

GLOSSARY AND ACRONYMS

GLOSSARY

Acellular vaccines: Vaccines containing partial cellular material as opposed to complete cells.

Acquired immunity: Antibody and cell-mediated immune responses specific to a particular pathogen (and perhaps some of its close relatives) that can result in either short-term or long-term protection. These responses involve a variety of types of cells found in the blood and tissues and can require a week or more to become established.

Acute: A short-term, intense health effect.

Acute disseminated encephalomyelitis: Rare disease of the central nervous system, which usually affects infants and young children. The disease is very similar to multiple sclerosis (MS) except that one episode of neurologic symptoms occurs rather than the multiple episodes characteristic of MS.

Acute otitis media: A viral or bacterial infection that leads to inflammation of the middle ear. This condition can occur following pneumococcal disease. Symptoms include earache, high fever, nausea, vomiting and diarrhea. In addition, hearing loss, facial paralysis and meningitis may result.

Adjuvant: An additive to a vaccine that increases its effectiveness in producing antibodies against a disease-causing agent.

Adverse events: Undesirable experiences occurring after immunization that may or may not be related to the vaccine. Adverse events can range from minor effects such as tenderness at the site of injection and mild fever to rare, serious effects such as seizures and serious allergic reactions.

Advisory Committee on Immunization Practices (ACIP): This committee consists of 15 immunization experts that develop written recommendations for the routine administration of vaccines to the public. ACIP also develops the schedules that note the appropriate timing, dosage and contraindications for each vaccine.

Allergic reaction: Sneezing, itching and/or skin rashes or other reactions caused by the body's abnormal immune response to certain substances.

Allergy: A condition in which the body has an exaggerated immune response to a substance, e.g., food or drug. Also known as hypersensitivity or an allergic reaction.

Amino acid: A class of chemical compounds that link together to form proteins. Often called the building blocks of a cell.

Anaphylaxis: An immediate and severe allergic reaction to a substance, e.g., food or drugs. Symptoms of anaphylaxis include breathing difficulties, loss of consciousness and a drop in blood pressure. This condition can be fatal and requires immediate medical attention.

Anorexia: Refers to the loss of body weight.

Anthrax: An acute infectious disease caused by the large, spore-forming bacterium *Bacillus anthracis*. Naturally occurring disease in humans is acquired by skin contact, ingestion or inhalation of *Bacillus anthracis* spores from infected animal products or inhalation of spores from the environment. Human anthrax is not contagious and therefore cannot be transmitted from one person to another. Three forms of this disease exist in humans: cutaneous (skin), gastrointestinal and inhalational (lung) anthrax.

Antibiotic: Medicine that is produced by microorganisms and is capable of destroying or weakening particular bacteria.

Antibody: A protein found in the blood that is produced in response to foreign substances, e.g., bacteria or viruses, invading the body. Antibodies protect the body from disease by binding to these organisms and destroying them.

Antigen: Foreign substance, e.g., bacteria or viruses, in the body that is capable of causing disease. The presence of antigens in the body triggers an immune response, usually the production of antibodies and cytotoxic T cells.

Arthralgia: Joint pain.

Arthritis: A medical condition characterized by inflammation of the joints, which results in pain and difficulty in moving.

Aseptic meningitis: Meningitis that occurs in the absence of an infecting organism. It can be due to a diagnostic or therapeutic procedure, a tumor or other non-infectious agents within the skull or spinal canal.

Asperger's disorder: A type of autism-spectrum disorder characterized by normal early language skills and intelligence levels along with problems with social and motor skills.

Association: The degree to which the occurrence of two variables or events are linked. Association describes a situation where the likelihood of one event occurring depends on the presence of another event or variable. However, an association between two variables does not necessarily imply a cause and effect relationship. The term association and relationship are often used interchangeably. See causal and temporal association.

Asthma: An allergic reaction that is localized to the lungs and airways and may be manifested by wheezing, dyspnea and respiratory insufficiency.

Attack rate: The proportion of persons who develop a disease relative to the total number of persons at risk for developing the disease.

Attention deficit disorder: A childhood syndrome characterized by impulsiveness, hyperactivity and short attention span, which often leads to learning disabilities and various behavioral problems.

Attenuated vaccines: Vaccines in which a live virus is weakened through chemical or physical processes in order to produce an immune response without causing the severe effects of the disease.

Attributable risk: The amount or proportion of disease that can be said to be caused by a specific exposure.

Autism: A chronic developmental disorder usually diagnosed between 18 and 30 months of age. Symptoms include problems with social interaction and communication as well as repetitive interests and activities.

Autism-spectrum disorders (ASD): Term used to describe the range of functioning among persons with autism.

Autoimmune disease: Disease that occurs when a person's antibodies or lymphocytes attack their own cells and/or tissues.

B cell: Small white blood cell that helps the body defend itself against infection. This cell is produced in bone marrow and develops into plasma cells which produce antibodies. Also known as a B-lymphocyte.

Bacillus anthracis: Spore-forming bacterium that causes anthrax.

Background incidence: The rate of disease in the general population that exists regardless of the exposure in question.

Bacteria: Tiny one-celled organisms present throughout the environment that require a microscope to be seen. While not all bacteria are harmful, some cause disease. Examples of bacterial disease include diphtheria, pertussis, tetanus, *Haemophilus influenza* and pneumococcus (pneumonia).

Bacteremia: The presence of bacteria circulating in the bloodstream that are capable of growing or reproducing.

Bacterial meningitis: Meningitis caused by bacteria.

Beta cell: Insulin-producing cell found in the pancreas.

Bias: Any factor or consideration that consciously or unconsciously enters into the design or interpretation of a scientific study that would predispose the study to reach a predetermined or desired conclusion.

Biostatistics: Statistical methods and processes applied to the analysis of biological data.

Blinded: Description of researchers who are kept unaware of key information (such as exposures and diagnoses) regarding research study participants for the purpose of remaining unbiased in reporting study findings and in making study conclusions.

Blood serum: Yellowish fluid that separates from a blood clot after coagulation.

Booster: A second, third or greater immunization with a specific vaccine that may be necessary to ensure that the individual is protected against the infectious disease.

Bordetella pertussis: Rod-shaped bacteria that cause pertussis (whooping cough).

Bovine spongiform encephalopathy (BSE): Fatal neurological disease of cattle that was first identified in 1986. The disease is thought to be spread through cattle feed containing meat and bone meal from infected cows and causes apprehension, loss of orientation and movement disturbances that can lead to frenzied behavior.

