

## Seasonal Flu Vaccine

What is the relevance of present seasonal flu vaccine (2009) in light of the current swine flu pandemic? The present flu vaccine composition was recommended by WHO in anticipation of the prevalent strain expected to circulate in the flu season of this year. Because of the swine flu pandemic, there is confusion regarding predominant prevalent strain at this time.

A unique feature of influenza epidemiology was that once an antigenic variant emerged, it displaced completely the pre-existing strain. Thus, when H1N1 strains arose in 1946-47, they became the only viruses causes human disease, and the previous H0N1 strains disappeared completely. The H1N1 strains were displaced by H2N2 strains in 1957, and they, in turn by H3N2 strains in 1968. But this rule has not been observed in recent years. H3N2 strains continued to be prevalent inspite of pandemics of Hsw1N1 strains in 1976 and H1N1 strains in 1977.

So, at present is there any data/evidence which suggest the co-existence of both the seasonal strain and the pandemic swine flu strain?, or, is swine flu strain is the predominant strain?

If swine flue strain is the predominant circulating strain then seasonal flu vaccine is useless and it should not be used. What is the opinion of IAP COI in this regard?

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### REPLY

Novel H1N1 means the so called pandemic swine flu virus. Seasonal flu vaccine (2009) means vaccine containing H1N1 strain of yesteryear and not novel H1N1 strain. Novel H1N1 has replaced to the tune of

90% all the flu viruses in areas where there has been documented novel H1N1 outbreak. This is also evident by the sero-epidemiological survey done in areas like Pune, where nearly 25% of the general population was found to be seropositive for the novel H1N1 strain (most of them asymptomatic though). Hence in such areas it is futile to use seasonal flu vaccine made for use during 2009. This vaccine is of no use now as we await 'seasonal' vaccine for the year 2010.

In 2009, after the pandemic with novel H1N1, there was need to protect against the new virus (not covered by seasonal vaccine 2009). This is the reason why a monovalent novel H1N1 vaccine was ordered by WHO for immediate use in world. Now we have more than 5 monovalent novel H1N1 vaccines available in the world, including one in India (licensed for use only for >18 years of age individuals). These vaccines have been used in millions in the developed world since last 6 months. This is also the reason why WHO has now declared that novel H1N1 strain will be the only H1N1 strain in the seasonal vaccine, besides the H3N2 and the B serotypes for this year (2010).

Till the new trivalent vaccine containing novel H1N1 is available, one has to use monovalent H1N1 vaccine to protect against novel H1N1 infection. A live nasal monovalent novel H1N1 vaccine is going to be marketed soon in India for the use from 3 years of age onwards, and we hope to receive the 'seasonal' 2010 vaccine (containing the novel H1N1 strain) by September 2010. The IAP COI recommendations on use of any flu vaccine remain same as in past (including the novel H1N1 vaccine – monovalent or trivalent)(1)

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### REFERENCE

1. Singhal T, Amdekar YK, Agarwal RK. IAP Committee on Immunization 2007-2008. IAP Guidebook on Immunization. New Delhi: Jaypee Brothers; 2009.