

# Utah Health Status Update: HPV Immunization

January 2015

In 2006, the Centers for Disease Control and Prevention Advisory Committee on Immunization Practices (ACIP) recommended that females aged 11–12 years be routinely vaccinated against human papillomavirus (HPV). The HPV vaccine is also recommended for 13- to 26-year-old females who have not yet received or completed the vaccination series.<sup>1</sup> In 2011, ACIP approved and recommended the HPV vaccine for 11- to 21-year-old males.<sup>2</sup> Despite the ACIP recommendations and proven vaccine efficacy, uptake of the HPV vaccine has been, and continues to be, suboptimal among age-eligible adolescents and young adults in the U.S.

The Centers for Disease Control and Prevention's (CDC) National Immunization Survey (NIS) is sponsored by the National Center for Immunizations and Respiratory Diseases (NCIRD) and conducted jointly by NCIRD and the National Center for Health Statistics (NCHS). The NIS is a list-assisted random-digit-dialing telephone survey followed by a mailed survey to children's immunization providers to monitor childhood immunization coverage.<sup>3</sup> The results of the 2014 NIS indicate that in 2013, HPV vaccination rates in Utah among females with  $\geq 3$  doses and males with  $\geq 1$  dose were the lowest in the nation at 20.5% and 11.0%, respectively.<sup>4</sup> HPV immunization rates in Utah were significantly lower than the national averages of 57.3% (1 dose)

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- The results of the 2014 NIS indicate that in 2013, HPV vaccination rates in Utah among females with  $\geq 3$  doses and males with  $\geq 1$  dose were the lowest in the nation at 20.5% and 11.0%, respectively.
- Despite the fact that notable efforts have been made in recent years, much work remains to be done to improve HPV immunization rates in Utah.

## Utah HPV Vaccination Coverage

Table 1. Percentage of teens aged 13-17 receiving various dosages of HPV vaccine by survey year and sex, Utah and U.S., 2008–2013

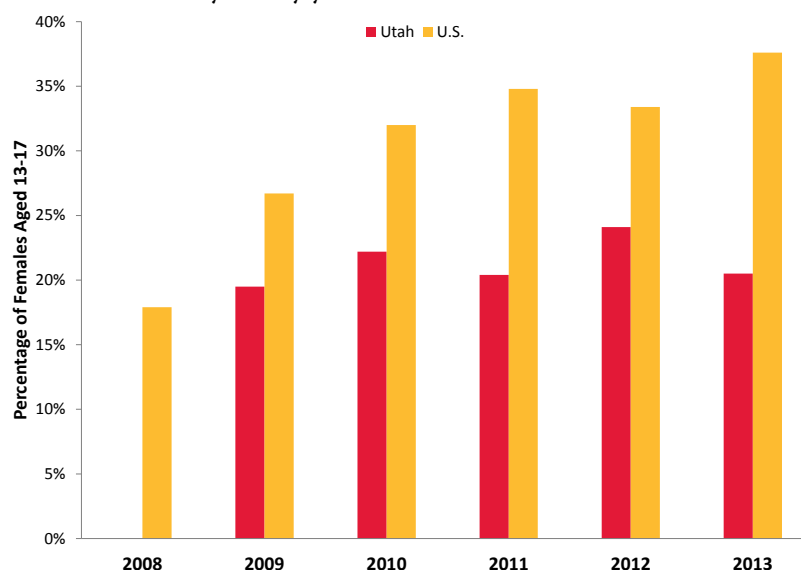
Survey Year	UTAH			U.S.		
	1 HPV - Female	1 HPV - Male	3 HPV - Female	1 HPV - Female	1 HPV - Male	3 HPV - Female
2008	17.1%	--	--	37.2%	--	17.9%
2009	32.5%	--	19.5%	44.3%	--	26.7%
2010	39.2%	--	22.2%	48.7%	--	32.0%
2011	53.3%	--	20.4%	53.0%	8.3%	34.8%
2012	44.3%	--	24.1%	53.8%	20.8%	33.4%
2013	44.3%	11%	20.5%	57.3%	34.6%	37.6%

Source: Centers for Disease Control and Prevention (CDC). (2014). *National Immunization Survey Teen Data – Adolescents/Teens*. Retrieved from: <http://www.cdc.gov/vaccines/imz-managers/coverage/nis/teen/index.html>.

