

Each year the CDC conducts the NIS-Teen survey, which reports adolescent (13-17 years of age) coverage for catch-up vaccines as well as adolescent specific vaccines. The survey only includes several hundred Utah residents so it is impossible to discern coverage levels on a community level. For this reason adolescent immunization records were queried in USIIS to establish coverage levels for each of our 12 Local Health Districts (LHD) as of December 31, 2009.

A total of 55 clinics were randomly selected for inclusion in the sample, and the sample included at least one clinic from each of the 29 counties in Utah. The sample consisted of 37 private clinics, 13 health department clinics, and five federally qualified health centers (FQHC). Each clinic provided sufficient records to adequately represent its contribution to the total number of 13-17 year olds found in the state of Utah. The sample included a total of 1,254 adolescents. The sample distribution (based on county) of adolescents included in this study adequately represents the true state population distribution.

Vaccine histories were obtained for Td, Tdap, MMR, Hepatitis B, Varicella, history of Varicella disease, Meningococcal, and HPV. State coverage levels for each of these vaccines, as reported by USIIS, were compared to the state coverage reported in the NIS-Teen. A comparison of these two surveys would indicate how well USIIS reports “true” immunization coverage. If the coverage levels matched between the two data sources, then it would be appropriate to report for each LHD.

USIIS and NIS-Teen coverage levels agreed for 1 Tdap, 1 Meningococcal, and HPV. These are the adolescent specific vaccines. Coverage levels for 1 Td or Tdap, 2 MMR, 3 Hep B, and Varicella did not agree (Table 1). This may indicate that recently administered vaccines are being entered into USIIS accurately and consistently, but clinics are not retroactively reporting older immunization dates.

Tables for key adolescent immunizations can be seen in the next 3 tables. Local Health Districts in bold are significantly lower than the State average.

Table 1 Adolescent coverage with 1 Tdap by Local Health District

LHD	Point Estimate Coverage	95% CI
BRHD	69.1%	58.1% to 80.1%
CUPHD	65.9%	51.9% to 79.9%
DCHD	59.1%	50.9% to 67.3%
SLVHD	59.3%	54.9% to 63.7%
SEUPHD	60.0%	42.5% to 77.5%
SWUPHD	71.1%	60.9% to 81.3%
SCHD	57.9%	35.7% to 80.1%
TCHD	42.4%	25.5% to 59.3%
TRCHD	63.2%	41.5% to 84.9%
UCHD	42.4%	36.1% to 48.7%
WCHD	50.0%	21.7% to 78.3%
WMHD	61.3%	52.2% to 70.4%

Table 2 Adolescent vaccination coverage with 1 Meningococcal by LHD

LHD	Point Estimate Coverage	95% CI
BRHD	38.2%	26.7% to 49.7%
CUPHD	31.8%	18.0% to 45.6%
DCHD	42.3%	34.0% to 50.6%
SLVHD	45.4%	40.9% to 49.9%
SEUPHD	20.0%	5.7% to 34.3%
SWUPHD	31.6%	21.1% to 42.1%
SCHD	52.6%	30.1% to 75.1%
TCHD	27.3%	12.1% to 42.5%
TRCHD	21.1%	2.8% to 39.4%
UCHD	21.6%	16.3% to 26.9%
WCHD	50.0%	21.7% to 78.3%
WMHD	55.0%	45.7% to 64.3%

Table 3 Adolescent vaccination coverage with HPV among females by LHD, numbers in parentheses are 95% confidence intervals

LHD	3 HPV	2 HPV	1 HPV
BRHD	22.6% (7.9% to 37.3%)	16.1% (3.2% to 29.0%)	6.5% (1.8% to 20.7%)
CUPHD	59.1% (38.6% to 79.6%)	54.5% (33.7% to 75.3%)	27.3% (8.7% to 45.9%)
DCHD	29.4% (18.6% to 40.2%)	16.2% (7.4% to 25.0%)	11.8% (4.1% to 19.5%)
SLVHD	42.1% (35.6% to 48.6%)	29.0% (23.0% to 35.0%)	19.0% (13.8% to 24.2%)
SEUPHD	7.7% (1.4% to 33.3%)	0.0% (0.0% to 22.8%)	0.0% (0.0% to 22.8%)
SWUPHD	32.6% (18.6% to 46.6%)	11.6% (2.0% to 21.2%)	4.7% (1.3% to 15.5%)
SCHD	7.7% (1.4% to 33.3%)	7.7% (1.4% to 33.3%)	7.7% (1.4% to 33.3%)
TCHD	56.0% (36.5% to 75.5%)	36.0% (17.2% to 54.8%)	16.0% (1.7% to 30.3%)
TRCHD	50.0% (19.0% to 81.0%)	20.0% (5.7% to 51.0%)	20.0% (5.7% to 51.0%)
UCHD	24.2% (16.7% to 31.7%)	12.1% (6.4% to 17.8%)	4.8% (1.1% to 8.5%)
WCHD	40.0% (11.8% to 76.9%)	20.0% (3.6% to 62.4%)	20.0% (3.6% to 62.4%)
WMHD	42.1% (29.3% to 54.9%)	26.3% (14.9% to 37.7%)	14.0% (5.0% to 23.0%)

Historically, Utah immunization coverage reported through CoCASA has been significantly lower than what is reported for Utah in the NIS. Consequently a sample of children 19-35 months was taken from the USIIS database to determine coverage for the 4:3:1:3:3:1 series. The sample included 1,322 children from each of the LHDs. For most LHD's there were not enough children included to create coverage levels. The WMHD, DCHD, SLVHD, and UCHD were combined and reported as Wasatch Front, the remaining LHD were combined to form non-Wasatch Front. Results can be seen in Table 1. The results here are higher than the CoCASA assessments but not as high as the NIS. An additional assessment which includes a larger sample from the smaller LHD is necessary for follow-up.

Table 1 Utah Up-to-date at age 2 4:3:1:3:3:1

Geographic Location	# children up-to-date	Total Sample	Percent up-to-date	Lower Limit	Upper Limit
Utah	762	1,322	57.6%	55.0%	60.3%
Wasatch Front	601	976	61.6%	58.5%	64.6%
Non-Wasatch Front	161	346	46.5%	41.3%	51.8%

Rotavirus vaccination rates for 2006 through 2010 were calculated from children younger than 3 in Utah from USIIS queries. Rates are reported for initiating the series (1 dose), 2 doses (incomplete series) and completed series (2 or 3 doses depending on brand). Significant gains were experienced between 2006 and 2009. There was an increase in rates from 2009 to 2010, but this increase was not significant.

Year	1 dose	95% CI	2 doses	95% CI	Completed series	95% CI
2006	2.7%	1.6% to 3.8%	1.6%	0.7% to 2.5%	0.7%	0.1% to 1.3%
2007	22.9%	18.7% to 27.1%	16.1%	12.4% to 19.8%	9.1%	6.2% to 12.0%
2008	48.7%	44.0% to 53.8%	38.4%	33.6% to 43.2%	25.6%	21.3% to 29.9%
2009	66.7%	61.9% to 71.5%	53.7%	48.6% to 58.8%	39.9%	34.9% to 44.9%
2010	72.0%	67.1% to 76.9%	60.2%	54.9% to 65.5%	43.8%	38.4% to 49.2%