

## Utah Health Status Update:

# Oral Health Knowledge and Behaviors Among Utah Students

February 2018

### Introduction

During the 2016–2017 school year, the Utah Department of Health (UDOH) Oral Health Program launched an effort to assess the knowledge of oral health behaviors and use of dental services among middle school and high school aged students. This was the first time such data among this age group has been gathered in Utah.

### Methods

Schools located along the Wasatch Front were selected to participate through convenience sampling. Health educators at each of the selected schools were then contacted to assess interest in participating. For those who agreed to participate, staff from the Oral Health Program gave a classroom presentation on preventive oral health behaviors and practices

to their students. The presentation was developed using the Health Belief Model—a theoretical framework that explains why and how individuals adopt health behavior change—to increase positive oral health behaviors and utilization of dental services. Pre- and post-tests were given in the classroom just prior to and following the presentation, respectively. These surveys were designed to measure changes in students' knowledge of the topics presented as well as current oral health behaviors.

### Results

Nineteen schools participated and a total of 2,882 middle and high school students received the presentation and took the pre- and post-tests. Two-thirds of the students (63.2%) were 13 years old, and just over half (51.7%) were male. The majority of students were White (81.2%) and non-Hispanic (70.9%).

### Last Dental Visit and Soda Consumption

Students were asked when they had last visited a dentist, as well as how much soda they had consumed in the previous week, not including diet soda. Although these questions were asked on both the pre- and post-tests, only responses from the pre-test were analyzed; including responses from the post-test may have introduced bias to the results due to students' exposure to the presentation.

The majority of students reported having seen a dentist during the last 12 months (78.5%, as shown in Figure 1).

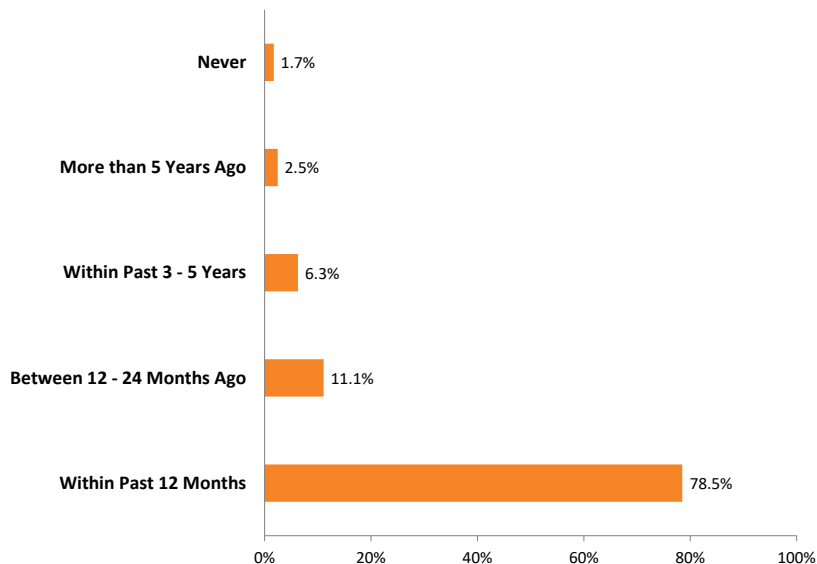
Nearly half of students reported consuming between one and three non-diet sodas during the previous week (44.9%), and nearly one-third of students reported that they did not drink any soda during the previous week (31.7%). Among students who reported no soda consumption

### KEY FINDINGS

- During the 2016–2017 school year, the Utah Department of Health Oral Health Program launched an effort to assess the knowledge of oral health behaviors and use of dental services among Utah middle school and high school aged students.
- The majority of students reported having seen a dentist during the last 12 months (78.5%).
- Nearly half of students reported drinking between one and three non-diet sodas during the previous week (44.9%).
- Nearly one-third of students reported that they did not drink any soda during the previous week (31.7%).
- The highest percentage of students reporting a dental visit within the past year was among students reporting no soda consumption in the past week (82.9%).
- Students' oral health knowledge increased by at least 20 percentage points on the presentation topics between the pre- and post-tests.

### Reported Last Dental Visit

Figure 1. Percentage of students that reported having seen a dentist during the last 12 months, Utah, 2016–2017



during the previous week, 82.9% reported that they had visited a dentist in the past year and 17.1% reported that their last dental visit had taken place more than one year previously. As illustrated in Figure 2, there was an inverse relationship between soda consumption and time since last dental visit; students reporting no soda in the past week were most likely to have had a dental visit within the past year (82.9%).