and 37.6% (3 doses).<sup>4</sup> The NIS results also indicate that the rate among females with  $\geq 1$  HPV vaccine dose remained unchanged between 2012 and 2013.<sup>4</sup> According to the Utah Statewide Immunization Information System (USIIS), of the approximately 176,015 female adolescents aged 12–17 in USIIS, only 23,800 (13.5%) have received 3 or more doses of the HPV vaccine while the rate among male adolescents is even lower at 5.1% (9,456 out of 185,418).<sup>5</sup> Furthermore, in 2014, 8 out of 12 local health districts (LHDs) in Utah had HPV vaccination rates of less than 25% for 1 or more dose of HPV vaccine, while 10 out of 12 had rates of less than 10% for 3 or more doses of HPV vaccine (Figure 2).<sup>5</sup>

## Female HPV Vaccine Coverage, Utah vs. U.S.

Figure 1. Percentage of females aged 13–17 receiving 3 or more doses of the HPV vaccine by survey year, Utah and U.S., 2008–2013



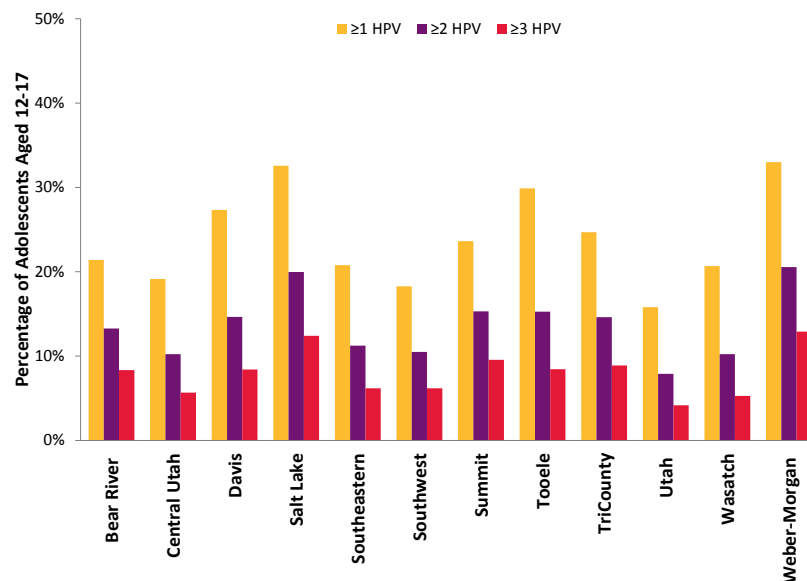
Source: Centers for Disease Control and Prevention (CDC). (2014). *National Immunization Survey Teen Data – Adolescents/Teens*. Retrieved from: <http://www.cdc.gov/vaccines/imz-managers/coverage/nis/teen/index.html>.

In 2013, the Utah Immunization Program (UIP) was awarded a CDC Prevention and Public Health Fund (PPHF) grant focused on increasing HPV immunization coverage rates among adolescents in the state. In collaboration with the Utah Cancer Control Program (UCCP), the UIP has been tasked with identifying barriers to HPV vaccination and increasing awareness and acceptance of the HPV vaccine throughout Utah. The grant is comprised of several ongoing efforts including: development and utilization of a statewide joint initiative/coalition with immunization stakeholders in the state; development and implementation of a comprehensive communication campaign targeted to parents and adolescents with an emphasis on reaching parents of children aged 11–18 years; implementation of a centralized recall and reminder for HPV vaccination through USIIS; integration of HPV coverage assessments into VFC site visits; identification of knowledge, attitudes, and practices among providers related to the HPV vaccine; and implementation of strategies to increase provider knowledge and administration of the HPV vaccine and decrease missed opportunities; partnership with Federally Qualified Health Centers (FQHCs) throughout the state to provide vaccination to underinsured adolescents and young adults; partnership with LHDs to assess and evaluate local HPV immunization coverage rates, outreach to providers, and formulation of strategies to increase HPV vaccination rates; and dissemination of lessons learned to various industry stakeholders. Preliminary analyses have indicated increases in both HPV vaccine doses distributed and USIIS coverage rates in the state.

As of October 2014, the UIP has completed several activities including: formation of a media workgroup and development of a comprehensive media campaign; dissemination of informational materials to providers and stakeholders throughout the state; three provider conferences focused on HPV and the HPV vaccine; surveys to understand parental and provider knowledge, attitudes, and practices around the HPV vaccine; data draws from USIIS and NIS for quantitative analysis of HPV vaccine coverage rates; and a recall/reminder mailing through USIIS. The HPV media campaign is ongoing and has achieved several milestones including multiple TV appearances, radio interviews, theater promotions, and transit advertising spots.

