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Ministry of Health and Family Welfare  
Directorate General of Health Services  
(Emergency Medical Relief)

Seasonal Influenza: Guidelines for Vaccination with Influenza Vaccine

1. Background

Seasonal Influenza is caused by a number of circulating Influenza viruses such as Influenza A H1N1, H3N2, Influenza B etc. While declaring the Pandemic to be over in August 2010, World Health Organization conveyed that Pandemic Influenza A (H1N1) virus that caused Pandemic [2009-2010] would circulate as Seasonal Influenza virus and would continue to do so for years to come.

Seasonal Influenza may affect all age groups; globally incidence is higher in young children and those above 65 years. Health workers and persons with comorbid conditions (such as lung disease, heart disease, liver disease, kidney disease, blood disorders, Diabetes) and immuno-compromised persons are at higher risk. Influenza may have an aggressive course in extremes of age and in co-morbid conditions.

2. Evidence Base for Vaccination

World Health Organization recommends vaccination of high risk groups with Seasonal Influenza Vaccine. Vaccination is an important tool to prevent infection and severe outcomes caused by influenza viruses. Over the years, evidence has been established through research globally on the protection provided by Seasonal Influenza Vaccine, in particular for those at higher risk. It helps protect women during pregnancy and their babies up to six months and among vaccinated, reduction in influenza related hospitalizations across all age groups is expected.

In India, available information suggests that in the post pandemic period (2012-2015) Seasonal Influenza has affected persons mainly in all age groups. Analysis of mortality of laboratory confirmed cases suggest that about 50 % of those affected had co-morbid conditions.

### 3. Guidance for the States/ UTs on Seasonal Influenza Vaccination

#### 3.1 Persons recommended for vaccination

Based on epidemiological evidence, the advice received from World Health Organization, Indian Council of Medical Research and subject experts, Government of India recommends vaccination of High Risk Groups with Seasonal Influenza Vaccine. The recommendations for prioritized groups are as under:

- Health Care workers, working in hospital / institutional settings (doctors, nurses, paramedics) with likelihood of exposure to Influenza virus should be vaccinated. This includes those:
  - All medical and paramedical personnel working in casualty/ emergency department of identified hospitals treating Influenza cases.
  - All medical and paramedical personnel working in ICU and Isolation Wards managing influenza patients.
  - All personnel identified to work in screening centres that would be set up for categorization of patients during Seasonal Influenza outbreak.
  - Treating/managing the High Risk Group.
  - Laboratory personnel working in virological laboratories testing suspected Influenza samples.
  - Rapid Response Team members identified to investigate outbreaks of Influenza.

- Drivers and staff of vehicles/ambulances involved in transfer of Influenza patients.
- Vaccine is recommended for pregnant women, irrespective of the duration of pregnancy.
- Vaccine is recommended for:
  - persons with chronic illnesses such as Chronic Obstructive Pulmonary Disease, Bronchial Asthma, Heart disease, Liver disease, Kidney disease, Blood disorders, Diabetes, Cancer and for those who are immunocompromised.
  - for children having chronic diseases like Asthma; Neuro developmental condition like cerebral palsy, epilepsy stroke, mentally challenged etc; heart disease like CHI), CHF; blood disorders like Sickle cell disease; diabetes, metabolic disorder, all immunocompromised children, malignancy receiving immuno-suppressive therapy, kidney disorder and liver disorder.
- Vaccine is desirable for
  - elderly individuals ( $\geq 65$  years of age)
  - children between 6 months to 8 years of age.

### 3.2 Selection of Vaccine

#### 3.2.1. Seasonal Influenza Vaccine recommended for the winter season of 2016-2017

The Indian Council of Medical Research (ICMR) has recommended on the following Seasonal Influenza vaccine composition, for the period 2017-2018. The recommended Trivalent vaccine should have:

- an A/Michigan/45/2015 (H1N1)pdm09-like virus
- an A/Hong Kong/4801/2014 (H3N2) – like virus
- a B/Brisbane/60/2008-like virus

It may be noted that the ICMR recommendations are in line with those recommended by WHO for Seasonal Influenza vaccine composition 2017-18. This vaccine is expected to offer good effectiveness against currently circulating subtypes of Influenza. Further, this vaccine has the approval of Drug Controller General (I).

### 3.3 Type of Vaccine

Ministry of Health and Family Welfare recommends the trivalent inactivated influenza vaccine.

### 3.4 Frequency of vaccination – Yearly

## 4. Implementation

The State Governments/ Union Territory Administration, depending upon the public health burden of Influenza, would evolve a plan for vaccinating the health care workers/ persons at higher risk, on yearly basis. States/UTs may take appropriate steps for undertaking immunization of healthcare workers based on usual timing of disease outbreaks in their State/region. The concerned hospitals would also have an action plan to vaccinate their health care workers on yearly basis.

## 5. Limitations of the Influenza Vaccination

Influenza vaccination is most effective when circulating viruses are well-matched with vaccine viruses. Even with appropriate matching, efficacy of vaccine may be about 70% to 80%. In case the locally circulating virus is different from vaccine virus recommended by WHO, it may be partially effective or not be effective at all. Hence, vaccine should not give a false sense of security. Considering the risk perspective, the modalities of infection prevention and control practices like personal hygiene, frequent washing of hands, respiratory etiquettes and airborne precautions (in hospital settings or domiciliary care settings) should be strictly adhered to.

The available vaccine takes about 2-3 weeks for development of immunity. Hence, for the health care workers working in an environment with likelihood of exposure to Influenza virus, vaccine should be administered at least one month prior to the commencement of the season, till such time use of chemoprophylaxis may be considered.