

Vaccines Dramatically Reduce Disease in the United States

Baseline 20 th century annual morbidity and 1998 provisional morbidity from nine diseases with vaccines recommended before 1990 for universal use in children - United States.			
Disease	Baseline 20 th Century Annual Morbidity	1998 Provisional Morbidity	% Decrease
Smallpox	48,164 ¹	0	100%
Diphtheria	175,885 ²	1	100% ³
Pertussis	147,271 ⁴	6,279	95.7%
Tetanus	1,314 ⁵	34	97.4%
Polio (paralytic)	16,316 ⁶	0 ⁷	100%
Measles	503,282 ⁸	89	100% ³
Mumps	152,209 ⁹	606	99.6%
Rubella	47,745 ¹⁰	345	99.3%
Congenital Rubella Syndrome	823 ¹¹	5	99.4%
<i>Haemophilus influenzae</i> type b	20,000 ¹²	54 ¹³	99.7%

¹ Average annual number of cases during 1900-1904.

² Average annual number of reported cases during 1920-1922, 3 years before vaccine development.

³ Rounded to nearest tenth.

⁴ Average annual number of reported cases during 1922-1925, 4 years before vaccine development.

⁵ Estimated number of cases based on reported number of deaths during 1922-1926, assuming a case-fatality rate of 90%.

⁶ Average annual number of reported cases during 1951-1954, 4 years before vaccine licensure.

⁷ Excludes one case of vaccine-associated polio reported in 1998.

⁸ Average annual number of reported cases during 1958-1962, 5 years before vaccine licensure.

⁹ Number of reported cases in 1968, the year reporting began and the first year after vaccine licensure.

¹⁰ Average annual number of reported cases during 1996-1968, 3 years before vaccine licensure.

¹¹ Estimated number of cases based on seroprevalence data in the population and on the risk that women infected during a childbearing year would have a fetus with congenital rubella syndrome.

¹² Estimated number of cases from population-based surveillance studies before vaccine licensure in 1985.

¹³ Excludes 71 cases of *Haemophilus influenzae* disease of unknown serotype.

Adapted from [MMWR](#), April 2, 1999, Vol. 48, No. 12 by the [Immunization Action Coalition](#)