## HPV Vaccine Coverage by Local Health District

Figure 2. Percentage of adolescents aged 12–17 in the Utah Statewide Immunization Information System (USIIS) who have received the HPV vaccine by local health district and number of doses received, Utah, 2014



Utah Statewide Immunization Information System (USIIS). (2014). *HPV Vaccine Coverage among Adolescents in Utah*. Internal data

Despite the fact that notable efforts have been made in recent years, much work remains to be done to improve HPV immunization rates in Utah. A combination of ongoing concerted efforts by multiple public health organizations, private organizations, and stakeholders in the state are needed to further increase HPV vaccine uptake in the state.

### References

- Centers for Disease Control and Prevention (CDC). (2007). *Quadrivalent Human Papillomavirus Vaccine: Recommendations of the Advisory Committee on Immunization Practices (ACIP)*. Retrieved from: <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5602a1.htm>.
- Centers for Disease Control and Prevention (CDC). (2011). *Recommendations on the Use of Quadrivalent Human Papillomavirus Vaccine in Males — Advisory Committee on Immunization Practices (ACIP), 2011*. Retrieved from: <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6050a3.htm>.
- Centers for Disease Control and Prevention (CDC). (2014). National Immunization Survey. Retrieved from: <http://www.cdc.gov/nchs/nis.htm>.
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- Utah Statewide Immunization Information System (USIIS). (2014). *HPV Vaccine Coverage among Adolescents in Utah*. Internal data.

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## Breaking News, January 2015

### Nicotine Content in E-Liquid Samples, Salt Lake County Health Department, 2014

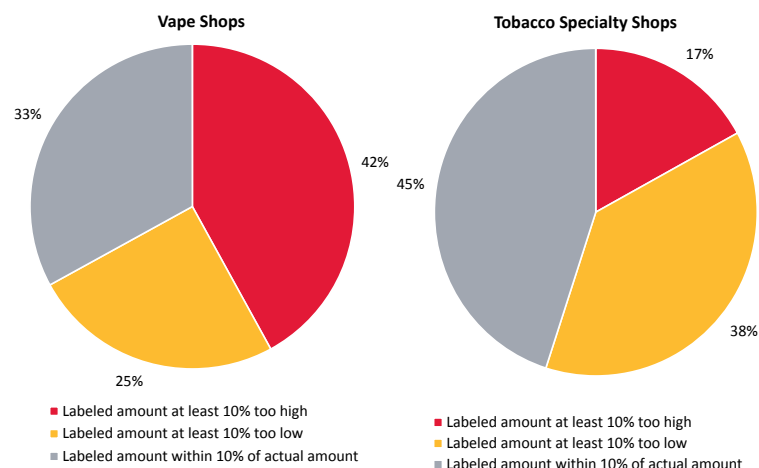
Electronic cigarettes (e-cigarettes) are battery-powered devices that turn liquids (usually containing nicotine) into an aerosol inhaled by the user. Nicotine is both a highly addictive drug and a neurotoxin that can cause nausea, vomiting, sweating, and an increased heart rate. Even though nicotine levels in e-cigarette refill solutions are often high enough to be fatal to small children if ingested, the FDA does not regulate e-liquid manufacturing.

Salt Lake County Health Department (SLCoHD) partnered with the Center for Human Toxicology at the University of Utah to measure the amount of nicotine in 153 e-liquid samples that were obtained from all 14 vape shops in Salt Lake County, as well as from a random selection of 16 tobacco specialty stores in the county. In accordance with findings from national studies,<sup>1</sup> the nicotine levels listed on the e-liquid labels were often significantly different from the values measured by the Center for Human Toxicology.

The American E-Liquid Manufacturing Standards Association recommends that all liquids produced will be within the tolerance level of +/-10% nicotine content in final product. In the SLCoHD study 61% of the e-liquids tested (73 out of 120 that listed a nicotine amount higher than zero) differed by at least 10% from the labeled nicotine content, with discrepancies that ranged from 88% less to 840% more than stated. Of the 33 samples that listed the nicotine amount as zero, 32 contained less than 0.5mg/ml of nicotine and 1 sample contained 7.35mg/ml.

These findings support the need for local policies that require licenses to manufacture e-liquids and to sell e-cigarettes to ensure safety standards that include accurate labeling of ingredients and nicotine levels.

