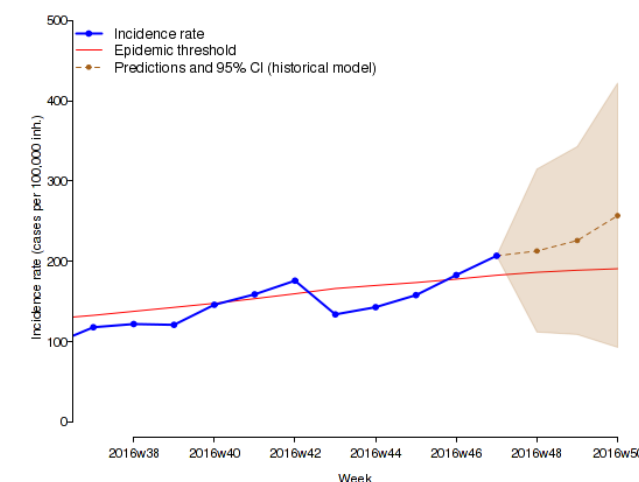
Predicted acute diarrhea incidence rate for the next three weeks based on a forecast model on historical data [2]
Sentinelles general practitioners

Influenza-like illness

INFLUENZA-LIKE ILLNESS
Low activity

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, the incidence rate of influenza-like illness seen in general practice was estimated at 32 cases per 100,000 inhabitants (95% CI [22 ; 42]), **below** the epidemic threshold (154 cases per 100,000) [1].
At the regional level, the highest incidence rates were reported in: Bretagne (62 cases per 100,000 inhabitants, 95% CI [11 ; 113]), Corse (53, 95% CI [0 ; 106]) and Bourgogne-Franche-Comté (36, 95% CI [1 ; 71]).*

Virological monitoring: Virological monitoring: since week 2016w40, date of start of monitoring, 375 samples were collected by the Sentinelles network practitioners (210 by general practitionners and 165 by pediatricians). Among the samples tested, 45 (12.6%) were positive for at least one influenza virus. The virus of type A(H3N2) was predominant, accounting for 82.2% (n = 37) of the positive samples. The influenza viruses detected were distributed as follows:
- 0   (0.0%) A(H1N1)pdm09 virus,
- 37 (10.4%) A(H3N2) virus,
- 8   (2.2%) 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-infection has been observed.
Last week, 46 samples were tested. Among them, 13 (28.3%) were positive for at least one influenza virus. Among the samples tested for three other respiratory viruses, the HRV was dominant with 82 (23 %) positive samples. Last week, a decrease in HRV activity has 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 deliveries (IMS-Health research partnership) [3], the activity of ILI may increase moderately and remain below threshold in the upcoming weeks *(see the graph hereafter).*
*More information about this surveillance*
*Information about the statistical methods*

