

Measles – Maintaining Disease Elimination, Eradication and Enhancing Vaccine Confidence – A Glossary

Measles is preventable with consistent uptake of recommended vaccines in childhood. Recent measles outbreaks have been especially problematic when they occur in close-knit communities where the spread of misinformation has led to decreased immunization coverage. Increasing vaccine confidence in communities with pockets of under-immunization is required to strengthen herd immunity.

Term	Definition
Advisory Committee on Immunization Practices	Advisory Committee on Immunization Practices (ACIP) comprises medical and public health experts who develop recommendations on the use of vaccines in the civilian population of the United States. The recommendations stand as public health guidance for safe use of vaccines and related biological products.
Disinformation	Disinformation refers to narratives about a subject deliberately designed to deceive, mislead or confuse others. Compare with Misinformation , which refers to details about a subject containing errors or that is inaccurate.
Elimination	Elimination means stopping the continuous transmission of a disease in a specific geographic area or country, but not worldwide.
Eradication	Disease eradication is the permanent reduction of a disease to zero cases worldwide through deliberate measures such as vaccines.
Herd Immunity	Herd immunity (or Community Immunity) refers to indirect protection from a disease conferred to unvaccinated persons when a large proportion of a population is immune to that disease through vaccination or exposure. To achieve herd immunity for measles, 95% of the population must be vaccinated or have had the disease. Herd immunity is important for overall population health, but especially critical to protect newborn babies who have not yet received recommended vaccine dosages, and persons with compromised immune systems who cannot be vaccinated.
Immunity	Immunity is a condition of being able to resist a particular disease.
Importation	Importation in the context of measles and other diseases refers to spread of disease beyond borders by international travel.
Incubation Period	An incubation period is the time between exposure to a disease and symptom onset. The incubation period of measles, from exposure to symptom onset averages 10–12 days, and from exposure to rash onset averages 14 days (range, 7–21 days).
Measles	Measles is a highly contagious virus that causes illness and can lead to complications. It affected most of American and Global populations before vaccinations were developed and introduced in 1963. Prior to vaccination campaigns, approximately three to four million measles cases occurred annually in the United States, with an average of 450 reported deaths. With widespread vaccination uptake across the nation, by 2000 CDC declared measles officially eliminated (absence of continuous disease transmission for greater than 12 months) from the United States. The <i>Morbidity and Mortality Weekly Report (MMWR)</i> of June 24, 2011 cited the control of vaccine preventable diseases, including measles, as one of the ten great public health achievements, worldwide.

Measles Complications	Common complications are ear infections and diarrhea. More serious complications associated with measles include pneumonia and encephalitis. Children younger than 5 years of age and adults older than 20 years of age, and pregnant women and persons with compromised immune systems are more likely to suffer from complications.
Measles, Mumps and Rubella (MMR) Vaccine	The Measles, Mumps and Rubella (MMR) vaccine helps prevent three highly contagious diseases: Measles, Mumps, and Rubella (German Measles)
Basic Reproductive Number	The basic reproductive number (R_0) is defined as the average number of secondary cases of an infectious disease arising from a typical case in a susceptible population. R_0 determines the herd immunity threshold and therefore the immunization coverage required to achieve elimination of an infectious disease. As R_0 increases, higher immunization coverage is required to achieve herd immunity. For measles, R_0 is estimated to be 12–18, which means that each person with measles would, on average, infect 12–18 other people in a totally susceptible population
Vaccination Coverage (Uptake)	Vaccination coverage is the estimated proportion of people who have received specific vaccines. Health departments all over the United States monitor vaccination coverage to understand how well communities are protected from vaccine-preventable diseases. Vaccination coverage information is used to identify areas and groups with lower vaccination uptake so public health departments, health care partners, and schools can take action to help improve vaccination coverage and protect everyone from vaccine-preventable diseases.
Vaccine Exemptions	All 50 states and the District of Columbia have legislation requiring vaccinations for children. However, a number of legally supported exemptions apply including those for medical, religious and philosophical reasons. All states and D. C. allow exemptions for children with a medical condition preventing administering vaccines. Forty-five states and the District of Columbia grant exemptions for families who have religious objections to children receiving vaccinations. Currently, 15 states allow philosophical exemptions for those who object to immunizations because of personal, moral or other beliefs. Exemption rates are highest in states where personal belief exemptions are easy to obtain (for example, signing a health form) compared with those that require parents to take more steps to obtain refusal (for example, receiving documented education from a healthcare professional about the benefits of immunization and the risks of the vaccine-preventable disease, and obtaining a notarized form).
Vaccine Hesitancy	Vaccine hesitancy refers to delay in acceptance or refusal of vaccination despite availability of vaccination services. Vaccine hesitancy is complex and context specific, varying across time, place and vaccines. Reluctance to receive vaccination services is influenced by multiple determinants in social contexts such as complacency, convenience and confidence. Healthcare professionals should answer parents' questions about vaccines, and should encourage parents to vaccinate on time and make sure children who have fallen behind schedule catch up.