Breakthrough cases: Persons who develop a vaccine-preventable disease even though they have been immunized and their immune system has responded to the vaccine. Breakthrough cases in vaccinated persons tend to be less serious than natural disease in unvaccinated persons.

Bystander activation: Non-specific stimulation of inflammatory cells that are associated with the normal response to an infection. Upon activation, these cells release large quantities of cytokines and other factors that contribute to the destruction of host tissue.

Case ascertainment: The determination through diagnostic methodology of whether or not a person is infected with a particular disease.

Case-control studies: Studies in which researchers identify a group of persons with the disease (cases) and a group of persons without the disease (controls) and then determine the proportion of each group that were exposed to the proposed risk factor.

Cases: A group of persons in a research study who have been exposed to the proposed risk factor, i.e., the vaccine.

Case series: Research studies that select and characterize cases exposed to the proposed risk factor but do not use a control group.

Cataracts: A clouding of the lens of the eye or of its surrounding transparent membrane causing an obstruction in the passage of light into the eye.

Causal association: The presence or absence of a variable, e.g., smoking, is responsible for an increase or decrease in another variable, e.g., cancer. A change in exposure leads to a change in the outcome of interest.

Cell-mediated response: Immune response provided by the direct action of immune cells (as distinct from the response provided by antibodies and other soluble molecules).

Cellulitis: Diffuse inflammation of body connective tissue located under the skin.

Cerebral palsy: Disability resulting from damage to the brain before or during birth causing muscular incoordination and speech disturbances.

Chelation therapy: Non-specific therapy used to reduce the concentration of metals in the blood.

Chemokines: Certain chemicals that are released by cells surrounding an area of injury or pathogen attack that help to direct the immune response.

- Chickenpox:** A severe, contagious viral infection, which is characterized by red blotches appearing on the skin. The infection is transmitted by airborne droplets and direct contact with lesions. Complications include bacterial infection of skin lesions, pneumonia, dehydration, hospitalization and death. Also known as varicella.
- Childhood developmental disorder:** A type of autism-spectrum disorder characterized by a period of normal development followed by a marked regression with only minimal recovery.
- Chronic:** A disease or health condition that lasts for a long period of time, e.g., cancer, asthma.
- Chronic carrier:** Person who remains infected with a disease agent and therefore may be able to pass the disease agent to persons they come into contact with. Chronic carriers may or may not exhibit disease symptoms.
- Chronic obstructive pulmonary disease:** Long-term, persistent blockage of air flow into and out of the lungs.
- Cirrhosis:** A chronic disease of the liver characterized by the formation of nodules and scar tissue.
- Clinical trial:** Research studies in which human are exposed to vaccines or pharmaceutical compounds under the direct supervision of physicians, nurses or other health care professionals.
- Clostridium tetani:** Rod-shaped bacteria that cause tetanus.
- Cohort studies:** Studies in which researchers select a group of individuals that are exposed to the proposed risk factor and a group of individuals that are not exposed to the proposed risk factor, and follow both groups to compare the incidence of disease (or rate of death from the disease) in the two groups.
- Coma:** A state of unconsciousness caused by disease, injury or poison.
- Combination vaccine:** Two or more vaccines administered in a single injection in order to reduce the number of shots given. For example, the MMR (measles, mumps, rubella) vaccine.
- Community immunity:** Having a large percentage of the population vaccinated in order to prevent the spread of certain infectious diseases. Even individuals not vaccinated (such as newborns and those with chronic illnesses) are offered some protection because the disease has little opportunity to spread within the community. (Also known as herd immunity.)
- Compulsory immunization laws:** State laws that require children to receive certain vaccines before they are allowed to enter school.
- Confounder:** A factor that must be taken into account when designing or interpreting a scientific study. Failure to consider confounding factors can lead to misinterpretation of the results.
- Congenital rubella syndrome:** Infection of a developing fetus that can lead to death, premature delivery, deafness, cataracts, heart defects, abnormalities of the nervous system, mental retardation, bone alterations and liver and spleen damage.
- Congestive heart failure:** A heart condition in which blood accumulates in the heart leading to insufficient circulation of the blood through the rest of the body.
- Conjugate vaccine:** The joining together of two compounds (usually a protein and a polysaccharide) to increase a vaccine's effectiveness.
- Contraindications:** Condition or symptom that makes a particular treatment or procedure inadvisable.
- Controls:** A group of persons in a research study who have not been exposed to the proposed risk factor, e.g., the vaccine.
- Corynebacterium diphtheriae:** Rod-shaped bacteria that cause diphtheria.
- Coverage:** Refers to the proportion of persons in a population that have received the full course of specific immunizations recommended by the Advisory Committee on Immunization Practices (ACIP).
- Coxsackievirus:** Any of a group of viruses that attacks the gastrointestinal tract that can cause a disease resembling poliomyelitis but without paralysis.
- Creutzfeldt-Jakob disease:** Human neurodegenerative disease associated with prion infection that progresses from memory loss and confusion, to behavioral and movement abnormalities, to a host of neurological deficits.
- Crohn's disease:** A chronic medical condition characterized by inflammation of the bowel. Symptoms include abdominal pain, diarrhea, fever, loss of appetite and weight loss. The cause of Crohn's disease is not known, but genetic, dietary and infectious factors may play a part in disease progression.
- Cross-sectional studies:** Research studies in which investigators determine both proposed risk exposure and disease outcome simultaneously.
- Current Good Manufacturing Practices (CGMP):** Minimum Food and Drug Administration (FDA) standards for the vaccine manufacturing process that specify quality control, documentation, testing and facility requirements that each vaccine manufacturer must meet both before a vaccine is licensed and for as long as it continues to be used by the public.
- Cutaneous anthrax:** Disease caused when *Bacillus anthracis* bacterium enters a cut or abrasion on the skin. Infections begin as a raised itchy bump resembling an insect bite and progress to a fluid-filled blister with a black area in the center.
- Cytokines:** Certain chemicals that are released by cells of the immune system surrounding an area of injury or pathogen attack that help to direct the immune response.