[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.*

2016w43   2016w44   2016w45   2016w46

Consolidated data for the last 4 weeks
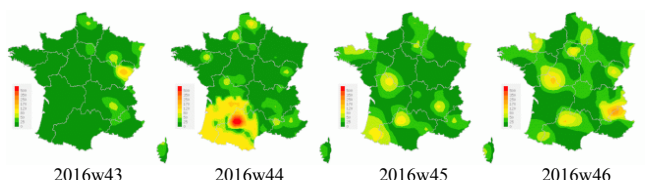
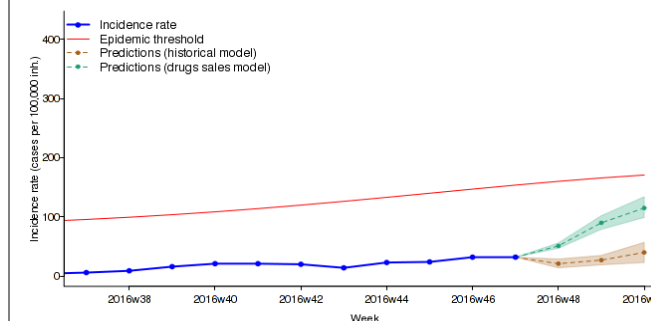Sentinelles(c)
UMR S 1136
INSERM, UPMC
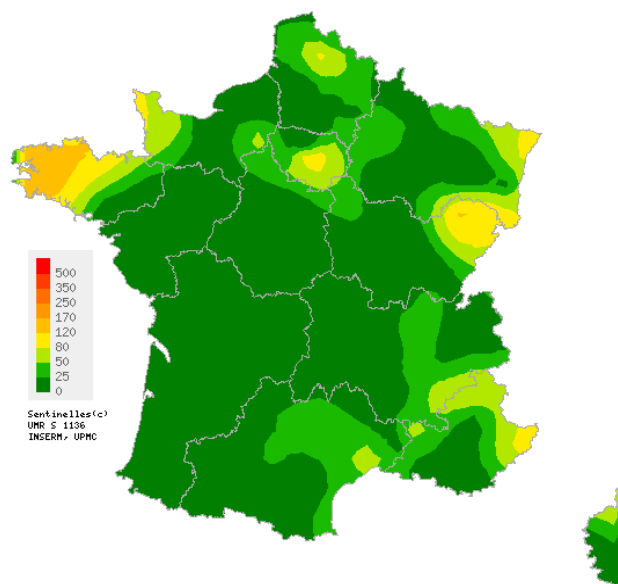
Map of spatial data interpolation based on Influenza-like illness incidence rates at the « departement » (NUTS 3) level (per 100 000 inhabitants), Sentinelles general practitioners, 2016w47
Maps available at http://www.sentiweb.fr
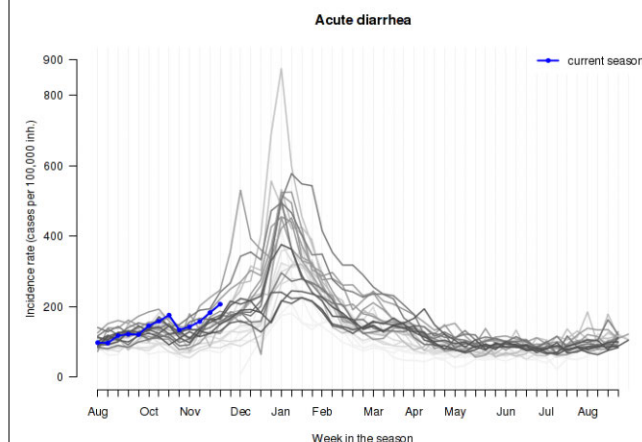
Incidence rate of influenza-like illness since 1984 (per 100 000 inhabitants), Sentinelles general practitioners.
In Blue: season 2016-2017 / in gray: seasons from 1984 to 2016
(the clearer the curve the older the data)

Predicted incidence rate for the next three weeks based on a forecast model on historical data [2] and on drug sales [3]
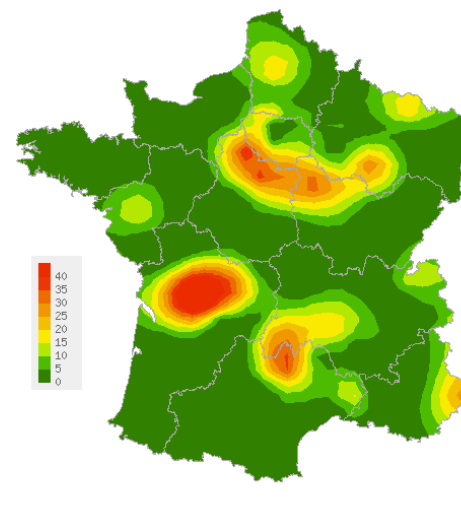Sentinelles general practitioners

CHICKENPOX
Low activity

In metropolitan France, last week, the incidence rate of Chickenpox seen in general practice was estimated at 11 cases per 100,000 inhabitants (95% CI [5 ; 17]).

