

## ITALY

### Influenza Like Illness (ILI) sentinel surveillance: (<http://www.iss.it/iflu/>)



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Completeness of reporting in epiweek 48 was 95% (20/21 regions reporting).

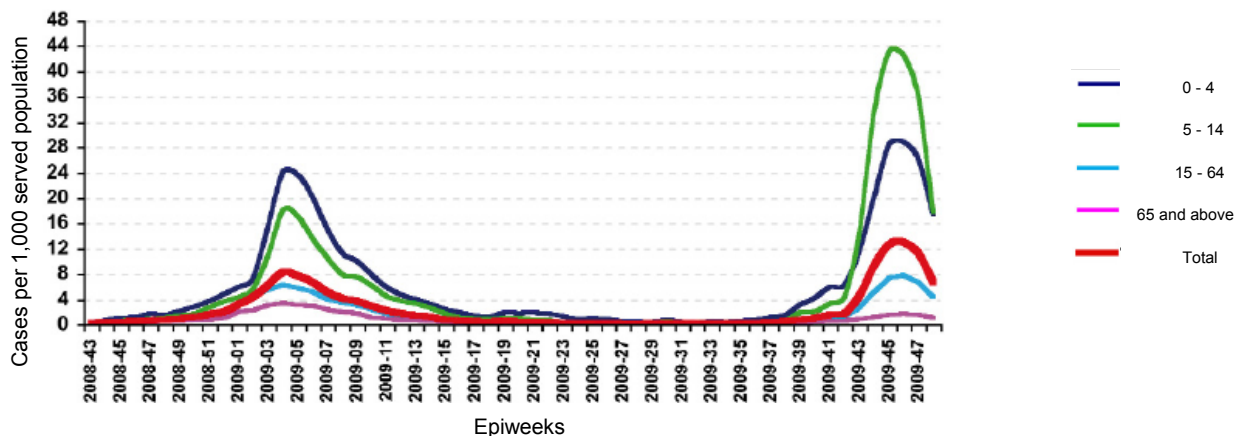
The incidence of ILI, as detected through sentinel surveillance, was 6.64 cases per 1,000, almost half the incidence reported in the last epiweek. In the age group 0-4 years the incidence was 17.44‰. Among patients aged 5-14 years the incidence was 17.79‰, among those aged 15-64 years it was 4.41‰, while the incidence among patients 65 years or more, was 1.14‰.

After having peaked in epiweek 46, the ILI epicurve is clearly descending.

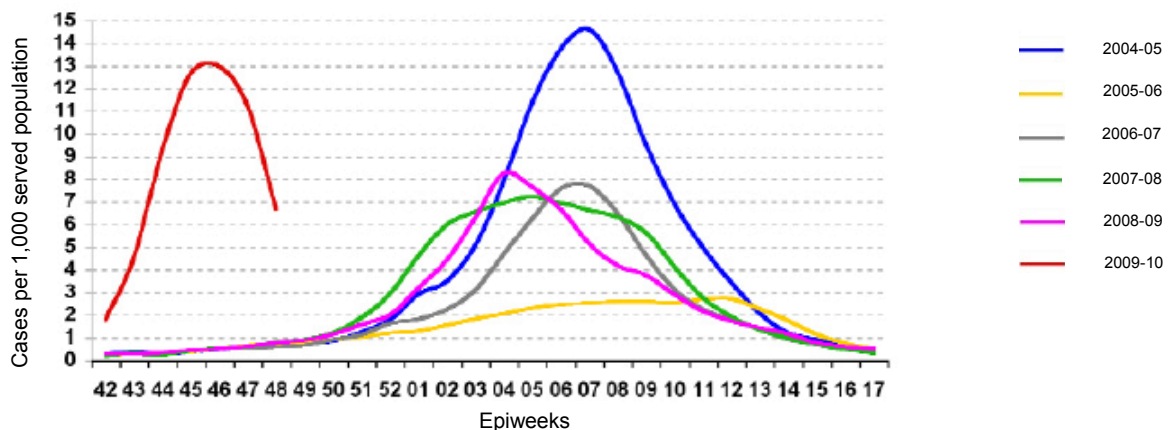
#### HIGHLIGHTS:

- ⇒ The epidemic curve for ILI cases in Italy is decreasing sharply.
- ⇒ The number of deaths due to H1N1 is decreasing.
- ⇒ The emergency room admissions for ARS are still decreasing.
- ⇒ Purchase of pain killers, antibiotics and antivirals was decreasing in epiweek 47.