- Cytomegalovirus:** A member of the herpes virus group that may cause enlargement of the liver and spleen and lead to hearing loss, vision impairment or mental retardation in some infected persons.
- Cytotoxic T cell:** Type of lymphocyte that develops the ability to identify and destroy certain pathogens or pathogen-infected cells when it is stimulated by an antigen.
- DEET:** A chemical found in many mosquito repellents that provides effective and long-lasting protection against bites from mosquitoes and ticks.
- Demyelinating:** Destroying or removing the myelin sheath of a nerve fiber.
- Deoxyribonucleic acid (DNA):** A long, unbranched molecule of nucleotides containing deoxyribose that contain molecules for the production of proteins.
- Diabetes:** A chronic health condition where the body is unable to produce insulin and properly breakdown sugar (glucose) in the blood. Symptoms include hunger, thirst, excessive urination, dehydration and weight loss. The treatment of diabetes can require daily insulin injections, proper nutrition and regular exercise. Complications can include heart disease, stroke, neuropathy and poor circulation leading to loss of limbs, hearing impairment, vision problems and death.
- Diphtheria:** Serious infectious respiratory disease infecting the throat, tonsils and nose.
- Diphtheria, Tetanus, acellular Pertussis vaccine (DTaP):** A combination vaccine that protects against diphtheria, tetanus and pertussis (whooping cough).
- Disease:** Sickness, illness or loss of health.
- Dose-response relationship:** Criterion used in evaluating a causal relationship between a vaccine and an adverse reaction. If an association does exist the amount or number of doses of vaccine should theoretically increase at an identical or similar rate as the risk of the adverse event. The absence of a dose-response relationship does not necessarily rule out a causal relationship.
- Dysenteric infection:** Inflammatory infection of the lower intestinal tract that results in pain, fever and severe diarrhea, often accompanied by the passage of blood and mucus.
- Dysfunction:** Impaired or abnormal functioning.
- Ecologic studies:** Studies that examine group characteristics, often using data from such sources as registries, birth certificates, average values for disease rates, vaccine uptake, etc. These studies are often the first approach used by researchers in determining whether or not an association exists. However, because these studies use group data and cannot account for variability among individuals within a group, certain study characteristics may be incorrectly attributed to members of a group that do not in fact possess these characteristics as individuals. Therefore, ecologic studies alone cannot demonstrate that a causal association exists.
- Eczema:** An inflammatory condition of the skin characterized by redness, itching and oozing vesicles, which become scaly, crusted or hardened.
- Efficacy:** A measure used to describe how good a vaccine is at preventing the targeted disease.
- Encephalitis:** Inflammation of the brain caused by a virus. Encephalitis can result in permanent brain damage or death.
- Encephalographic:** Measurement of brain function through the recording of electrical signals from the brain under various conditions, e.g., resting, sleeping, problem solving, etc.
- Encephalopathy:** A general term describing diseases of the brain, including degenerative changes. Examples include encephalitis, meningitis, seizures and head trauma.
- Endemic:** Native to a particular people or country.
- Endotoxin:** Chemicals associated with certain bacteria that cause fever and other symptoms of infection.
- Enterocolitis:** Inflammation of both the large and small intestines.
- Eosinophil:** A type of white blood cell that contains granules that are easily stained (for identification purposes) by dyes.
- Epidemic:** The occurrence of disease within a specific geographical area or population that is in excess of what is normally expected.
- Epidemiologic studies:** Studies of how disease is distributed in populations and of the factors that influence or determine this distribution.
- Epiglottitis:** Inflammation of the epiglottis, a flap of tissue that covers the trachea (air passageway) when swallowing to prevent food and liquid from entering or blocking a person's airway and obstructing normal breathing.
- Erythema:** Redness of the skin caused by dilation and congestion of the blood vessels, often a sign of inflammation or infection.
- Ethyl mercury:** The form of mercury found in thimerosal.
- Etiology:** The cause or origin of a disease or disorder as determined by medical diagnosis.
- Excise taxes:** Tax levied by the federal government on the sale of certain products in the United States. In the case of vaccines, the revenue derived from the excise tax is used to fund the Vaccine Injury Compensation Program.
- Exemptors:** Individuals who refuse vaccination on religious or philosophical grounds.
- Experimental autoimmune encephalomyelitis:** Mouse disease that was the original research model for studying the human disease of multiple sclerosis.
- Fragile X syndrome:** Inherited disease caused by a gene mutation. Symptoms include: mental impairment, attention deficit, hyperactivity, anxiety and unstable mood, autistic-like behaviors, long face, large ears, flat feet, hyperextensible joints and seizures.

- Gastroenterology:** The study of the diseases and pathology of the stomach and intestines, i.e., the digestive tract.
- Gastrointestinal anthrax:** Anthrax disease that occurs when a person ingests insufficiently cooked, contaminated meat. Infection results in an acute inflammation of the intestinal tract.
- Gastrointestinal system:** Includes the stomach and the intestines.
- Gastrointestinal tract:** Starts from the mouth and continues to the esophagus, stomach, duodenum, small intestine, large intestine, rectum and anus.
- Genome:** One set of half the number of characteristic chromosomes in a person's body along with the genes they contain.
- German measles:** Another name for rubella.
- Group A streptococcus:** Diverse group of round bacteria associated with respiratory and other infections. These diseases are not currently vaccine-preventable.
- Guillain-Barré syndrome (GBS):** A rare neurological disease characterized by loss of reflexes and temporary paralysis. Symptoms include weakness, numbness, tingling and increased sensitivity that spreads over the body. Muscle paralysis starts in the feet and legs and moves upwards to the arms and hands. Sometimes paralysis can occur in the respiratory muscles causing breathing difficulties. Symptoms usually appear over the course of one day and may continue to progress for three days up to four weeks. Recovery begins within two to four weeks after the progression stops. While most patients recover, approximately 15%–20% of patients experience persistent symptoms. GBS is fatal in 5% of cases.
- Haemophilus influenzae type b (Hib):** Bacteria responsible for diseases such as meningitis, epiglottitis, pneumonia and others.
- Hay fever:** An acute allergic nasal cold and eye inflammation.
- Heart failure:** A heart condition in which the ability of the heart to function is impaired.
- Helper T cell:** Type of lymphocyte that produces various cytokines that help to direct the immune response when stimulated by antigen.
- Hemodialysis:** Process of removing blood from an artery, purifying it by dialysis, adding vital substances and returning it to a vein.
- Hemorrhagic:** Escaping of large quantities of blood from a blood vessel or heavy bleeding.
- Hemorrhagic fevers:** Refers to a group of illnesses that are caused by several distinct families of viruses. Characteristically, these illnesses damage the overall vascular system, and cause the body's ability to regulate itself to become impaired. These symptoms are often accompanied by hemorrhage (bleeding); however, the bleeding is itself rarely life-threatening. While some types of hemorrhagic fever viruses can cause relatively mild illnesses, many of these viruses cause severe, life-threatening disease.
- Hepatitis:** A group of virus-caused diseases that cause fever, malaise that can lead to hospitalization, morbidity, complications and death.
- Hepatitis A:** A virus-caused disease with symptoms including anorexia, nausea and jaundice with a fatality rate of 0.3%.
- Hepatitis B:** A virus-caused disease with symptoms, including anorexia, nausea, vomiting, abdominal pain, jaundice and liver abnormalities. Chronically infected persons are at increased risk for developing liver failure and hepatocellular carcinoma.
- Hepatocellular carcinoma:** Cancer of the liver cells.
- Herd immunity:** See community immunity.
- Herpes zoster:** A disease characterized by painful skin lesions that occur mainly on the trunk (back and stomach) of the body but which can also develop on the face and in the mouth. Complications include headache, vomiting, fever and meningitis. Recovery may take up to five weeks. Herpes zoster is caused by the same virus that is responsible for chickenpox. Most people are exposed to this virus during childhood. After the primary infection (chickenpox), the virus becomes dormant, or inactivated. In some people the zoster reactivates years, or even decades later and causes herpes zoster. Also known as shingles.
- Heterogeneous:** Mixed. A heterogeneous population would consist of persons varying from one another by sex, race, age, etc.
- Heterologous infections:** Infections due to agents other than those targeted by vaccines.
- Hexavalent vaccine:** A vaccine that contains antigens from six different disease-causing agents.
- Hib vaccine:** Vaccine that protects children from *Haemophilus influenzae* type b disease.
- Hives:** Patchy, localized redness and swelling of the skin attributable to a variety of causes, including allergic reactions.
- Homogeneous:** Similar throughout. A homogeneous population would consist of persons who are identical or nearly identical in respects to such characteristics as sex, race, age, etc.
- HOXA1:** A gene that is involved in regulating the development of the brain.
- Hygiene hypothesis:** Proposed concept that immune system dysfunction is related to changes in antigen exposure (from actual disease, through the use of vaccines, etc.) during immune system development.
- Hypersensitivity:** A condition in which the body has an exaggerated immune response to a substance, e.g., food or drug. Also known as an allergy.
- IgE:** Immunoglobulin E. A class of proteins having antibody activity that is associated with asthma and allergic reactions.

