

Supplemental Information

SUPPLEMENTAL TABLE 3 Age-Specific Prevacine and Vaccine-Era Disease Incidence Estimates (Per 100 000) for *Haemophilus Influenzae* Type b, Rotavirus, Diphtheria, and Influenza

Scenario	Age						
	0–5 mo	6–11 mo	1 y	2 y	3 y	4 y	5–10 y
<i>Haemophilus influenzae</i> type b							
Prevaccine	148.0	274.9	157.5	50.1	31.1	11.2	—
Vaccine era	0.3	0.3	0.2	0.1	0.1	0.1	—
Percentage change	–99.8%	–99.9%	–99.9%	–99.9%	–99.8%	–99.4%	—
Rotavirus hospitalizations							
Prevaccine	340.0	340.0	340.0	340.0	340.0	340.0	—
Vaccine era	29.1	29.1	29.1	29.1	29.1	29.1	—
Percentage change	–91.4%	–91.4%	–91.4%	–91.4%	–91.4%	–91.4%	—
Rotavirus ED visits							
Prevaccine	1072.0	1072.0	1072.0	1072.0	1072.0	1072.0	—
Vaccine era	419.8	419.8	419.8	419.8	419.8	419.8	—
Percentage change	–60.8%	–60.8%	–60.8%	–60.8%	–60.8%	–60.8%	—
Rotavirus outpatient visits							
Prevaccine	2228.0	2228.0	2228.0	2228.0	2228.0	2228.0	—
Vaccine era	1222.1	1222.1	1222.1	1222.1	1222.1	1222.1	—
Percentage change	–45.1%	–45.1%	–45.1%	–45.1%	–45.1%	–45.1%	—
Diphtheria							
Prevaccine	600.0	600.0	600.0	600.0	600.0	600.0	600.0
Vaccine era	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentage change	–100.0%	–100.0%	–100.0%	–100.0%	–100.0%	–100.0%	–100.0%
Influenza							
Prevaccine	18 903.3	18 903.3	18 903.3	18 903.3	18 903.3	18 903.3	14 066.8
Vaccine era	15 180.1	15 180.1	15 180.1	15 180.1	15 180.1	15 180.1	11 979.4
Percentage change	–19.7%	–19.7%	–19.7%	–19.7%	–19.7%	–19.7%	–14.8%

—, disease impact was not assessed in the given age group; ED, emergency department; mo, month; y, year. Ages >10 y were not modeled.

SUPPLEMENTAL TABLE 4 Age-Specific Prevacine and Vaccine-Era Disease Incidence Estimates (per 100 000) for Measles, Mumps, Rubella

Scenario	Age								
	<1 y	1 y	2–4 y	5–9 y	10–14 y	15–19 y	20–24 y	25–29 y	30–39 y
Measles									
Prevaccine	9200.0	11 053.0	10 641.0	2536.7	2536.7	2536.7	22.9	22.9	22.9
Vaccine era	0.7	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1
Percentage change	–100.0%	–100.0%	–100.0%	–100.0%	–100.0%	–100.0%	–99.4%	–99.7%	–99.7%
Mumps									
Prevaccine	558.5	1809.8	3744.7	6205.4	1200.0	256.1	229.8	229.8	99.3
Vaccine era	0.3	0.8	0.8	1.6	1.6	3.3	3.3	1.1	1.1
Percentage change	–100.0%	–100.0%	–100.0%	–100.0%	–99.9%	–98.7%	–98.5%	–99.5%	–98.9%
Rubella									
Prevaccine	2585.4	2585.4	2585.4	3300.0	1551.2	751.2	300.0	300.0	300.0
Vaccine era	<0.1	<0.1	<0.1	0.0	0.0	<0.1	<0.1	0.0	0.0
Percentage change	–100.0%	–100.0%	–100.0%	–100.0%	–100.0%	–100.0%	–100.0%	–100.0%	–100.0%

Ages ≥40 y were not modeled.

SUPPLEMENTAL TABLE 5 Age-Specific Prevacine and Vaccine-Era Disease Incidence Estimates (per 100 000) for Hepatitis A, Hepatitis B, pertussis, Streptococcus pneumoniae, Polio, Tetanus, and Varicella

