

Dictionary & Glossary – Pandemic Terms

This PDF provides explanations of many terms and acronyms used throughout the site.

adjuvant: A substance added to a vaccine to improve the immune response so that less vaccine is needed to provide protection.

antibiotic: A substance produced by bacteria or fungi that destroys or prevents the growth of other bacteria and fungi.

antibody: A protein produced by the body's immune system in response to a foreign substance (antigen). Our bodies fight off an infection by producing antibodies. An antibody reacts specifically with the antigen that triggered its formation and its function is to inactivate the antigen.

antigen: Any foreign substance, usually a protein, that stimulates the body's immune system to produce antibodies. (The name antigen reflects its role in stimulating an immune response - antibody generating.)

antiviral: Drug that is used to prevent or cure a disease caused by a virus, by interfering with the ability of the virus to multiply in number or spread from cell to cell.

APHIS: Animal and Plant Health Inspection Service, a part of the U.S. Department of Agriculture that provides leadership in ensuring the health and care of animals and plants.

asymptomatic: Presenting no symptoms of disease.

avian flu: A highly contagious viral disease with up to 100% mortality in domestic fowl caused by influenza A virus subtypes H5 and H7. All types of birds are susceptible to the virus but outbreaks occur most often in chickens and turkeys. The infection may be carried by migratory wild birds, which can carry the virus but show no signs of disease. Humans are only rarely affected.

carrier: A bearer and transmitter of a agent capable of causing infectious disease. An asymptomatic carrier shows no symptoms of carrying an infectious agent.

CDC: Centers for Disease Control and Prevention, the U.S. government agency at the forefront of public health efforts to prevent and control infectious and chronic diseases, injuries, workplace hazards, disabilities, and environmental health threats. CDC is one of 13 major operating components of the Department of Health and Human Services.

clade: A group of organisms, such as a species, whose members share homologous features derived from a common ancestor. The avian virus H5N1 clade 1 includes human and bird isolates from Vietnam, Thailand, Cambodia, Laos, and Malaysia. Clade 2 viruses have been identified in bird isolates from China, Indonesia, Japan, and South Korea.

contagious: A contagious disease is easily spread from one person to another by contact with the infectious agent that causes the disease. The agent may be in droplets of liquid particles made by coughing or sneezing, contaminated food utensils, water or food.

DOI: U.S. Department of Interior, the government agency that protects and provides access to our Nation's natural resources.

drift: One process in which influenza virus undergoes mutation. The amount of change can be subtle or dramatic, but eventually as drift occurs, a new variant strain will become dominant. This process allows influenza viruses to change and re-infect people repeatedly through their lifetime and is the reason influenza virus strains in vaccine must be updated each year. See shift.

enzyme: A substance that speeds up chemical reaction. Every chemical reaction in living organisms is facilitated by an enzyme.

EPA: U.S. Environmental Protection Agency, the government agency that leads the nation's environmental science, research, education and assessment efforts.

epidemic: A disease occurring suddenly in a community, region or country in numbers clearly in excess of normal. See pandemic.

FAO: Food and Agriculture Organization of the United Nations leads international efforts to defeat hunger. FAO serves both developed and developing countries and acts as a neutral forum where all nations meet as equals to negotiate agreements and debate policy.

FDA: U.S. Food and Drug Administration, the government agency responsible for protecting the public health by assuring the safety, efficacy, and security of human and veterinary drugs, biological products, medical devices, our nation's food supply, cosmetics, and products that emit radiation. FDA is one of 13 major operating components of the Department of Health and Human Services.

H5N1: A variant of avian influenza, which is a type of influenza virulent in birds. It was first identified in Italy in the early 1900s and is now known to exist worldwide.

HPAI: Highly Pathogenic form of Avian Influenza. Avian flu viruses are classified based upon the severity of the illness and HPAI is extremely infectious among humans. The rapid spread of HPAI, with outbreaks occurring at the same time, is of growing concern for human health as well as for animal health. See LPAI.

homologous: Similar in position, structure, function, or characteristics.

host: An organism on or in which a parasite lives.

hemagglutinin: An important surface structure protein of the influenza virus that is an essential gene for the spread of the virus throughout the respiratory tract. This enables the virus to attach itself to a cell in the respiratory system and penetrate it. Referred to as the "H" in influenza viruses. See neuraminidase.

immune system: The cells, tissues and organs that help the body to resist infection and disease by producing antibodies and/or altered cells that inhibit the multiplication of the infectious agent.

infectious agent: Any organism, such as a pathogenic virus, parasite, or bacterium, that is capable of invading body tissues, multiplying, and causing disease.

influenza: A serious disease caused by viruses that infect the respiratory tract.

isolate: A pure strain that has been isolated as from diseased tissue, contaminated water, or the air.