**Comparison of Listed Versus Actual Amounts of Nicotine in E-liquids by Type of Retailer, Salt Lake County, 2014**



1. Cheng T., Chemical Evaluation of Electronic Cigarettes. Tobacco Control 2014. Retrieved on December 29, 2014 from [http://tobaccocontrol.bmj.com/content/23/suppl\\_2/ii11.full](http://tobaccocontrol.bmj.com/content/23/suppl_2/ii11.full).

## Community Health Indicators Spotlight, January 2015

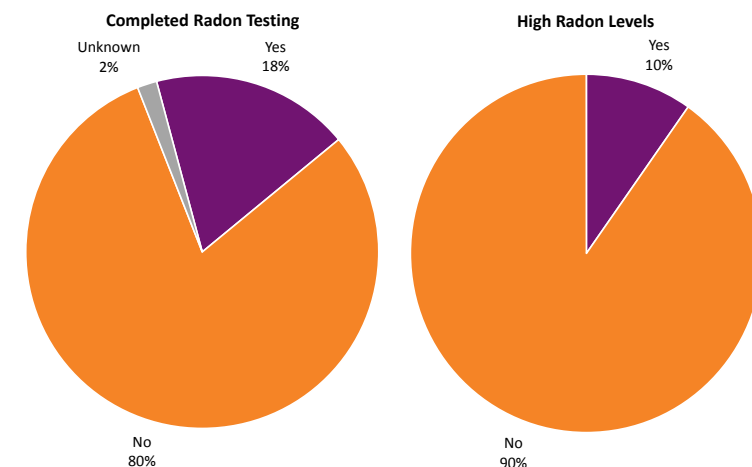
### Radon Testing

In 2013, questions about radon were included for the first time in the Utah Behavioral Risk Factor Surveillance System (BRFSS) survey. Four questions were developed and included in two of the three versions of the survey that were used.

- Have you ever had your home tested for radon gas?
- Did the radon test show a high level?
- What is the most important reason you have not had your home tested for radon gas?
- What health condition is most often associated with radon gas?

The results of the survey indicated that 80% of Utahns have not tested their homes for radon gas. Of the 18% who have tested their homes for radon gas, 90% indicated that the test result was not above the 4.0 pCi/L action level. When respondents were asked why they had not tested their home for radon, 34% responded that they had not thought about it, 14% responded that they were not at risk and did not need to, and 13% responded that they did not know about radon. Fifty-one percent of respondents knew that lung cancer was the health condition that was most often associated with radon. While it is encouraging that half of Utahns know the health outcomes of radon exposure, the low rate of testing leaves much to be improved.

**Radon Testing in Utah, 2013**



Source: Utah Behavioral Risk Factor Surveillance System

# Monthly Health Indicators Report

(Data Through November 2014)

Monthly Report of Notifiable Diseases, November 2014	Current Month # Cases	Current Month # Expected Cases (5-yr average)	# Cases YTD	# Expected YTD (5-yr average)	YTD Standard Morbidity Ratio (obs/exp)
Campylobacteriosis (Campylobacter)	19	27	529	420	1.3
Shiga toxin-producing Escherichia coli (E. coli)	13	6	92	117	0.8
Hepatitis A (infectious hepatitis)	0	1	6	8	0.7
Hepatitis B, acute infections (serum hepatitis)	1	0	6	8	0.8
Influenza*	Weekly updates at <a href="http://health.utah.gov/epi/diseases/influenza">http://health.utah.gov/epi/diseases/influenza</a>				
Meningococcal Disease	0	0	1	5	0.2
Pertussis (Whooping Cough)	22	69	777	731	1.1
Salmonellosis (Salmonella)	21	22	343	300	1.1
Shigellosis (Shigella)	3	2	32	36	0.9
Varicella (Chickenpox)	14	32	196	339	0.6
Quarterly Report of Notifiable Diseases, 3rd Qtr 2014	Current Quarter # Cases	Current Quarter # Expected Cases (5-yr average)	# Cases YTD	# Expected YTD (5-yr average)	YTD Standard Morbidity Ratio (obs/exp)
HIV/AIDS†	27	23	65	79	0.8
Chlamydia	1,968	1,800	6,100	5,266	1.2
Gonorrhea	399	133	1,038	329	3.2
Syphilis	8	13	31	35	0.9
Tuberculosis	8	7	22	25	0.9
Medicaid Expenditures (in Millions) for the Month of November 2014	Current Month	Expected/Budgeted for Month	Fiscal YTD	Budgeted Fiscal YTD	Variance - over (under) budget
Capitated Mental Health	\$ 16.7	\$ 13.0	\$ 66.0	\$ 62.6	\$ 3.5
Inpatient Hospital	\$ 13.3	\$ 12.7	\$ 56.5	\$ 63.4	\$ (6.8)
Outpatient Hospital	\$ 5.9	\$ 5.0	\$ 22.5	\$ 24.8	\$ (2.3)
Long Term Care	\$ 18.8	\$ 14.9	\$ 70.5	\$ 69.1	\$ 1.4
Pharmacy	\$ 12.2	\$ 9.3	\$ 51.9	\$ 47.8	\$ 4.1
Physician/Osteo Services	\$ 6.3	\$ 5.1	\$ 22.9	\$ 25.5	\$ (2.6)
TOTAL MEDICAID	\$ 292.8	\$ 292.4	\$ 954.2	\$ 955.0	\$ (0.8)

