GENERALITAT VALENCIANA

CENTRO SUPERIOR DE INVESTIGACIÓN EN SALUD PÚBLICA

Global Influenza Hospital Surveillance Network

The "Global Influenza Hospital Surveillance Network" (GIHSN): a step forward
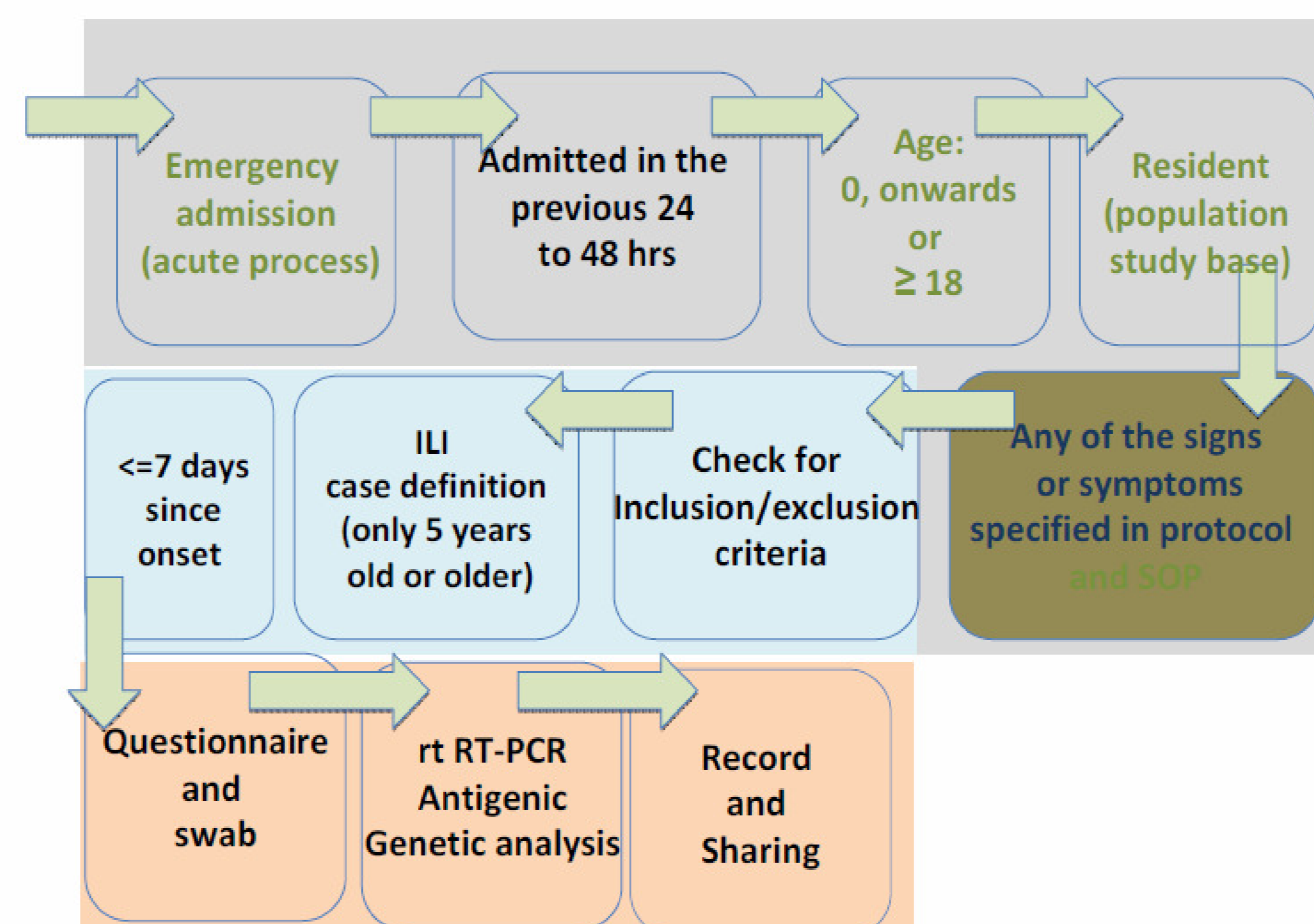
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BACKGROUNG

Because the influenza epidemics vary between years and between countries, networks of quality surveillance systems are relevant tools to get a better understanding of influenza and of the effect of influenza vaccination programs. While surveillance systems already exist, very few focus on specific outcomes (laboratory confirmed influenza) and on serious disease requiring hospitalization. In order to fill this gap, a public-private partnership was initiated in 2012. .
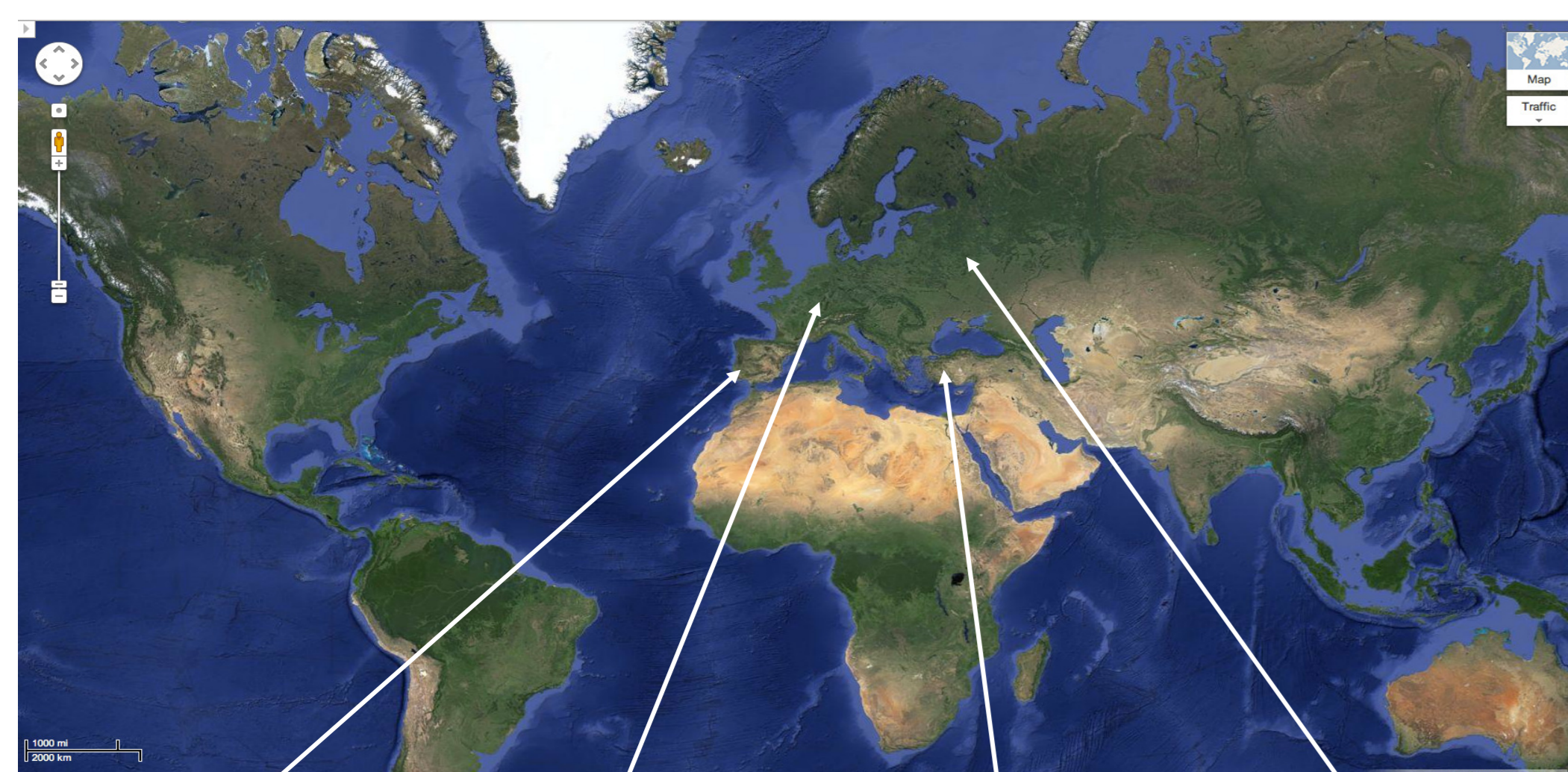

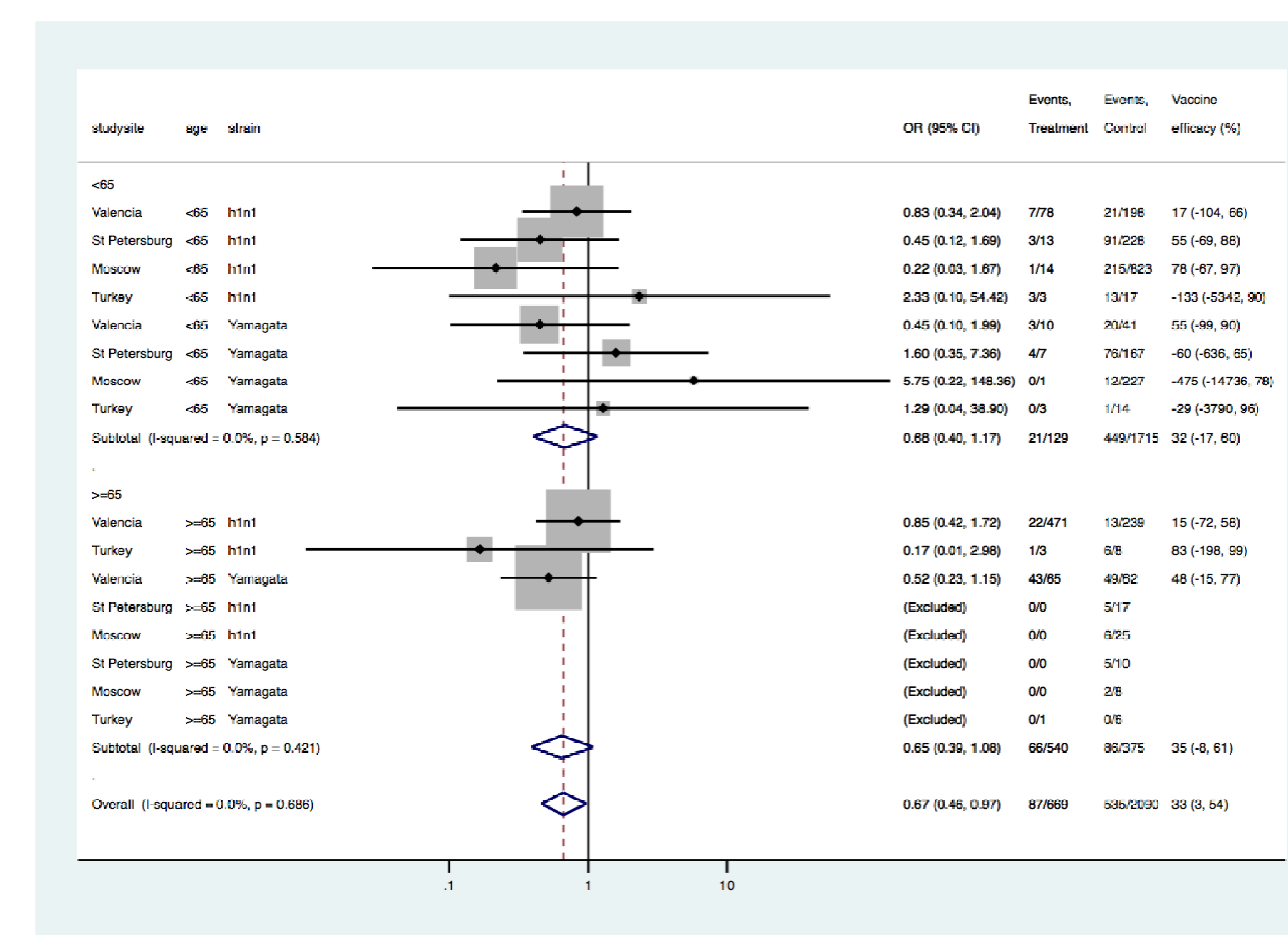5 hospitals in Spain, 1 in Valencia, 2 in Castellón, 2 in Alicante

5 hospitals in France, 2 in Paris, 1 in Montpellier, 1 in Limoges, 1 in Lyon

7 hospitals in Turkey, 3 in Istanbul, 2 in Ankara, 1 in Edirne, 1 in Bursa

4 hospitals from the Russian Federation, 3 in St. Petersburg, 1 in Moscow

METHODS

The network is composed of country sites supervising a group of 1-5 hospitals each. Each site follows a standard core protocol. In each hospital, patients admitted to the hospital during the influenza season with any antecedent of influenza like illness (ILI) in the preceding 7 days are swabbed. All samples are analyzed by RT-PCR for confirmation.

Influenza cases are compared with negative controls to assess vaccine effectiveness.
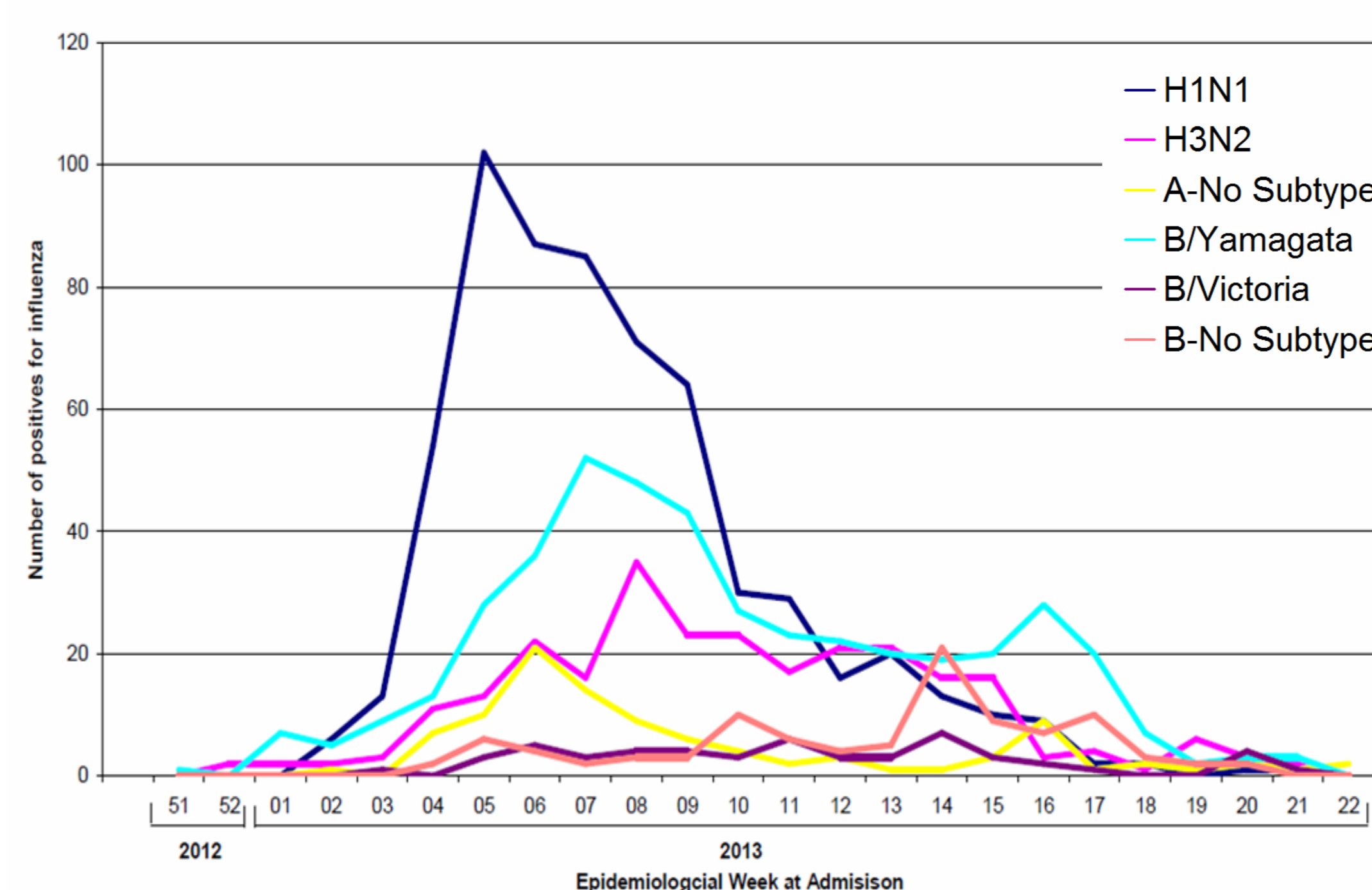

RESULTS

During the 2012 - 2013 influenza season, the network included 21 large hospitals (5 in Spain, 5 in France, 4 in the Russian Federation and 7 in Turkey). 5,906 patients were admitted to the participating hospitals with an ILI in the last 7 days. More than 1,000 laboratory confirmed influenza cases were identified. The main circulating strain was H1N1 (40%) followed by B and H3N2.

	Number of ILI patients positive for influenza and with known vaccinated status included in the study		Number of ILI patients negative for influenza and with known vaccinated status included in the study	
	Total	Vaccinated [a]	Total	Vaccinated [a]
	n	n (%)	n	n (%)
Spain	236	82 (34.7)	1271	504 (39.7)
St. Petersburg	652	11 (1.7)	996	12 (1.2)
Moscow	471	6 (1.3)	921	17 (1.9)
Turkey	36	5 (13.9)	19	3 (15.8)
France	150	50 (33.3)	282	153 (54.3)
Overall	**1545**	**154 (10.0)**	**3489**	**689 (19.8)**

[a] Vaccinated patients were vaccinated 14 days or more before onset of ILI symptoms

Vaccine effectiveness was estimated by strain and age group. For example, the vaccine effectiveness in adults against hospitalizations from influenza and related complications against the B/Yamagata strain in Spain was 48% (95%CI: -15% - 77%) this year.

CONCLUSIONS

The first year of this network already produced relevant, useful and timely results. Additional countries already agreed to join the network next season. The experience so far has been very rewarding. However, additional partners and contributors will be needed to strengthen this initiative and ensure its sustainability for the benefit of the influenza scientific knowledge and global public health.