LPAI: Low Pathogenic form of Avian Influenza. Most avian flu strains are classified as LPAI and typically cause little or no clinical signs in infected birds. However, some LPAI virus strains are capable of mutating under field conditions into HPAI viruses. See HPAI.

MRC: The Medical Reserve Corps establishes teams of local volunteer medical and public health professionals who can contribute their skills and expertise throughout the year and during times of community need.

mutation: Any alteration in a gene from its natural state. This change may be disease causing or a benign, normal variant. Specific mutations and evolution in influenza viruses cannot be predicted, making it difficult if not impossible to know if or when a virus such as H5N1 might acquire the properties needed to spread easily among humans.

neuraminidase: An important surface structure protein of the influenza virus that is an essential enzyme for the spread of the virus throughout the respiratory tract. It enables the virus to escape the host cell and infect new cells. Referred to as the “N” in influenza viruses. See hemagglutinin.

NIAID: National Institute of Allergy and Infectious Diseases conducts and supports basic and applied research to better understand, treat, and ultimately prevent infectious, immunologic, and allergic diseases. NIAID research has led to new therapies, vaccines, diagnostic tests, and other technologies that have improved the health of millions. NIAID is one of 13 major operating components of the Department of Health and Human Services.

NVPO: National Vaccine Program Office is responsible for coordinating and ensuring collaboration among the many federal agencies involved in vaccine and immunization activities. It is part of the Department of Health and Human Services.

OIE (Office International des Epizooties): World Organisation for Animal Health, an international organization including 167 member countries that collects, analyses, and reports information on global animal disease situations.

pandemic: The worldwide outbreak of a disease in numbers clearly in excess of normal. See epidemic.

parasite: An organism living in, with, or on another organism.

pathogenic: Causing disease or capable of doing so.

prophylactic: A medical procedure or practice that prevents or protects against a disease or condition (eg, vaccines, antibiotics, drugs).

reassortment: The rearrangement of genes from two distinct influenza strains to produce a novel viral strain.

seasonal flu: A respiratory illness that can be transmitted person to person. Most people have some immunity, and a vaccine is available. This is also known as the common flu or winter flu.

shift: The process in which the existing H (hemagglutinin) and N (neuraminidase) are replaced by significantly different H and Ns. These new H or H/N combinations are perceived by human immune systems as new, so most people do not have pre-existing antibody protection to these novel viruses. This is one of the reasons that pandemic viruses can have such a severe impact on the health of populations. See drift.

species: A class of plants or animals having common attributes and designated by a common name. Theoretically, plants or animals of different species cannot interbreed. However, occasionally this does not hold true.

strain: A group of organisms within a species or variety.

USAID: United States Agency for International Development provides foreign assistance to developing countries in order to further America's foreign policy interests in expanding democracy and free markets while improving the lives of the citizens of the developing world.

USDA: U.S. Department of Agriculture, the government agency responsible for regulating the safety and development of food, agriculture, and natural resources.

vaccine: A preparation consisting of antigens of a disease-causing organism which, when introduced into the body, stimulates the production of specific antibodies or altered cells. This produces an immunity to the disease-causing organism. The antigen in the preparation can be whole disease-causing organisms (killed or weakened) or parts of these organisms.

virulent: Highly lethal; causing severe illness or death.

virus: Any of various simple submicroscopic parasites of plants, animals, and bacteria that often cause disease and that consist essentially of a core of RNA or DNA surrounded by a protein coat. Unable to replicate without a host cell, viruses are typically not considered living organisms.

waterfowl: Birds that swim and live near water, including ducks, geese, and swans.

WHO: World Health Organization, an agency of the United Nations established in 1948 to further international cooperation in improving health conditions.

zoonoses: Diseases that are transferable from animals to humans.