

**Table 3. Estimated linear trends in vaccination coverage by age 24 months, National Immunization Survey-Child, United States, 2013–2017**

Vaccine/Dose		Monthly Birth Cohorts (A) January 2012–January 2016			Monthly Birth Cohorts (B) January 2014–January 2016		
		Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI
<b>DTaP*</b>							
≥3 doses	Baseline coverage <sup>†</sup>	95.18	94.54	95.83	93.28	90.42	96.14
	12-month change <sup>§</sup>	-0.29	-0.59	0.01	0.30	-0.65	1.25
≥4 doses	Baseline coverage	82.49	81.07	83.91	81.71	75.16	88.26
	12-month change	-0.55	-1.20	0.10	-0.23	-2.42	1.96
<b>Poliovirus (≥3 doses)</b>							
	Baseline coverage	93.45	92.71	94.20	89.66	85.79	93.52
	12-month change	-0.17	-0.52	0.18	1.05	-0.21	2.31
<b>MMR (≥1 dose)</b>							
	Baseline coverage	91.34	90.33	92.34	93.46	89.59	97.33
	12-month change	-0.11	-0.58	0.35	-0.88	-2.19	0.43
<b>Hib<sup>¶</sup></b>							
Primary series	Baseline coverage	94.56	93.81	95.30	93.06	90.02	96.10
	12-month change	<b>-0.50</b>	-0.86	-0.14	-0.07	-1.09	0.95
Full series	Baseline coverage	81.53	80.19	82.88	81.97	76.13	87.81
	12-month change	-0.51	-1.13	0.11	-0.65	-2.61	1.31
<b>HepB</b>							
≥3 doses	Baseline coverage	93.29	92.37	94.21	89.87	86.19	93.56
	12-month change	<b>-0.53</b>	-0.97	-0.09	0.58	-0.65	1.80
Birth dose**	Baseline coverage	72.67	71.14	74.20	65.40	60.05	70.76
	12-month change	0.58	-0.10	1.26	<b>2.97</b>	1.22	4.73
<b>Varicella (≥1 dose)</b>							
	Baseline coverage	90.69	89.66	91.72	90.73	86.56	94.90
	12-month change	-0.05	-0.53	0.42	-0.14	-1.54	1.26
<b>PCV</b>							
≥3 doses	Baseline coverage	93.42	92.62	94.22	92.30	88.25	96.35
	12-month change	-0.18	-0.55	0.19	0.19	-1.17	1.55
≥4 doses	Baseline coverage	82.50	80.97	84.03	83.61	75.96	91.26
	12-month change	0.00	-0.69	0.68	-0.33	-2.88	2.22
<b>HepA</b>							
≥1 doses	Baseline coverage	83.14	82.00	84.28	83.05	78.76	87.35
	12-month change	0.44	-0.07	0.96	0.46	-0.98	1.90
≥2 doses	Baseline coverage	39.56	37.77	41.34	45.29	38.79	51.79
	12-month change	<b>1.13</b>	0.30	1.97	-0.76	-2.95	1.44
≥2 doses (by 35 months) <sup>††</sup>	Baseline coverage	75.26	72.34	78.19	85.76	68.93	102.60
	12-month change	-0.42	-1.96	1.12	-4.39	-10.77	1.98
<b>Rotavirus (by 8 months)<sup>§§</sup></b>							
	Baseline coverage	71.87	70.17	73.57	73.47	66.87	80.07
	12-month change	0.68	-0.09	1.45	0.15	-2.08	2.38
<b>Combined 7-vaccine series<sup>¶¶</sup></b>							
	Baseline coverage	69.44	67.67	71.20	69.82	61.69	77.96
	12-month change	-0.27	-1.07	0.53	-0.33	-3.05	2.40

**Abbreviations:** CI = confidence interval; DTaP = diphtheria, tetanus toxoids, and acellular pertussis vaccine; HepA = hepatitis A vaccine; HepB = hepatitis B vaccine; Hib = *Haemophilus influenzae* type b conjugate vaccine; MMR = measles, mumps, and rubella vaccine; PCV = pneumococcal conjugate vaccine

**Bolded** estimates of 12-month change in coverage are statistically significant at  $p < 0.05$ , where the 95% CI does not contain zero.

\* Includes children who might have been vaccinated with diphtheria and tetanus toxoids vaccine or diphtheria, tetanus toxoids, and pertussis vaccine.

<sup>†</sup> Estimated vaccination coverage for the oldest monthly birth cohort included in the linear regression analysis (the estimated intercept for the fitted linear regression line).

<sup>§</sup> Percentage point change in coverage over 12 months of birth, estimated as the per-month-of-birth slope of the fitted regression line\*12.

<sup>¶</sup> Hib primary series: receipt of ≥2 or ≥3 doses, depending on the product type received. Full series: receipt of ≥3 or ≥4 doses, depending on product type received (primary series and booster dose).

\*\* The hepatitis birth dose (one dose of HepB administered between birth and age 3 days) was assessed by age 3 days. Estimates for the group A monthly birth cohorts are based on data from children born January 2012 through May 2016. Estimates for the group B monthly birth cohorts are based on data from children born January 2014 through May 2016.

<sup>††</sup> ≥2 doses of HepA vaccine was also assessed at 35 months, since a child could follow the recommended schedule and still receive vaccine at this age. Estimates for the group A monthly birth cohorts are based on data from children born January 2012 through February 2015. Estimates for the group B monthly birth cohorts are based on data from children born January 2014 through February 2015.

§§ Rotavirus vaccine was assessed at 8 months since the age at vaccination should not exceed 8 months. Estimates for the group A monthly birth cohorts are based on data from children born January 2012 through May 2016. Estimates for the group B monthly birth cohorts are based on data from children born January 2014 through May 2016.

¶¶ The combined 7-vaccine series includes  $\geq 4$  doses of DTaP,  $\geq 3$  doses of poliovirus vaccine,  $\geq 1$  dose of measles-containing vaccine, the full series of Hib ( $\geq 3$  or  $\geq 4$  doses, depending on product type of vaccine),  $\geq 3$  doses of HepB,  $\geq 1$  dose of varicella vaccine, and  $\geq 4$  doses of PCV.