### Incidence of ILI by age group, seasons 2008-09 and 2009-10



### Incidence of ILI in Italy, seasons 2004-05 to 2009-2010

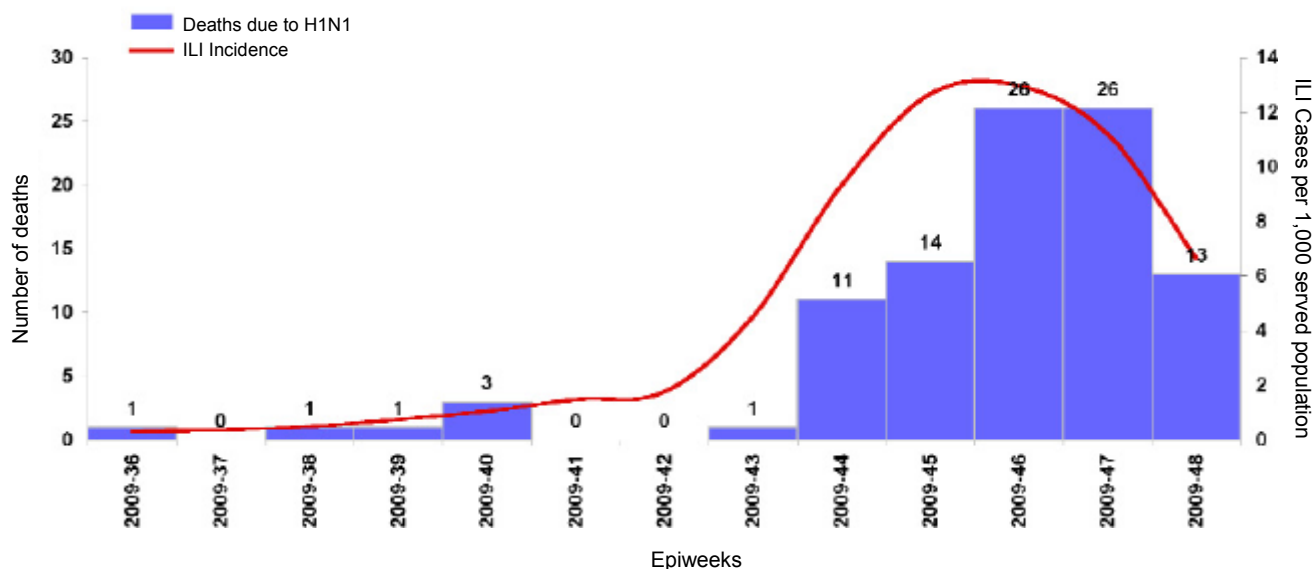


#### ILI surveillance methodology:

The Italian surveillance system for influenza is based on a network of sentinel community based physicians in the 21 regions and autonomous provinces of the country. Incidence rates are therefore not based on consultations but on the served population of each reporting physician each week. Incidence data per 1,000 patients is provided globally and by age group. For more information on the Influnet surveillance system consult the website <http://www.iss.it/iflu/> (in Italian).

# Estimated cases of ILI and H1N1 related deaths

## H1N1 related deaths per epiweek



### Estimated cases of ILI in Italy

Epiweek 2009	Estimated cases
43	270,000
44	558,000
45	760,000
46	780,000
47	670,000
48	400,000
<b>Total</b>	<b>3,438,000</b>

Data is constantly updated as reporting completeness increases. Therefore figures for previous epiweeks will vary among FluNews bulletins, with the latest being the most reliable.

### Surveillance of H1N1 mortality:

In epiweek 48, 13 deaths were reported. A decrease compared with the three previous epiweeks. 43.3% of deaths were among women. 10.3% were among children under the age of 14 and 21.6% among adults over 65.

The most affected Italian region was Campania where 27.8% of all H1N1 deaths have occurred, followed by Lazio and Calabria.

89.7% of the people who died had a pre-existing risk factor.

With the decrease in ILI incidence the number of deaths is decreasing. In Epiweek 48, 13 deaths were reported due to H1N1.



### Mortality Data:

Since the 19th of November, a special surveillance for hospitalized and severe cases as well as fatalities due to Influenza A H1N1 was activated in Italy.

Each region compiles online individual case forms as severe cases and deaths occur and aggregate data weekly.

# Emergency room admission trends

## Admission to Emergency Rooms (ERs) for acute respiratory syndromes (ARS) sentinel surveillance

Completeness of reporting in epiweek 48 was 100% (13/13 regions presently reporting). See the methods box below for further details.

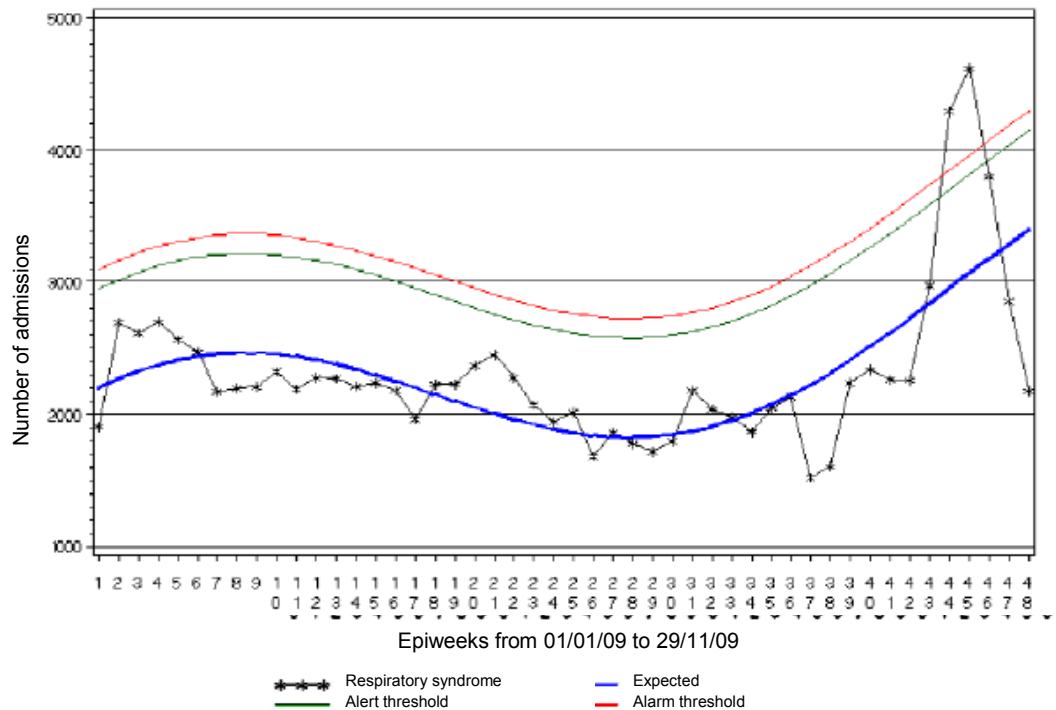
In the 48th epiweek, 6% of all people who accessed the sentinel ERs were diagnosed with acute respiratory syndrome, of those 24% were admitted to hospital.

Compared with the previous epiweeks, the number of ER admissions has decreased and no epidemic threshold was breached both globally and by age group.

Compared with the previous reporting period, the proportion of ER admissions for ARS is stationary (from 7% to 6%).

## Admissions for acute respiratory syndromes in sentinel ERs, all age groups

ICD9-CM CODES: 462, 466.0, 466.1, 480–487, 786.0, 786.2, 786.5, 793.1 e 780.6



### LIMITS:

The system is influenced by the different ways of accessing emergency services in the country. However it captures in a timely fashion the increase in admissions for acute respiratory syndromes that is an indirect indicator of increased activity of influenza viruses.



### ER admission surveillance methodology:

A surveillance network was established among Italian emergency services that had an automatic recording system for admissions with immediate regional updates as of August 2009. 15 of the 21 Italian regions adhered (71.4%). Of these 13 identified at least one emergency service that would send data for surveillance and constitute to date the reporting units of the system.

The surveillance system is based on the weekly transmission of the total number of ER admission to the regional health institutions. They select those whose main diagnosis is coded as an acute respiratory syndrome based on the ICD9-CM coding system. One year historical data, when available, was received by the adhering regions and the estimated number of weekly admission, alert and alarm epidemic thresholds were calculated using a time series model (cyclic regression analysis) that takes into account the seasonality of the disease. Each week the actual number of admissions is compared with the estimated one and any threshold breach documented.

# Drug purchase trends

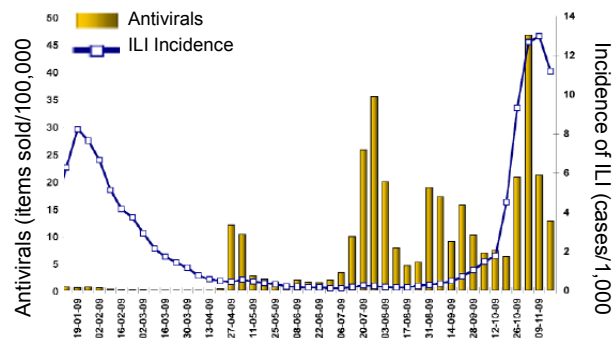
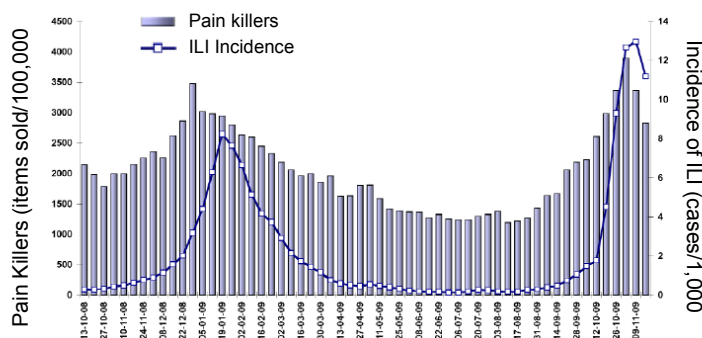
## Drug purchase trends on a representative sample of 2,500 pharmacies (epiweek 47)

Drug purchase data is always reported one week after the current epiweek, therefore all comparisons with the ILI surveillance data reflect the epiweek before the reporting period of this bulletin.

Between the 16th and 22nd of November, the purchase of antibiotics and pain killers increased by 20% and 32% respectively compared with the same period last year. However when compared with the previous epiweek, both decreased (by 8% and 16% respectively).

Antiviral purchase was 13 items/100,000 inhabitants, a 39% decrease compared with the previous epiweek, consistently with the decrease in the incidence of ILI. The Southern and Central regions of Italy still report the highest purchase rates of antivirals but are both decreasing consistently with national data (in the last epiweek a 48% decrease in the Central and 37% in the Southern regions of the Country was recorded).

### Weekly trends in the purchase of painkillers and antivirals



#### Drug purchase monitoring methodology:

Drug purchase data is always reported one week later than the surveillance week. Data reports the drugs classified by the Italian system as class A (reimbursable by the Italian MoH), class C (non-reimbursable) and self medication drugs purchased from a representative sample of 2,500 public and private pharmacies in Italy. Regional purchases for each drug item by ATC code is estimated based on these observations. For surveillance purposes, the drugs monitored are antibiotics (ATC J01), pain killers (ATC N02B), and antivirals (ATC J05AH). Analysis calculates items sold per 100,000 inhabitants, this indicator calculates the intensity of use of a specific class of drugs. Denominators are based on population estimates as of January 2009 (source ISTAT).

The trend in drug consumption is based on the Compound Annual Growth Rate: where n is the number of months in the reporting period,  $item_{t+n}$  and  $item_t$  the number of items/100,000 inhabitants purchased in the first and last month. Analysis is conducted by the drug epidemiology department of the Italian National Institute of Health (Iss-Cnesps) on OsMed data.

$$\left( \sqrt[n]{\frac{item_{t+n}}{item_t}} - 1 \right) * 100$$

#### Acknowledgements

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