Ileal-lymphoid-nodular hyperplasia: Swelling of lower abdominal lymph glands due to the increasing numbers of cells in the gland.

Immune response: Collective and coordinated response by the molecules and cells of the immune system that result in the elimination of naturally acquired disease-causing agents. This response also can be triggered by vaccination leading to immune protection against specific diseases.

Immune system: Tissues, cells and molecules found throughout the body that work together in a coordinated fashion to eliminate and prevent infections.

Immunity: Protection against a disease. There are two types of immunity, natural (innate) and acquired. Immunity is indicated by the presence of antibodies against a disease.

Immunization: The process by which a person or animal becomes protected against a disease. This term is often used interchangeably with vaccination or inoculation.

Immuno-competent: Having a working immune system.

Immunogenicity: The ability to produce a detectable immune response.

Immunogold electron microscopy: A research technique in which gold (electron-dense substance) is conjugated to antibody molecules that bind to specific antigens. This binding can be visualized by electron microscopy.

Immunosuppressed: When the immune system is unable to protect the body from disease. This condition can be caused by disease (like HIV infection or cancer) or by certain drugs (like those used in chemotherapy). Also known as immunocompromised.

Imported case: A case of a vaccine-preventable disease that occurs when an unvaccinated person is exposed to the disease-causing agent outside of the US and subsequently develops the disease while in the US.

Inactivated poliovirus (IPV) vaccine: Inactivated vaccine administered via injection that provides protection from polio.

Inactivated vaccine: A vaccine made from viruses and bacteria that have been killed through physical or chemical processes. These killed organisms cannot cause disease.

Incidence: The number of new disease cases reported in a population over a certain period of time.

Induration: The hardening of a normally soft tissue or organ, especially the skin, because of inflammation, infiltration of an abnormal growth or an accumulation of blood.

Inflammation: An influx of lymphocytes, macrophages and other cells into a site of injury or infection leading to redness and swelling at the site.

Inflammatory bowel disease: Inflammation of the lower gastrointestinal tract.

Influenza: Highly contagious viral infection of the nose, throat and lungs. Commonly known as the flu, this seasonal disease can be fatal to the aged, immunocompromised and infants.

Inhalational anthrax: Most severe and deadly form of anthrax disease that results when 8,000 to 50,000 anthrax bacteria spores enter the body through the airways.

Innate immunity: Immunity to microorganisms that does not require prior experience of the organism and does not depend on the generation of specific lymphocytes or the formation of specific antibodies.

In situ hybridization: Technique used to identify a particular ribonucleic acid (RNA) or deoxyribonucleic acid (DNA) sequence in the presence of many other sequences.

Institute of Medicine (IOM): Independent body established by the United States government, whose mission is to advance and disseminate scientific knowledge to improve human health.

Institutional Review Board (IRB): A committee of local experts established by the agency, institution or corporation conducting a clinical trial. The IRB is responsible for reviewing all aspects of the clinical trial.

Insulin: A chemical naturally produced by the pancreas that is involved in regulating glucose (sugar) metabolism. A deficiency of insulin causes diabetes.

Insulin-dependent diabetes mellitus (IDDM): Form of diabetes found primarily in children but has also been found in persons of all ages. Diabetes is a chronic health condition where the body is unable to produce insulin and properly breakdown sugar (glucose) in the blood. Also known as type 1 diabetes.

Interferon gamma: A whole-blood test for latent tuberculosis infection.

Interleukin 4 (IL-4): A T cell-derived cytokine that promotes B cell growth.

Interleukin 10 (IL-10): A cytokine that regulates the production of IgE antibodies that are responsible for allergic reactions.

Intussusception: Rare bowel obstruction that has recently been shown to be associated with the rotavirus vaccine.

In utero: Before birth or in the uterus.

Invasive: Tending to invade healthy tissue.

Investigational New Drug (IND) application: Initial application to the United States Food and Drug Administration (FDA) that a vaccine manufacturer must complete to begin the process of vaccine licensure.

Investigational New Drug (IND) review: Stage of the vaccine licensure process that requires the vaccine sponsor to conduct clinical trials to provide data to the United States Food and Drug Administration (FDA) on the vaccine's safety and efficacy.