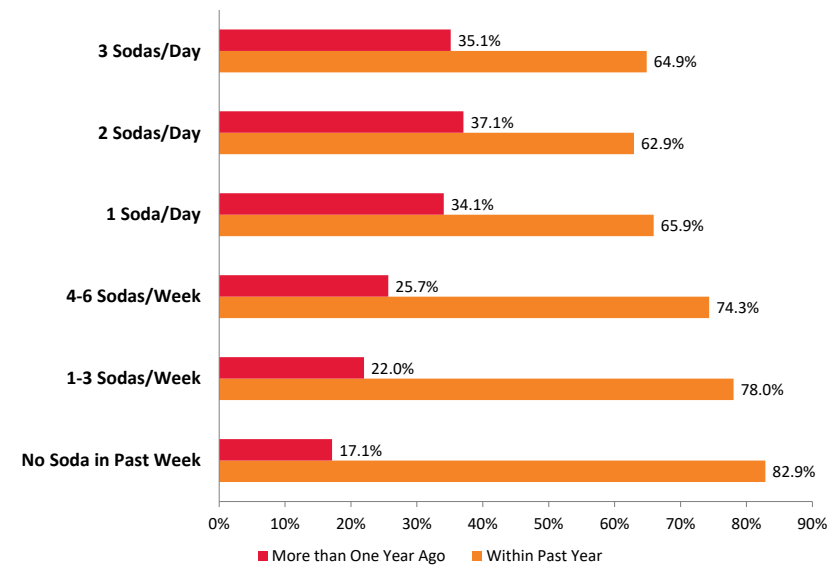
The pre- and post-tests also asked five questions related to oral health knowledge. For each of these questions, there was at least a 20-point increase in the percentage of students who selected the correct response between the pre- and post-tests. Table 1 presents these questions and the number and proportion of student responses per answer choice for both the pre- and post-tests.

### Conclusion

Staff with the UDOH Oral Health Program are currently implementing the presentation and pre- and post-tests for a second school year. Results from the 2016–2017 and 2017–2018 school years will be compared to help identify trends in oral health knowledge and behaviors among Utah students. Results will also be used to modify educational programs and interventions for this population.

## Weekly Soda Consumption and Last Dental Visit

Figure 2. Percentage of students reporting weekly soda consumption by last dental visit within the past year, Utah, 2016–2017



## Survey Question Responses

Table 1. Percentage of students responding to each question on the pre- and post-test, Utah, 2016–2017

Survey Question ( <i>correct answer choice in italics</i> )	Pre-test		Post-test	
	N	%	N	%
<b>Is it common for healthy gums to bleed when brushing/flossing?</b>				
<i>No, bleeding gums is not normal</i>	1,493	52.4%	1,916	84.8%
Yes, when you have a cold	50	1.8%	51	0.9%
Yes, sometimes	1,118	39.2%	267	11.8%
Yes, all the time	190	6.6%	55	2.4%
<b>Can toothpaste clear up pimples</b>				
Yes	1,013	36.1%	143	6.4%
<i>No</i>	1,790	63.9%	2,092	93.6%
<b>Which of the following chronic diseases is most common among children/teens?</b>				
Asthma	225	7.9%	25	1.1%
<i>Cavities</i>	2,036	71.9%	2,169	95.8%
Hay fever	173	6.1%	35	1.6%
Obesity	397	14.0%	36	1.6%
<b>All of the following statements are true about cavities except for one. Mark the statement that is false.</b>				
Cavities can spread from person to person	2,095	73.8%	336	14.9%
Cavities can get worse over time if not treated	137	4.8%	116	5.1%
<i>Everyone gets cavities</i>	471	16.6%	1,627	72.1%
Cavities are preventable	137	4.8%	178	7.9%
<b>How often is it recommended that you brush your teeth?</b>				
Once a day	89	3.1%	53	2.3%
<i>Twice a day</i>	1,924	67.5%	1,959	86.6%
After every meal	800	28.1%	227	10.0%
Not sure/Don't know	38	1.3%	23	1.0%

### UDOH ANNOUNCEMENT:

The Physical Activity Guidelines for Americans recommends that children ages 6–17 receive at least 60 minutes of physical activity per day. Schools are encouraged to adopt the Comprehensive School Physical Activity Program (CSPAP) framework to help ensure students have access to daily physical activity (<https://www.cdc.gov/healthyschools/physicalactivity/cspap.htm>). The UDOH Healthy Living through Environment, Policy and Improved Clinical Care (EPICC) Program partners with the State Board of Education to train teachers on ways to help students meet this goal.

For additional information about this topic, contact Alexandra Gero, 801-273-2914, [agero@utah.gov](mailto:agero@utah.gov); or the Office of Public Health Assessment, Utah Department of Health, (801) 538-9191, [chdata@utah.gov](mailto:chdata@utah.gov).