Program Enrollment for the Month of November 2014	Current Month	Previous Month	% Change* From Previous Month	1 Year Ago	% Change* From 1 Year Ago
Medicaid	276,963	278,208	-0.4%	254,746	+8.7%
PCN (Primary Care Network)	20,147	20,515	-1.8%	14,290	+41.0%
CHIP (Children's Health Ins. Plan)§	14,825	15,868	-6.6%	34,063	-56.5%
Health Care System Measures	Annual Visits		Annual Charges		
Health Care System Measures	Number of Events	Rate per 100 Population	% Change* From Previous Year	Total Charges in Millions	% Change* From Previous Year
Overall Hospitalizations (2012)	281,605	9.2%	-1.2%	\$ 6,146.4	+5.6%
Non-maternity Hospitalizations (2012)	177,753	5.7%	-0.3%	\$ 5,208.7	+6.1%
Emergency Department Encounters (2012)	683,079	22.7%	+1.0%	\$ 1,451.9	+10.9%
Outpatient Surgery (2011)	376,054	12.7%	+2.4%	\$ 1,878.5	+6.5%
Annual Community Health Measures	Current Data Year	Number Affected	Percent/Rate	% Change* From Previous Year	State Rank <sup>  </sup> (1 is best)
Obesity (Adults 18+)	2013	483,800	24.1%	-0.5%	9 (2013)
Cigarette Smoking (Adults 18+)	2013	207,000	10.3%	-2.2%	1 (2013)
Influenza Immunization (Adults 65+)	2013	162,900	57.4%	+2.5%	39 (2013)
Health Insurance Coverage (Uninsured)	2013	336,500	11.6%	-12.1%	n/a
Motor Vehicle Traffic Crash Injury Deaths	2013	192	6.6 / 100,000	-7.8%	14 (2012)
Poisoning Deaths	2013	630	21.7 / 100,000	-6.2%	48 (2012)
Suicide Deaths	2013	570	19.6 / 100,000	+2.9%	47 (2012)
Diabetes Prevalence (Adults 18+)	2013	142,500	7.1%	-1.1%	10 (2013)
Poor Mental Health (Adults 18+)	2013	328,700	16.4%	+4.6%	21 (2013)
Coronary Heart Disease Deaths	2013	1,515	52.2 / 100,000	+1.0%	2 (2012)
All Cancer Deaths	2013	2,961	102.1 / 100,000	+1.9%	1 (2012)
Stroke Deaths	2013	831	28.6 / 100,000	+3.1%	32 (2012)
Births to Adolescents (Ages 15-17)	2013	573	8.6 / 1,000	-16.3%	10 (2012)
Early Prenatal Care	2013	38,905	76.4%	+1.2%	n/a
Infant Mortality	2013	262	5.1 / 1,000	+6.7%	9 (2012)
Childhood Immunization (4:3:1:3:3:1)	2013	40,600	80.5%	+7.5%	16 (2013)

\* Influenza activity is low to moderate in Utah. Influenza-like illness activity is above baseline statewide. As of December 13, 2014, 196 influenza-associated hospitalizations have been reported to the UDOH. More information can be found at <http://health.utah.gov/epi/diseases/influenza/index.html>.

† Diagnosed HIV infections, regardless of AIDS diagnosis.

‡ % Change could be due to random variation.

§ The 56.5% reduction in CHIP enrollment from 34,063 one year ago to 14,825 in the current month is due to the "ACA federal mandate ruling" allowing a large percentage of CHIP kids to qualify and transfer to the Medicaid program for expanded medical services.

|| State rank based on age-adjusted rates.

Notes: Data for notifiable diseases are preliminary and subject to change upon the completion of ongoing disease investigations. Active surveillance has ended for West Nile Virus until the 2015 season.