What childhood diseases are actually vaccine-preventable?

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https://dickatlee.com/vaccines/maine/nass_vaccine_disease_relevance.html and PDF

(*Analysis courtesy of Dr. Meryl Nass, M.D., blogging at https://anthraxvaccine.blogspot.com*)

Below is the list of **15 infectious diseases** for which vaccines are recommended as part of the childhood vaccine schedule in the United States, **grouped by color** according to the relevance of vaccines for their prevention. (A sixteenth, **rotavirus**, does have a vaccine at 2 & 4 months, but because rotavirus only causes diarrhea and is not expected to cause severe illness/death, the CDC does not collect information on US case numbers.)

These diseases **cannot spread casually** from person to person, so children are at **no risk** from them.

These diseases have been **wiped out** in the United States, and there have not been any new cases that originated in the US for many years.

These diseases **cannot be wiped out**, nor can herd immunity be achieved, because available vaccines only protect against some strains. In fact, sometimes vaccinations against some strains cause infections from other strains to *increase* in incidence.

These diseases **can't be stopped from spreading** because the vaccines aren't effective enough.

Only two vaccine-preventable illnesses are left.

Disease	don't spread	wiped out	can't wipe out	can't stop spread	potentially preventable	CDC 2019 Schedule (if done on time) 70 doses through age 18
Diphtheria		+	.....			2,4,6,12-18mo, 4-6,11-12yr
Haemophilus influenzae, type B			+	.....		2,4,6,12-18 mos
Hepatitis A	[1]	.....				12-24 mos (2 doses)
Hepatitis B	[2]	.....				birth, 1-2,6-18 mos
HPV			[3]	.....		11-12 yrs
Influenza				[4]	.....	6 mos, annual
Measles					[5]	12-15 mos, 4-6 yrs
Meningococcal disease, type ACWY			[6]	.....		11-12,16 yrs
Mumps				[7]	.....	12-15 mos, 4-6 yrs
Pertussis				[8]	.....	2,4,6,12-18mo, 4-6,11-12yr
Pneumococcal disease, certain serotypes			+	.....		2,4,6,12-15 mos

Polio		[9]	.....			2,4,6-18 mos, 4-6 yrs
Rubella		[10]	.....			12-15 mos, 4-6 yrs
Tetanus	[11]	.....				2,4,6,12-18mo, 4-6,11-12yr
Varicella (chickenpox)					[12]	12-15 mos, 4-6 yrs
Disease	don't spread	wiped out	can't wipe out	can't stop spread	potentially preventable	CDC 2019 Schedule (if done on time) 70 doses through age 18

Notes *

[1] According to the American Academy of Pediatrics, **Hepatitis A** affects particular at-risk populations of adults, children only in very specific cases; appropriate on a case-by-case basis, but not for universal use.

[2] **Hepatitis B** is only transmitted by needles or sex, not on day 1; any protection has waned by any time of exposure.

[3] **HPV** vaccine covers only a small proportion of HPV strains; evidence is mounting of higher-virulence strain replacement.

[4] **Influenza** vaccine has been only 40% effective on average over last 12 years.

[5] If given after 15 months of age, 2 doses of **measles** vaccine should be 97% effective initially, with only mild waning over time. In Maine in 2017, there was only one case (the first in 20 years), imported by an unvaccinated female in the 15-24 age range. The last U.S. death was in a 14-year-old bone marrow transplant patient.

[6] Kids carry **meningococcal** bacteria in their noses despite being vaccinated.

[7] Most **mumps** cases are caused not by lack of vaccination, but by vaccine failure -- either primary or secondary. In Maine in 2017 there was only 1 case: a vaccinated female in the 15-24 age bracket. There have been no U.S. mumps deaths in recent years.

[8] Most **pertussis** cases are caused by vaccine failure: in Maine in 2017, 66% of the 410 documented cases were up to date on vaccination, 83% had at least one dose and only 6% were under a year old. Of the 10 deaths nationally, it is not clear if any were from Maine.

[9] The last 3 U.S. **polio** cases occurred due to live-vaccine strain polio.

[10] All recent **rubella** cases have come from overseas, and there have been none in Maine since 2008.

[11] **Tetanus** only occurs in contaminated wounds; 30 U.S. cases/year, only one of which in 2017 was in Maine (unvaccinated female, age range 15-24).

[12] Of 198 **varicella** cases in Maine in 2017, 40% were among children (of whom 70% were vaccinated); 8% were in the 15-24 age bracket; no Maine deaths (nationwide: only about 1/year).

* The statistics in these notes were obtained from the Maine CDC and the federal CDC and collated by Dr. Meryl Nass, MD on February 8, 2019.