- Japanese encephalitis (JE):** A viral infection transmitted mainly by bites of a particular type of mosquito. JE is the leading cause of childhood encephalitis in Asia with approximately 35,000 cases and 10,000 deaths reported annually.
- Jaundice:** Yellow discoloration of the skin and mucous membranes that is often observed among hepatitis-infected persons.
- Kuru:** Human neurodegenerative disease associated with prions. This disease has only been reported among members of a small population native to Papua New Guinea and has since largely been eradicated.
- Lesions:** Abnormal changes in the structure of an organ or other body part due to injury or disease.
- Live-attenuated vaccine:** A vaccine consisting of a live virus that has been weakened through chemical or physical processes in order to produce an immune response without causing the severe effects of the disease. Attenuated vaccines currently licensed in the United States include measles, mumps, rubella, polio, yellow fever and varicella. Also known as an attenuated vaccine.
- Liver:** Organ in the upper abdomen that is responsible for many of the metabolic processes necessary to sustain life. This organ is particularly susceptible to infection by hepatitis viruses.
- Liver failure:** Disease state in which normal liver function is sufficiently impaired that its ability to sustain life is compromised.
- Lumbar puncture:** Procedure used to sample fluids surrounding the spinal cord.
- Lymphatic system:** The interconnected system of spaces and vessels between body tissues and organs by which serum and white blood cells circulate through the body.
- Lymphatic tissue:** See lymph glands/tissues.
- Lymph glands/tissues:** Organs and tissues that are composed of lymphocytes, macrophages and other cells involved in immunity. Many of the cellular interactions that occur during an immune response take place in lymph glands that include the spleen, thymus, tonsils and lymph nodes.
- Lymphocytes:** Small white blood cells that help the body defend itself against infection. These cells are produced in bone marrow and may develop into helper T cells, cytotoxic T cells or B cells that mature into antibody secreting plasma cells and other cells essential to immune competence.
- Macrophage:** A large cell that helps the body defend itself against disease by engulfing and destroying the foreign organisms, e.g., bacteria.
- Magnetic resonance imaging:** Diagnostic procedure that uses magnetic fields to produce images of organs and tissues in the body. Provides greater clarity and resolution than x-rays when examining these structures.
- Major histocompatibility complex (MHC):** Refers to a family of genes that code for proteins involved in antigen presentation and other interactions between cells of the immune system.
- Malaise:** A vague feeling of illness.
- Measles:** Highly contagious respiratory disease that is caused by a virus. Symptoms include rash, high fever, cough, runny nose and red, watery eyes. Severe complications can occur such as pneumonia, encephalitis, seizures and death.
- Meningitis:** Inflammation of the brain and spinal cord that can result in permanent brain damage and death.
- Meningococcal disease:** Leading cause of bacterial meningitis and sepsis in older children and young adults in the United States. Certain medical conditions, household crowding, chronic illness and smoking increase the risk of developing this disease.
- Meta-analysis:** A statistical approach to analyzing data from numerous individual studies for the purpose of integrating the findings.
- Metabolic:** The entire spectrum of biological and chemical processes occurring in an organism, particularly those relating to the production and use of energy in the body.
- Metabolic disorder:** Abnormality or disease that results from a defect in gene expression or regulation. Examples include Tay-Sachs disease, sickle cell disease, and various diseases affecting the nervous system.
- Methyl mercury:** A chemical contaminant found in some seafood, high doses of this type of mercury have been associated with health effects, particularly among infants whose mothers were exposed during pregnancy. Several federal agencies in the United States, including the Environmental Protection Agency (EPA), Agency for Toxic Substance and Disease Registry (ATSDR) and the Food and Drug Administration (FDA), have developed guidelines for limiting intake of methyl mercury.
- MMR vaccine:** A combination vaccine that protects persons from developing measles, mumps and rubella.
- Molecular mimicry:** The sharing of biochemical and/or structural similarities by two distinct molecules. Typically used in the context of explaining why antibodies against a disease-causing agent cross-react with a self antigen.
- Monovalent:** A vaccine containing a single antigen from a disease-causing organism.
- Morbidity:** Relative new cases of disease reported over time.
- Multiple sclerosis:** Chronic, often disabling disease of the central nervous system. Symptoms may be mild such as numbness in the limbs or severe such as paralysis or loss of vision. Most people with this disease are diagnosed between the ages of 20 and 40.

Mumps: Viral disease that usually begins with swollen salivary glands and can lead to swelling of the testicles in adolescents and adults, deafness, aseptic meningitis and death.

Myalgia: Muscle pain or tenderness.

Myelin: A soft, white, somewhat fatty material that forms a sheath around a nerve fiber.

Nausea: A sick feeling in the stomach, with an impulse to vomit.

Neisseria meningitidis: Round-shaped bacteria that cause meningococcal disease.

Neonate: A newborn infant.

Nervous system: All of the nerve cells and nervous tissues in the body, including the brain, spinal cord, nerves, etc.

Neurodegenerative disease: Disease that causes a breakdown in the normal functions of the nervous system over time.

Neurodevelopmental disorder: Diseases of the nervous system that result from impaired development of the cells and tissues of the nervous system during fetal and postnatal development.

Neurologic disorder: Of, or affecting the nervous system. Examples includes seizures and encephalitis.

Neuropeptide: A small molecule that influences the biological activity of nerve cells and tissues.

Neurotrophin: A chemical that is attracted to cells or tissues of the nervous system.

Nodules: A small mass of rounded or irregular shape.

Non-obese diabetic (NOD) mice: An inbred strain of mice that is genetically predisposed to developing diabetes and is used in experimental animal studies.

Odds ratio: In a case-control study, the odds ratio is the ratio of the chance that cases were exposed to the proposed risk factor compared with the odds that the controls were exposed to this same factor. In a cohort study, the odds ratio is the comparison of the odds of developing a disease in persons exposed to a proposed risk factor compared with the odds of development of disease in persons non-exposed to the factor.

Oral poliovirus (OPV) vaccine: Attenuated vaccine administered via oral drops that provides protection from polio.

Pancreas: A long, irregularly shaped gland, lying behind the stomach, that secretes certain digestive enzymes into the intestine and hormones such as insulin into the bloodstream.

Pandemic: An epidemic occurring over a very large area.

Pathogens: Organisms, e.g., bacteria, viruses, parasites and fungi, that cause disease in human beings.

Pathogenesis: The mechanisms and processes resulting in the development of disease.

Pathology: A symptom or sign that is indicative of disease.

Penicillin: The first commercially available antibiotic used to treat infectious diseases. Introduced in the 1940s, penicillin was the principle weapon that physicians used against bacterial infections for many years.

Pentavalent vaccine: Vaccine that contains antigens from five different disease-causing agents.

