World Health Organization

INTERGOVERNMENTAL MEETING ON PANDEMIC INFLUENZA PREPAREDNESS: SHARING OF INFLUENZA VIRUSES AND ACCESS TO VACCINES AND OTHER BENEFITS
Agenda item 2

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Dictionary of terms

SCIENTIFIC TERMS

Candidate influenza vaccine viruses (H5N1). These are influenza viruses developed and modified by reverse genetics by WHO Collaborating Centres and the National Institute of Biological Standards and Control (United Kingdom of Great Britain and Northern Ireland) for influenza vaccine development.

Candidate influenza vaccine viruses (seasonal). These are influenza viruses approved by WHO as suitable for making influenza vaccine. Most are modified in **seasonal vaccine virus reassortment laboratories** by **"classical" reassortment** from **WHO-recommended viruses**.

"Classical" reassortment. This is a non-patented laboratory technique that is often used to make (seasonal) candidate vaccine viruses.

Clinical specimens (original). These are materials collected from humans, generally in order to confirm a diagnosis. For influenza, most commonly, clinical specimens are taken from the respiratory tract (for example, swabs and aspirated fluid) but they can be from other locations. Clinical specimens can be frozen and stored for later use.

Genetic reassortment. In this process genes from two or more influenza viruses are mixed in different combinations, resulting in hybrid viruses with genetic characteristics of each parent virus. This process occurs in nature but can also be done in a laboratory using **"classical" reassortment** or **reverse genetics**.

High-growth reassortant viruses. These are influenza viruses that have been genetically modified to grow better in eggs for optimal vaccine production.

Influenza reference viruses. These are **wild-type influenza viruses** that WHO has selected as representative of important groups of influenza viruses on the basis of extensive antigenic and genetic studies and comparisons with viruses from many countries. As the influenza viruses evolve in nature, new reference viruses are selected.

Influenza virus subtypes. Type A influenza viruses are further classified according to their combinations of haemagglutinin (H) and neuraminidase (N) antigens (i.e. specific proteins on the virus surface), e.g. H5N1; 16 H subtypes and nine N subtypes have been distinguished.

Novel (new) subtype of human influenza A virus. This term refers to human influenza viruses that have haemagglutinin and neuraminidase antigens that are distinct from seasonal influenza viruses and have the potential to cause a pandemic.

Reagents for influenza vaccine standardization. These reagents are used to standardize the amount of haemagglutinin protein in influenza vaccines as required by regulatory agencies. The reagents have to be produced in large quantities so that all vaccine batches can be tested.

Reverse genetics. This is a laboratory technique that is used to construct or modify influenza viruses and is protected by patents in several countries. It is used to render highly pathogenic H5N1 viruses less dangerous.

Seed viruses. These are influenza viruses prepared from **candidate influenza vaccine viruses** by individual manufacturers for the manufacturer's specific vaccine-production process.

WHO molecular diagnostic reagents. These reagents are used for real-time polymerase chain reaction diagnosis, and are available free of charge.

WHO reagent kits. These kits consist of inactivated **influenza reference viruses** or purified protein from reference viruses and corresponding antibodies, and are used for the identification of influenza viruses. They are available free of charge.

WHO-recommended viruses for vaccine use. These are **wild-type influenza viruses** that are recommended by WHO as the basis for an influenza vaccine.

Wild-type influenza viruses *(synonym: virus isolates)***.** These are influenza viruses that have been cultured either in eggs or cells (i.e. isolated) directly from **clinical specimens** and have not been modified.

INSTITUTIONS AND ORGANIZATIONS

Essential regulatory laboratories. These influenza laboratories, located in national regulatory agencies, have a critical role at the global level for developing, regulating and standardizing influenza vaccines and in this capacity they work closely with WHO and industry. They do not have formal Terms of Reference within the **Global Influenza Surveillance Network**.

Global Influenza Surveillance Network. This is an international network coordinated by WHO to undertake surveillance for many public health functions, including pandemic risk assessment and preparedness. It comprises **National Influenza Centres, WHO Collaborating Centres on influenza** and **WHO H5 Reference Laboratories**.

Influenza vaccine manufacturers. These are commercial institutions that develop and produce human influenza vaccines for seasonal, H5N1 and other influenza subtypes with pandemic potential.

Laboratories involved in specific WHO influenza projects. WHO's current projects are the WHO polymerase chain reaction (PCR) working group, which assists WHO in the updating of PCR diagnostic protocols for circulating H5N1 viruses, and External quality assessment project for detecting influenza A viruses using PCR.

National Influenza Centres. These are influenza laboratories designated by national authorities and recognized by WHO to perform certain roles within the **Global Influenza Surveillance Network** as defined by formal Terms of Reference.

Seasonal vaccine virus reassortment laboratories. These are laboratories (currently three) that develop **high-growth reassortant viruses** for seasonal influenza vaccine development and production, supported by industry funds.

WHO Collaborating Centres. These are influenza laboratories designated by WHO and fully supported by national authorities to perform certain roles within the **Global Influenza Surveillance Network** defined by formal Terms of Reference. In general, they differ from **National Influenza Centres** in having global responsibilities and more extensive technical capacities. Currently, there are four Collaborating Centres that focus primarily (but not exclusively) on human influenza and one that, in its role as a WHO Collaborating Centre, focuses primarily on animal influenza viruses that threaten people.

WHO Global Influenza Programme. This is WHO's main technical programme on influenza (in the Department of Epidemic and Pandemic Alert and Response, Health, Security and Environment cluster). It functions as the coordinating secretariat for the **Global Influenza Surveillance Network**.

WHO H5 Reference Laboratories. These are influenza laboratories that have been designated by WHO in order to strengthen national and regional capacity for reliably diagnosing H5 virus infection until this capacity is more widespread.

OTHER TERMS

Benefit. Advantage, profit, good *(Oxford English Dictionary, 2nd ed., 1989).*

Global public health security. This term comprises the activities, both proactive and reactive, required to minimize vulnerability to acute public health events that endanger the collective health of populations living across geographical regions and international boundaries.

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