**A single moderate regional cluster** was reported in Centre-Val de Loire (29, 95% CI [0 ; 61]). *

More information about this surveillance

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

Map of spatial data interpolation based on chickenpox incidence rates at the « departement » (NUTS 3) level (per 100 000 inhabitants), Sentinelles general practitioners, 2016w47

Maps available at http://www.sentiweb.fr
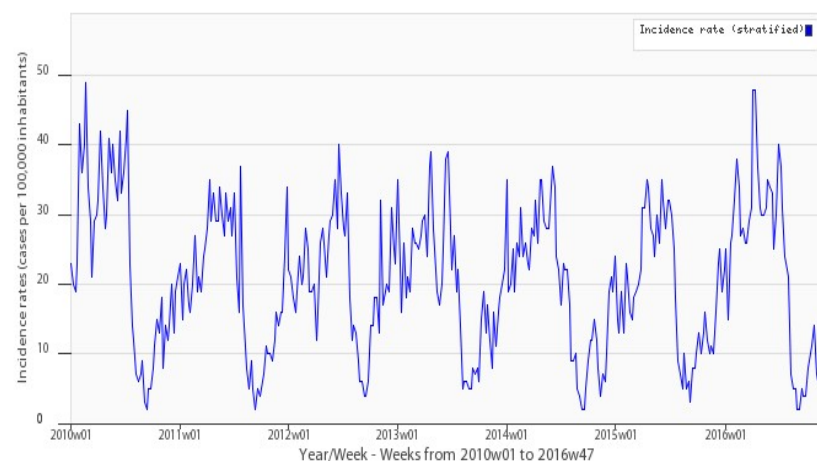
Chickenpox incidence rate
(per 100 000 inhabitants), Sentinelles general practitioners

National incidence rates (per 100 000 inhabitants) over the past 3 weeks	2016w47 (non consolidated)	2016w46	2016w45
	Incidence rate estimation [95% confidence interval]	Incidence rate estimation [95% confidence interval]	Incidence rate estimation [95% confidence interval]
INFLUENZA-LIKE ILLNESS	32 [22 ; 42]	32 [25 ; 39]	24 [17 ; 31]
ACUTE DIARRHEA	207 [181 ; 233]	183 [165 ; 201]	158 [141 ; 175]
CHICKENPOX	11 [5 ; 17]	7 [3 ; 11]	6 [2 ; 10]

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

Regional incidence rates for week 2016w47 (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	21 [2 ; 40]	130 [82 ; 178]	16 [0 ; 33]
Bourgogne-Franche-Comté	36 [1 ; 71]	168 [93 ; 243]	0 [0 ; 0]
Bretagne	62 [11 ; 113]	273 [131 ; 415]	0 [0 ; 0]
Centre-Val de Loire	7 [0 ; 16]	183 [110 ; 256]	29 [0 ; 61]
Corse	53 [0 ; 106]	102 [30 ; 174]	12 [0 ; 36]
Grand Est	33 [1 ; 65]	349 [240 ; 458]	13 [0 ; 33]
Hauts-de-France	35 [1 ; 69]	233 [149 ; 317]	13 [0 ; 33]
Ile-de-France	33 [5 ; 61]	223 [144 ; 302]	14 [0 ; 31]
Normandie	22 [0 ; 47]	172 [72 ; 272]	0 [0 ; 0]
Nouvelle-Aquitaine	2 [0 ; 6]	119 [0 ; 240]	8 [0 ; 35]
Occitanie	25 [0 ; 51]	133 [76 ; 190]	5 [0 ; 14]
Pays de la Loire	0 [0 ; 0]	95 [21 ; 169]	4 [0 ; 16]
Provence-Alpes-Côte d'Azur	30 [3 ; 57]	625 [54 ; 1196]	5 [0 ; 16]

Table 2 : Incidence rates* estimation with 95% confidence interval, for each indicator, for each French region, for week 2016w47.

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