Peripheral blood mononuclear cells: White blood cells containing a single nucleus that are ordinarily found circulating in the blood vessels, i.e., arteries and veins. These cells can leave the blood vessels and enter injured or infected tissues.

Pertussis: Highly contagious respiratory disease causing a severe “barking” cough that often occurs in spasms, making it difficult to eat, drink or sleep.

Pervasive developmental disorder: A non-specific type of autism-spectrum disorder.

Phase I study: A clinical trial involving a small number of healthy persons that is used to determine if a vaccine can be safely administered to humans and if it elicits an immune response in the study participants.

Phase II study: A clinical trial involving a larger number of healthy persons that is used to determine the appropriate dose and schedule for administering the vaccine, and to assess its effectiveness in preventing disease.

Phase III study: A clinical trial involving many thousands of persons that is used to demonstrate the safety and efficacy of a vaccine in a large, diverse population.

Placebo: An inert or inactive substance used in controlled experiments to test the efficacy, safety, involvement, activity, etc. of another substance (such as a drug or vaccine).

Placebo studies: A study utilizing an inactive substance or treatment (placebo) that has no effect on human beings in order to compare the clinical response to this substance or treatment with the active agent.

Pneumococcal disease: Bacterial disease that causes bacteremia, pneumonia, sinusitis, meningitis and severe ear infections. This disease is most common in children less than two years of age and adults over 40 years of age, and occurs more often in males than in females at all ages.

Pneumococcal polysaccharide: Vaccine comprised of multiple chains of sugar molecules derived from the bacteria *Streptococcus pneumoniae* that protects against pneumonia, bacteremia and meningitis caused by that organism.

Pneumonia: Inflammation of the lungs characterized by fever, chills, muscle stiffness, chest pain, cough, shortness of breath, rapid heart rate and difficulty breathing.

Poliomyelitis (polio): Infectious viral disease that attacks the central nervous system and can cause paralysis, muscle atrophy and death. Polio spreads to unaffected individuals by contact with an infected person or their stool. Symptoms can include flu-like illness, muscle pain or stiffness and transient or permanent paralysis.

Poliomyelitis Eradication Initiative: Worldwide campaign to eradicate polio through the use of polio vaccines.

Polymerase chain reaction (PCR): Highly specific research procedure that results in a geometric amplification of a specific deoxyribonucleic acid (DNA) sequence that facilitates the subsequent identification and characterization of that sequence.

Polymerase protein: An enzyme that facilitates the linkage of similar molecules to form a chain or polymer.

Polysaccharide: Long chains of sugar molecules that form unique structures on the surfaces of many infectious agents.

Polysaccharide vaccine: Vaccines that are composed of long chains of sugar molecules that resemble the surface of certain types of bacteria. Polysaccharide vaccines are available for pneumococcal disease, meningococcal disease and *Haemophilus influenzae* type b.

Pre-clinical study: A study conducted in animals to evaluate the effectiveness and safety of candidate vaccines or other pharmaceutical compounds.

Preservative: An additive that protects vaccine against contamination or spoilage.

Prevalence: The number of disease cases (new and existing) within a population over a given period of time.

Prion: Abnormal form of a protein found in brain cells that is capable of causing a cell to produce more abnormal protein. The presence of the abnormal protein is associated with fatal neurodegenerative changes.

Prophylaxis: Measures designed to preserve health and prevent the spread of disease.

Prospective cohort studies: Cohort studies in which researchers follow disease progression in study participants beginning at the start of the trial.

Protein: Large, complex molecules that are largely responsible for the complex and diverse functions associated with living organisms.

Rabies: A viral infection transmitted to humans by a scratch or a bite of an infected animal or the exchange of the infected animal's saliva to a human mucous membrane (lining of nose or mouth, open wound, etc.). Disease occurs after the rabies virus invades the victim's central nervous system, causing inflammation of the brain and spinal cord and rapid progression to paralysis, coma and death.

Rabies immune globulin: Solution of derived blood plasma of adult human donors who have been immunized with rabies vaccine.

Reactogenicity: Refers to the common reactions associated with vaccine use. These typically include redness, swelling or tenderness at the injection site or mild fever. Vaccine developers and regulators work to minimize the reactogenicity of all licensed vaccines.

Recombinant DNA technology: The technique by which genetic material from one organism is inserted into a foreign cell or another organism in order to mass-produce the protein encoded by the inserted genes.

Registry: A database for tracking the immunization records of individuals that facilitates determination of the individual's vaccination history to ensure that all doses of all of the Advisory Committee on Immunization Practices' (ACIP's) recommended vaccines are administered on time.

Relative risk: The ratio of the risk of disease in persons exposed to the proposed risk factor compared to the risk of disease in persons unexposed to the proposed risk factor.

Rendering: Animal carcasses and meat processing wastes are milled and decomposed by boiling at high pressures. This procedure produces a liquid protein under a layer of fat. The fat is removed and the liquid protein is dried into a meat and bone meal product that is packaged and distributed.

Retrospective cohort studies: Cohort studies in which researchers use past historical data to frame a study period and obtain findings. Exposure to the proposed risk factor is determined using these records and data on whether the study participants have developed the disease is taken either from past records or at the beginning of the study.

Rheumatic fever: Respiratory tract infection associated with inflammation of the heart and other organs that can trigger autoimmune heart disease in some patients.

Rheumatic heart disease: Damage to the valves of the heart caused by antibodies associated with group A streptococcus infections.

Ribonucleic acid (RNA): A long, unbranched molecule of nucleotides containing ribose that is transcribed from deoxyribonucleic acid (DNA) and is necessary for the production of proteins.

Risk: The likelihood that an individual will experience a certain event.

Rotavirus vaccine: Vaccine to protect against rotavirus, a severe diarrheal illness in childhood that accounts for more than 500,000 physician visits and approximately 50,000 hospitalizations each year among children less than five years of age. Symptoms include fever, an upset stomach and vomiting followed by diarrhea that may lead to dehydration.

Rubella: Mild rash illness when contracted by adult males and children. In women, rubella can cause arthritis, arthralgia and can cause serious birth defects or death to developing fetuses.

Safety assessment: The process of examining all available scientific information relevant to determining the safety of a vaccine, recognizing that there may be uncertainties associated with that information that need to be considered. Because safety is not absolute, the assessment addresses both the health benefits of the vaccine as well as possible health hazards that it may pose.

Salivary glands: Glands found in the mouth that release fluids and proteins that aid in digestion and swallowing.

Salmonella typhi: Rod-shaped bacteria that cause typhoid fever.