## Breaking News, February 2018

### Targeted Adult Medicaid Program

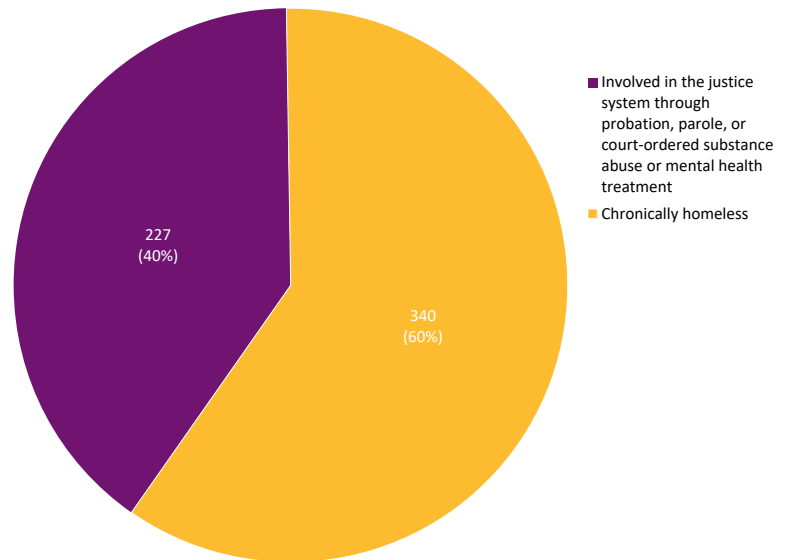
On November 1, 2017, the Centers for Medicare and Medicaid Services (CMS) approved a 2016 request from the state to expand Medicaid services to 4,000–6,000 Utah adults without dependent children. In order to be eligible, individuals may not earn more than five percent of the federal poverty level (approximately \$50 per month for a single adult) and must be chronically homeless or involved in the justice system through probation, parole, or court-ordered substance abuse or mental health treatment.

This limited expansion of Medicaid is a critical element of Operation Rio Grande, as many of the newly eligible recipients are members of the homeless population (60%). Program enrollment opened immediately when the waiver was approved and to-date the program has enrolled more than 550 individuals (see Figure).

The approval also includes authority to use federal funds to provide residential substance abuse treatment services to Medicaid recipients. Phase two of Operation Rio Grande focuses on bringing additional treatment beds into the system to support individuals in recovery. The waiver approval will encourage treatment centers to begin offering services for Medicaid members. Historically, substance abuse treatment through Medicaid was limited to facilities with 16 beds or fewer. Under the waiver, the bed capacity limit will be lifted allowing more treatment centers to have the ability to provide care to Medicaid members with substance use disorders.

For more information, visit: <https://medicaid.utah.gov/targeted-adult-medicaid-program>.

Targeted Adult Medicaid Enrollment as of January 18, 2018



## Community Health Spotlight, February 2018

### Million Hearts and the Utah Excellence in Blood Pressure Recognition Program

Every 40 seconds, an adult in the United States dies from a heart attack, stroke, or other adverse outcome of cardiovascular disease (CVD), accounting for about one-third (30.9%) of all deaths in the United States.<sup>1</sup> In Utah, there were 4,869 deaths in 2016, or about 13 adults every day, from CVD-related conditions.<sup>2</sup> CVD has a high economic toll, accounting for about \$1 of every \$6 spent on health care in the country.<sup>3</sup>

The Centers for Disease Control and Prevention and the Centers for Medicare and Medicaid Services launched a new campaign this year, building on previous efforts, to prevent 1 million heart attacks and strokes over the next five years. The priorities of the Million Hearts® 2022 campaign include: 1) Keeping people healthy by reducing sodium consumption, increasing physical activity, and decreasing tobacco use; 2) Optimizing care to improve the ABCS (aspirin, blood pressure control, cholesterol management, and smoking cessation); and 3) Improving outcomes for priority populations, including Blacks/African Americans, 35–64-year-olds, and people with mental illness or substance use disorders.

The Utah Million Hearts Coalition has a goal to improve blood pressure management and control rates. Coalition members include the Utah Department of Health, Intermountain Healthcare, University of Utah, HealthInsight, American Heart Association, local health departments, private providers, and the Utah Medical Association. The coalition is working toward its goal by recognizing top performing clinics throughout Utah with the Excellence in Blood Pressure Recognition program. The coalition recognized 54 clinics from 12 out of 13 local health districts in 2017. For more information, visit [www.healthinsight.org/bloodpressureaward](http://www.healthinsight.org/bloodpressureaward).

1. Benjamin, E.J., