

## ITALY

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



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Completeness of reporting in epiweek 47 was 95% (20/21 regions reporting).

The incidence of ILI, as detected through sentinel surveillance, was 11.38 cases per 1,000. In the age group 0-4 years the incidence was 26.65‰. Among patients aged 5-14 years the incidence was 36.47‰, among those aged 15-64 years it was 6.69‰, while the incidence among patients 65 years or more, was 1.36‰.

The epidemic curve has started its descent. Notwithstanding, the observed incidence of 11.38‰ is still higher than all previous influenza seasons, except 2004-05.

#### HIGHLIGHTS:

⇒ The epidemic curve for ILI cases in Italy has started its descent.

⇒ The emergency room admissions for ARS is still decreasing.

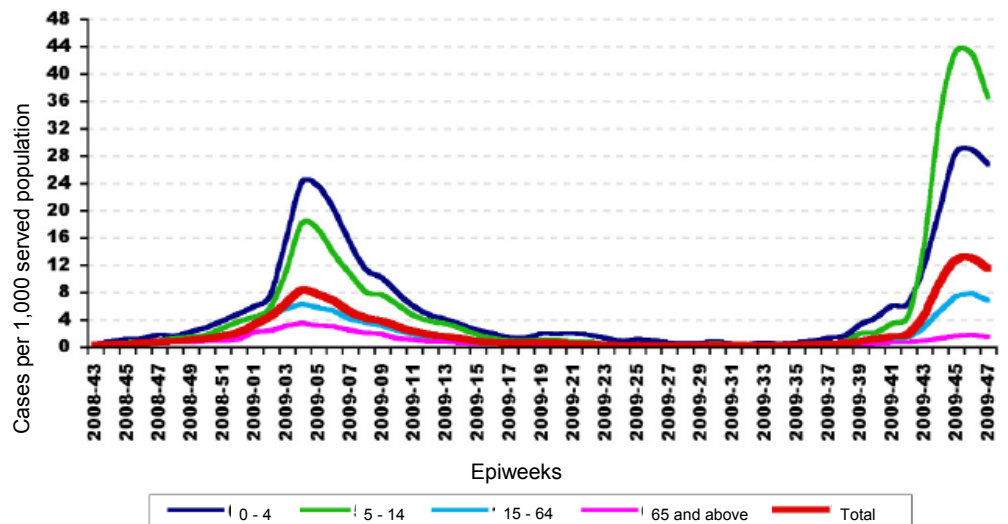
⇒ Purchases of pain killers, antibiotics and antivirals was decreasing in epiweek 46.



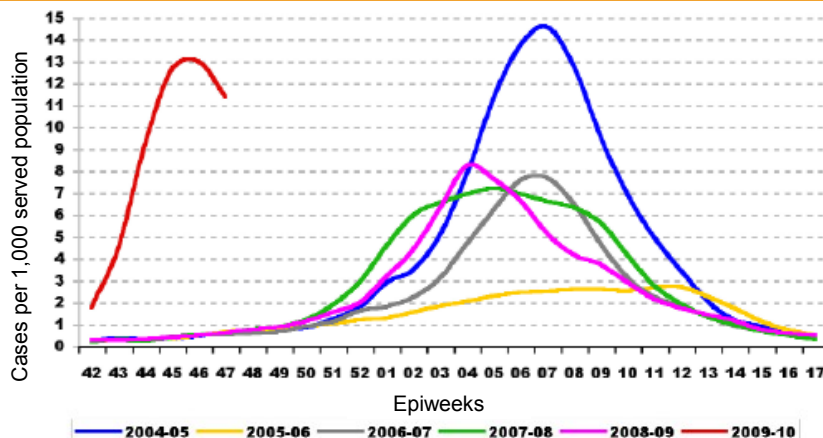
#### ILI surveillance methodology:

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).

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



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



#### Estimated cases of ILI in Italy

Epiweek 2009	Estimated cases
43	270,000
44	557,000
45	760,000
46	780,000
47	680,000
<b>Total</b>	<b>3,047,000</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.

# Emergency room admission trends

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

Completeness of reporting in epiweek 47 was 100% (13/13 regions presently reporting). See the methods box below for further details.

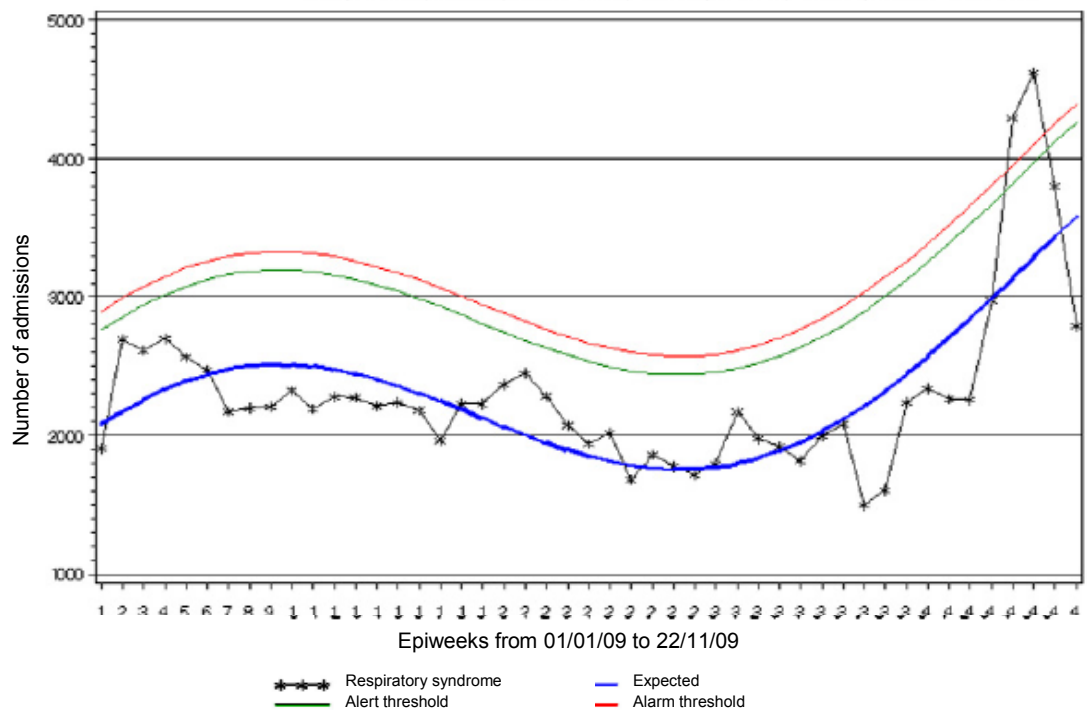
In the 47th epi-week, 7% of all people who accessed the sentinel ERs were diagnosed with acute respiratory syndrome, of those 23% were admitted to hospital (an increase compared with the previous epiweek).

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 have decreased from 10% to 7%.

### 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

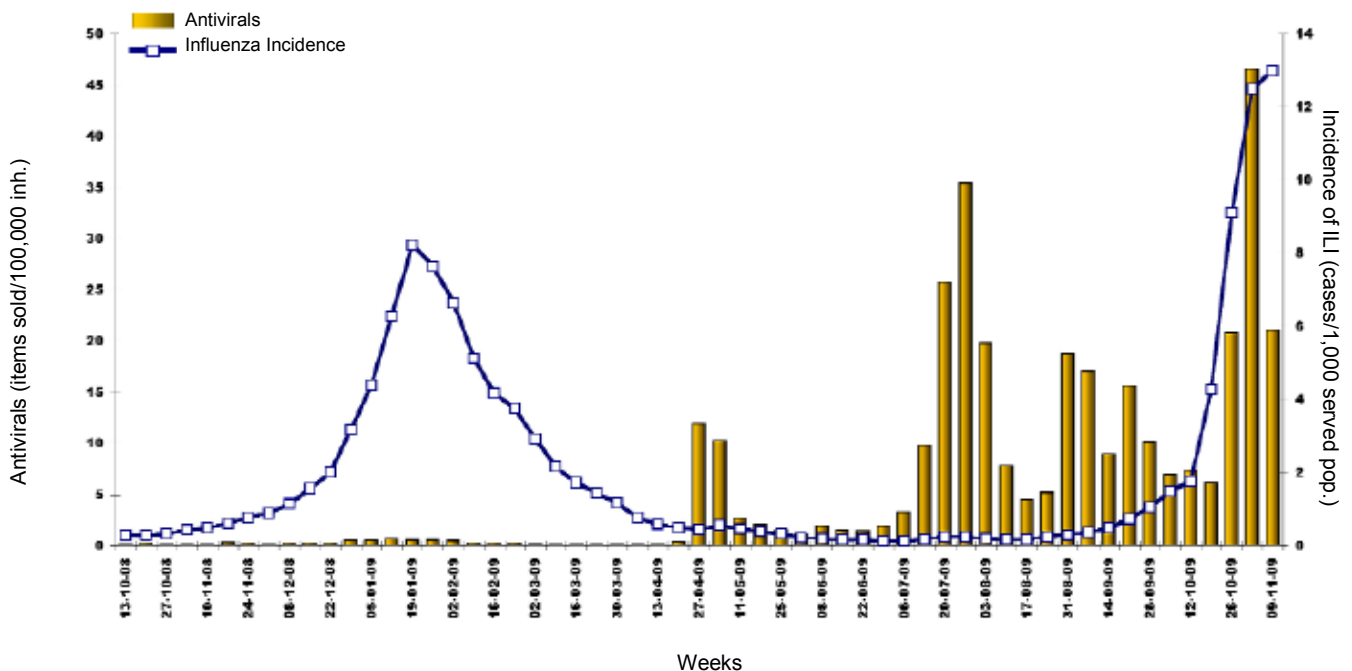
## Drug purchase trends on a representative sample of 2,500 pharmacies (epiweek 46)

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

In epiweek 46, a 34% increase in the purchase of antibiotics and a 69% increase in the purchase of pain killers have been recorded compared with the same period last year. With the mean monthly variation decreasing for both antibiotics (-7%) and pain killers (-14%).

Antiviral purchase was 21 items/100,000 inhabitants, less than half that observed in the previous epi-week, consistently with the observed probable plateau in the incidence of ILI. The Southern and Central regions of Italy report the highest purchase rates of antivirals.

### Weekly increase in the purchase of antivirals



#### Drug purchase monitoring methodology:

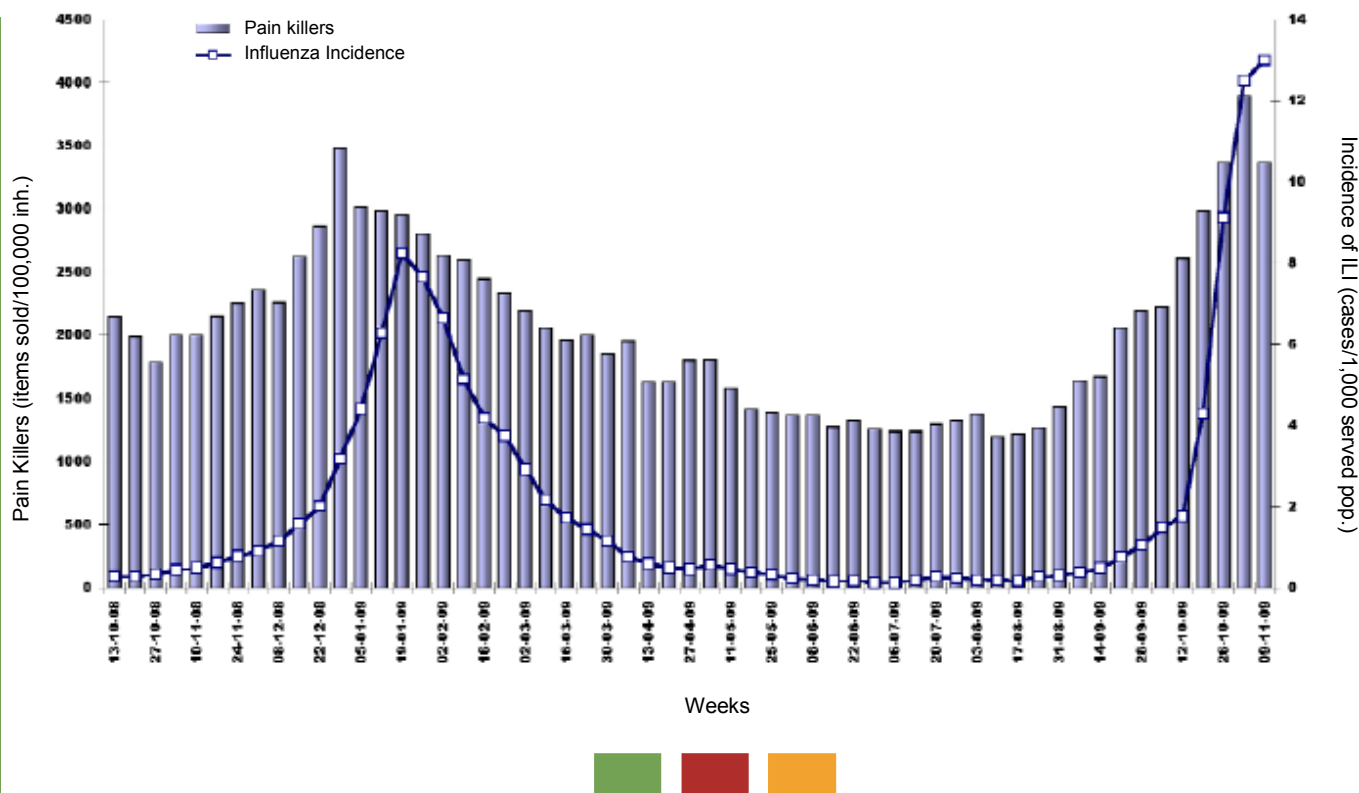
Drug purchase data is always reported one week later than the surveillance week. Data reports the drugs classified by the Italian system as class A (reimbursable by the Italian MoH), class C (non-reimbursable) and self medication drugs purchased from a representative sample of 2,500 public and private 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.

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

## Drug purchase trends on a representative sample of 2,500 pharmacies (epiweek 45)

### Weekly increase in the purchase of pain killers



### TAKING HOME POINTS:

- ⇒The epidemic curve for ILI cases in Italy has started its decrease.
- ⇒The emergency room admissions for ARS is still decreasing but the proportion of ER patients that required hospital admission has increased.
- ⇒Purchases of antibiotics, antivirals and pain killers as of epiweek 46 were decreasing.

### Acknowledgements

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