Scarification: The making of small breaks, punctures or scratches in the skin. This technique is used for delivery of smallpox vaccine into the body of a vaccinee.

Scrapie: Spongiform encephalopathy disease caused by a prion that has been observed in sheep for over 200 years.

Seizure: The sudden onset of a jerking and staring spell usually caused by fever. Also known as convulsion.

Selection bias: Occurs in a study if the way in which cases and controls or exposed and non-exposed individuals were selected is such that an apparent association is observed—even if, in reality, exposure and disease are not associated.

Sepsis: Toxic condition resulting from the spread of bacteria or their products from a point of infection.

Septic arthritis: Arthritis resulting from the spread of bacteria or their products from a point of infection.

Serotype: The set of antigens characteristic of a group of related organisms.

Serum: A gold-colored, protein-rich fluid that carries blood cells through the arteries and veins.

Shaken Baby Syndrome (SBS): A serious form of child maltreatment resulting in neurologic damage, usually involving infants less than six months of age.

Shingles: A disease characterized by painful skin lesions that occur mainly on the trunk (back and stomach) of the body but which can also develop on the face and in the mouth. Complications include headache, vomiting, fever and meningitis. Recovery may take up to five weeks. Shingles is caused by the same virus that is responsible for chickenpox. Most people are exposed to this virus during childhood. After the primary infection (chickenpox), the virus becomes dormant or inactivated. In some people, the infection reactivates years, or even decades later and causes shingles. Also known as herpes zoster.

Sinusitis: Inflammation of the nasal or other sinuses.

Smallpox: Serious infectious disease that caused rash, formation of pustules and scarring. Serious cases resulted in hemorrhaging and death. Smallpox vaccine use has led to the eradication of this disease worldwide.

Solvents: Fluids in which other materials are dissolved.

Spanish flu: Name applied to the 1918 global influenza epidemic that resulted in an estimated 21 million deaths.

Spasm: An involuntary and abnormal muscle contraction.

Specific acquired immunity: The production of antibodies and/or cytotoxic T cells against a specific disease by the immune system. Active immunity can be acquired in two ways, either by contracting the disease or through vaccination. Active immunity is usually permanent, meaning an individual is protected from the disease for the duration of their lives.

Steroids: A class of compounds that include medicines used to treat various conditions, including inflammation. Some of these drugs are used to suppress the immune response in the context of organ transplantation or chronic autoimmune disease.

Streptococcus pneumoniae: Round infectious bacteria that cause pneumonia, bacteremia and meningitis.

Sudden Infant Death Syndrome (SIDS): The sudden and unexpected death of a healthy infant under one year of age.

Subunit vaccines: Inactivated vaccine that utilizes fractional parts of antigens to generate an immune response.

Superantigens: Antigen that, following processing by a macrophage, becomes able to stimulate an immune response even at very low concentrations.

Systemic: Affecting the body generally.

T cell: A type of lymphocyte that is responsible for several distinct immune functions. T helper cells coordinate and regulate immune responses. T cytotoxic cells identify and destroy certain types of disease-causing agents and virus-infected cells.

T helper 1 (Th1) cell: A type of helper T cell that releases certain cytokines that promote the development of protective antibodies.

T helper 2 (Th2) cell: A type of helper T cell that releases certain cytokines that promote the development of IgE antibodies that are associated with allergic reactions.

Temporal relationship: Guideline for evaluating an association between a vaccine and an adverse event that asks the question or whether exposure to the vaccine occurred before the adverse event developed.

Testicles: Male reproductive organs.

Tetanus: Disease of the nervous system caused by a toxic chemical produced by an infectious agent that makes the muscles spasm. Also known as lockjaw.

Thalidomide: A sedative and hypnotic drug that was withdrawn from the market after it was found to cause severe birth defects when taken during pregnancy.

Thimerosal: Preservative used in some vaccines and other products since the 1930s as a safeguard against product contamination. For example, without use of a preservative such as thimerosal, vaccine vials that are used for multiple immunization could become contaminated between injections.

Threshold: A certain level of exposure above which disease will develop.

Thrombocytopenia: An abnormal decrease in the number of platelets (cells that allow the blood to clot) in circulating blood.

Tonsil: Lymph glands found in the throat at the back of the mouth.

Toxic shock syndrome: This disease is characterized by sudden onset of fever, chills, vomiting, diarrhea, muscle pains and rash. Toxic shock syndrome has been associated with use of tampons and intravaginal contraceptive devices in women and occurs as a complication of skin abscesses or surgery. Approximately 5% of cases will die from this disease.

Toxin: A type of chemical produced by certain disease-causing agents such as *Clostridium tetani* that causes disease. The *Clostridium tetani* toxin causes tetanus.

Type I diabetes: Form of diabetes found primarily in children but has also been found in persons of all ages. Diabetes is a chronic health condition where the body is unable to produce insulin and properly breakdown sugar (glucose) in the blood. Also known as insulin-dependent diabetes mellitus.

Typhoid fever: Acute generalized infection that is caused by the bacterium *Salmonella typhi*. Severe forms of the disease are characterized by persistent high fever, abdominal discomfort, malaise and headache. Transmission of typhoid fever occurs in areas where sanitation is primitive and where water supplies are not treated.

Ulcerative colitis: A chronic illnesses that can inflame the entire large intestine and rectum causing bloody diarrhea, abdominal pain and weight loss.

Vaccination registry: Confidential, computerized information systems that catalog patients' immunization histories. Immunization registries provide information that can be utilized for vaccine safety studies and incorporated into ongoing quality improvement practices.

Vaccine: A preparation of killed or attenuated disease-causing agents or their component proteins or other molecules that is used to stimulate a person's immune system in order to protect that person from developing a specific disease.

Vaccine Adverse Events Reporting System (VAERS): Mechanism by which information about adverse events following immunization may be reported, analyzed and made available to the public.

Vaccinees: Persons who have been vaccinated.

Vaccine Identification Standards Initiative (VISI):

Requires the placement of a bar-coded sticker on each vaccine produced so that health professionals can peel off the sticker and place it on the immunization record of the person being evaluated.

Vaccine information statement (VIS): Statements that outline the benefits and risks of vaccination and give information on how to report adverse events following immunization to the Vaccine Adverse Events Reporting System (VAERS). Health professionals are required by law to give all persons who are to be vaccinated or their guardians a copy of the corresponding vaccine information statement.

Vaccine Injury Compensation Program (VICP): Provides compensation to children who have been injured from a vaccine administered as part of the routine immunization schedule.

Vaccine Safety Datalink (VSD) Project: In order to increase knowledge about vaccine adverse events, the Centers for Disease Control and Prevention (CDC) have formed partnerships with large health maintenance organizations (HMOs) to continually evaluate vaccine safety. The project contains data on more than six million people. Medical records are monitored for potential adverse events following immunization. This project allows for planned vaccine safety studies as well as timely investigations of hypotheses.

Vaccine schedule: Recommendations developed by the Advisory Committee on Immunization Practices (ACIP) that specify the appropriate times for administering approved vaccines to infants, children, adolescents and adults.

Vaccine sponsor: An individual physician, university, hospital, government agency or commercial firm/manufacturer who pays or bears responsibility for a vaccine's research and development.

Vaccinia: Acute infection caused by the vaccinia virus and characterized by a localized pustular eruption. The infection stimulates antibody production which confers immunity to smallpox. A live vaccinia virus preparation is used as an active immunizing agent against smallpox.

Valent: Refers to the number of antigenic components of a vaccine.

Varicella: A severe, contagious viral infection, which is characterized by red blotches appearing on the skin. The infection is transmitted by airborne droplets and direct contact with lesions. Complications include bacterial infection of skin lesions, pneumonia, dehydration, hospitalization and death. Also known as chickenpox.

Variola virus: Virus that causes smallpox disease.

Virino: A small, informational molecule (likely a nucleic acid) associated with a protein.

Virus: A tiny organism that multiplies within cells and causes diseases such as chickenpox, measles, mumps, rubella, pertussis and hepatitis. Viruses are not affected by antibiotics, the drugs used to kill bacteria.

White blood cells: Found in the blood, these cells are responsible for keeping the bloodstream and tissues free of pathogens, abnormal cells and other unwanted material.

Whooping cough: Another name for pertussis.

Wild-type: Naturally-occurring form of the pathogen.

Yellow fever: Disease caused by a ribonucleic acid (RNA) virus transmitted to humans by mosquitoes or ticks. The severity of this disease ranges from flu-like symptoms to severe hepatitis and hemorrhagic fever. This disease kills an estimated 30,000 people per year and occurs only in sub-Saharan Africa, where the majority of cases are reported, and in tropical South America.

REFERENCES:

1. Centers for Disease Control and Prevention. <<http://www.cdc.gov/nip/vacsafe/concerns/autism/autism.htm>>; May 1, 2001.
2. Gordis L. Epidemiology. Philadelphia, PA: WB Saunders; 1996.
3. International Dictionary of Medicine and Biology. New York: John Wiley & Sons; 1986.
4. Stites D, Stobe J, Wells J. Basic and Clinical Immunology. 6th ed. Norwalk, CT: Appleton & Lange; 1987.
5. National Institute of Allergy and Infectious Disease. Understanding Vaccines. National Institutes of Health; 1998.

ACRONYMS

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|---------|--|--------|--|
| AAFP | American Academy of Family Physicians | IND | Investigational New Drug |
| AAP | American Academy of Pediatrics | IOM | Institute of Medicine |
| ACIP | Advisory Committee on Immunization Practices | IPV | Inactivated poliovirus |
| ADEM | Acute disseminated encephalomyelitis | IRB | Institutional Review Board |
| AIDS | Acquired Immune Deficiency Syndrome | JE | Japanese encephalitis |
| ASD | Autism-spectrum disorder | MCV | Measles-containing vaccine |
| ATSDR | Agency for Toxic Substances and Disease Registry | MHC | Major histocompatibility complex |
| BLA | Biologics License Application | MMR | Measles, mumps, rubella |
| BSE | Bovine spongiform encephalopathy | MRI | Magnetic resonance imaging |
| CBER | Center for Biologics Evaluation and Research (FDA) | MS | Multiple sclerosis |
| CDC | Centers for Disease Control and Prevention | MSAEFI | Monitoring System for Adverse Events Following Immunization |
| CGMP | Current Good Manufacturing Practices | NCES | National Childhood Encephalopathy Study |
| CISA | Clinical Immunization Safety Assessment | NIH | National Institutes of Health |
| CJD | Creutzfeldt-Jakob disease | NOD | Non-obese diabetic |
| CMS | Centers for Medicare and Medicaid Services | NVAC | National Vaccine Advisory Committee |
| COID | Committee on Infectious Diseases (AAP) | nvCJD | New variant Creutzfeldt-Jacob disease |
| CRS | Congenital rubella syndrome | NVPO | National Vaccine Program Office |
| DEET | N,N-diethyl-m-toluamide | OGC | Office of the General Counsel |
| DHHS | Department of Health and Human Services (US) | OPV | Oral poliovirus |
| DNA | Deoxyribonucleic acid | PAHO | Pan American Health Organization |
| DoD | Department of Defense | PBMC | Peripheral blood mononuclear cells |
| DTaP | Diphtheria-tetanus-acellular pertussis | PCR | Polymerase chain reaction |
| DTP | Diphtheria-tetanus-whole cell pertussis | PHS | Public Health Service (US) |
| EAE | Experimental autoimmune encephalomyelitis | RIG | Rabies immune globulin |
| EPA | Environmental Protection Agency | RNA | Ribonucleic acid |
| FDA | Food and Drug Administration | SBS | Shaken Baby Syndrome |
| HAV | Hepatitis A virus | SIDS | Sudden Infant Death Syndrome |
| HAVRIX® | Hepatitis A vaccine (GlaxoSmithKline) | USAID | United States Agency for International Development |
| HBV | Hepatitis B virus | VAERS | Vaccine Adverse Events Reporting System |
| Hib | <i>Haemophilus influenzae</i> type b | VAQTA® | Hepatitis A vaccine (Merck & Co.) |
| HIV | Human Immunodeficiency Virus | vCJD | Variant Creutzfeldt-Jacob disease |
| HMO | Health maintenance organization | VISI | Vaccine Identification Standards Initiative |
| HRSA | Health Resources and Services Administration | VIS | Vaccine information statement |
| IAVG | Interagency Vaccine Group | VICP | Vaccine Injury Compensation Program |
| IBD | Inflammatory bowel disease | VIG | Vaccinia immune globulin |
| IDDM | Insulin-dependent diabetes mellitus | VRBPAC | Vaccines and Related Biological Products Advisory Committee (CBER) |
| IgE | Immunoglobulin E | VSD | Vaccine Safety Datalink Project |
| IL-4 | Interleukin 4 | WHO | World Health Organization |
| IL-10 | Interleukin 10 | | |