

Pandemic H1N1v and Seasonal Influenza and Pneumococcal Vaccination Coverage in French HIV-Infected Adults during 2009 Pandemic: ANRS 2H Study

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BACKGROUND AND METHODS

The ANRS 2H study aimed at estimating incidence and describing presentation of pandemic 2009 H1N1 flu in HIV infected patients.

Among 2750 patients randomly selected from the active list of 40250 patients regularly followed-up in the 33 participating ANRS clinical sites, 956 patients accepted to participate.

54 patients presented an influenza-like illness (ILI) defined as fever $\geq 37.8^{\circ}\text{C}$ and cough or sore throat and the incidence rate was 4.92 % (95% CI: 4.08 - 5.75). All ILI cases occurred between November 2009 and May 2010.

24 patients presented a severe case of flu defined as hospitalization or death occurring during the 14 days following ILI (exhaustive data collection).

Annual influenza vaccination and pneumococcal vaccination are recommended for all HIV infected patients in France. In September 2009, two injections of an adjuvanted pandemic H1N1 flu vaccine (Pandemrix[®]) were recommended for all HIV infected patients by the French authorities. Recommendation for trivalent seasonal flu vaccine and pneumococcal vaccination was re-enforced.

In the ANRS 2H trial, information regarding monovalent H1N1v pandemic flu vaccine in 2009-2010, seasonal flu vaccine and pneumococcal in 2008-2009 and in 2009-2010 were recorded.

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RESULTS

Table 1. Characteristics of patients in ANRS 2H study

	n=956	
Male n (%)	651	(69)
Age in years, median (IQR)	47	(41-54)
Mode of infection, n (%)		
• Men having sex with men	390	(41)
• Heterosexual contact	395	(42)
• Injecting drug user	81	(9)
• Transfusion	27	(3)
• Unknown or other	53	(6)
Clinical stage, n (%)		
• A	523	(56)
• B	174	(19)
• C	239	(26)
CD4+ cells/mm ³ , median (IQR)		
• nadir	204	(82-299)
• current	543	(401-740)
HIV-1 RNA log ₁₀ copies/ml		
• mean (SD)	1.9	(0)
• patients with HIV-1 RNA < 50 cp/ml, n (%)	802	(84)
Patients with at least one co-morbidity, n (%)	136	(14)
Patients currently smoker, n (%)	342	(37)

Seasonal influenza and Pneumococcal vaccination (2009-2010)

324 patients (35%) were vaccinated against seasonal flu in 2009-2010 with a peak of vaccination in October 2009. Characteristics related to vaccination (yes versus no) were the proportion of patients with controlled HIV-1 viremia (< 50 cp/ml) (90% vs 81%, p=0.0009), gender (male : 79% vs 64%, p<0.0001) and age (median 50 vs 46 years, p<0.0001).

342 patients (37%) were vaccinated against pneumococcal in 2009-2010 with a peak of vaccination in September-October 2009. Characteristic related to vaccination (yes versus no) was the gender (male : 73% vs 67%, p=0.0351).

CONCLUSION

In France, pandemic 2009 H1N1 vaccine coverage was higher in HIV infected adults (45% in ANRS 2H Study) than in the French general population (8.6%). Despite re-enforced national recommendations, seasonal flu and pneumococcal vaccination coverage remained low (respectively 35 and 37%). Increased coverage in 2009-2010, as compared to 2008-2009, could reflect specific awareness of influenza vaccination in the context of H1N1 pandemic. Nevertheless, patients vaccinated for seasonal and pandemic flu were more frequently male, older and had a better control of HIV-1 viral load. Therefore, specific attention remains to be paid to other groups in need, so that coverage may reach desirable levels in those especially frail patients.

Influenza A H1N1 vaccination (2009-2010)

419 patients (45%) received at least one H1N1 pandemic vaccine dose (adjuvanted in most cases), 48 (12%) received 2 doses. Vaccination period peaked in November-December 2009.

Characteristics related to vaccination (yes versus no) were the proportion of patients with controlled HIV-1 viremia (< 50 cp/ml) (89% vs 80%, p=0.0003), gender (male : 75% vs 65%, p=0.0010) and age (median 48 vs 47 years, p=0.0218).

203 patients (21%) were vaccinated against H1N1 and seasonal influenza. Among them, 109 patients (54%) received additionally the pneumococcal vaccine.

310 patients (32%) received no vaccine.

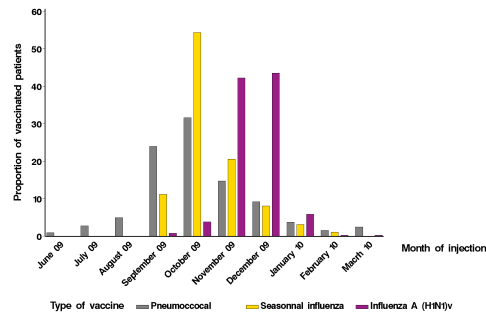


Figure 1. Period of vaccination in ANRS 2H study

From 2008-2009 to 2009-2010

Vaccination coverage against pneumococcal and seasonal flu increased significantly from 2008-2009 to 2009-2010 : respectively from 5 to 37% (p<0.0001) and from 18 to 35% (p<0.0001).

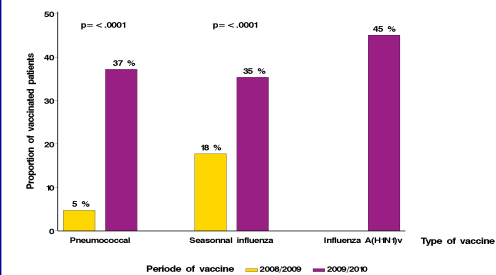


Figure 2. Vaccination according to vaccine type and period of vaccination