Disease or Scenario	Incidence Per 100 000, By Age													
	<1 y	1 y	2–4 y	5–10 y	11–14 y	15–17 y	18–24 y	25–34 y	35–39 y	40–49 y	50–64 y	65–74	75–84 y	85+ y
Hepatitis A^a														
Prevaccine	5.8	18.0	18.0	28.7	28.7	22.6	22.6	21.3	21.3	8.5	8.5	4.9	4.9	4.9
Vaccine era	0.1	0.2	0.2	0.2	0.2	1.5	1.5	4.5	4.5	2.5	2.5	1.2	1.2	1.2
Percentage change	–98.6%	–98.9%	–98.9%	–99.1%	–99.1%	–93.4%	–93.4%	–78.7%	–78.7%	–71.0%	–71.0%	–76.2%	–76.2%	–76.2%
Hepatitis B^a														
Prevaccine	4.5	2.3	2.3	4.5	4.5	107.5	107.5	66.4	66.4	26.4	26.4	15.3	15.3	15.3
Vaccine era	3.6	1.3	1.3	0.0	0.0	1.6	1.6	11.7	11.7	10.9	10.9	2.7	2.7	2.7
Percentage change	–21.0%	–46.2%	–46.2%	–99.7%	–99.7%	–98.5%	–98.5%	–82.4%	–82.4%	–58.7%	–58.7%	–82.7%	–82.7%	–82.7%
Pertussis														
Prevaccine	4720.0	4720.0	4720.0	4720.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0	131.0
Vaccine era	663.8	186.4	186.4	177.1	177.1	99.3	99.3	18.9	18.9	19.9	19.9	14.4	14.4	14.4
Percentage change	–85.9%	–96.1%	–96.1%	–96.2%	35.1%	–24.2%	–24.2%	–85.5%	–85.5%	–84.8%	–84.8%	–89.0%	–89.0%	–89.0%
Streptococcus pneumoniae														
IPD														
Prevaccine	157.0	195.5	33.7	4.4	4.4	4.4	8.3	8.3	18.6	18.6	24.0	61.2	61.2	61.2
Vaccine era	14.8	11.9	5.7	1.4	1.4	1.4	2.6	2.6	6.9	6.9	16.1	20.0	29.5	45.4
Percentage change	–90.5%	–93.9%	–83.0%	–67.3%	–67.3%	–67.3%	–68.3%	–68.3%	–63.0%	–63.0%	–32.8%	–67.4%	–51.8%	–25.9%
Pneumonia hospitalizations^b														
Prevaccine	433.2	433.2	139.7	33.0	33.0	33.0	29.2	29.2	29.2	29.2	91.7	353.0	752.9	1555.3
Vaccine era	10.7	10.9	6.0	1.6	1.6	1.6	4.5	4.5	4.5	4.5	15.7	55.7	142.6	284.4
Percentage change	–97.5%	–97.5%	–95.7%	–95.0%	–95.0%	–95.0%	–84.8%	–84.8%	–84.8%	–84.8%	–82.8%	–84.2%	–81.1%	–81.7%
Pneumonia outpatient visits^b														
Prevaccine	1458.6	1458.6	1458.6	408.0	265.2	265.2	111.9	111.9	111.9	111.9	111.9	335.8	592.4	592.4
Vaccine era	79.3	148.7	129.6	49.6	49.6	49.6	47.9	47.9	47.9	47.9	85.1	147.6	262.5	452.5
Percentage change	–94.6%	–89.8%	–91.1%	–87.9%	–81.3%	–81.3%	–57.2%	–57.2%	–57.2%	–57.2%	–23.9%	–56.0%	–55.7%	–23.6%
AOM^c														
Prevaccine	49 324.0	49 324.0	15 004.0	4840.0	4840.0	4840.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vaccine era	10 521.0	10 521.0	4032.0	1365.0	1365.0	1365.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentage change	–78.7%	–78.7%	–73.1%	–71.8%	–71.8%	–71.8%	—	—	—	—	—	—	—	—
Polio														
Prevaccine	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4	21.4
Vaccine era	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percentage change	–100.0%	–100.0%	–100.0%	–100.0%	–100.0%	–100.0%	–100.0%	–100.0%	–100.0%	–100.0%	–100.0%	–100.0%	–100.0%	–100.0%
Tetanus														
Prevaccine	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Vaccine era	0.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Percentage change	–100.0%	–99.5%	–99.5%	–98.5%	–98.5%	–99.5%	–99.5%	–97.5%	–97.5%	–98.5%	–98.5%	–97.5%	–97.5%	–97.5%
Varicella^a														
Prevaccine	1723.5	4519.4	4519.4	6480.0	6480.0	388.6	388.6	122.1	122.1	26.8	26.8	16.0	16.0	16.0
Vaccine era	230.6	139	139	88.4	88.4	23.9	23.9	14.4	14.4	6.8	6.8	2.6	2.6	2.6
Percentage change	–86.6%	–96.9%	–96.9%	–98.6%	–98.6%	–93.8%	–93.8%	–88.2%	–88.2%	–74.5%	–74.5%	–84.0%	–84.0%	–84.0%

ABC, Active Bacterial Core surveillance; AOM, acute otitis media; IPD, invasive pneumococcal disease; PCV13, 13-valent pneumococcal conjugate vaccine; PCV7, 7-valent pneumococcal conjugate vaccine; —, not applicable.

^a For ages 40 y and above, CDC reported cases by different age groups prevaccine, including among individuals aged 40–59 y and 60+ years, than in the vaccine era, which was reported for ages 40–64 and 65+. For simplicity, the analysis used the prevaccine incidence rates from 40–59 y and 60+ years for the 40–64 and 65+ age categories, respectively.

^b The percentages of hospitalizations and outpatient visits caused by Streptococcus pneumoniae are 34.0% prevaccine and 4.0% in the vaccine era for individuals aged <18 y and 27.3% prevaccine and 7.7% in the vaccine era for individuals aged ≥18 y.^{68–71}

^c The percentages of AOM cases caused by Streptococcus pneumoniae are 44.0% prevaccine and 21.0% in the vaccine era.⁷²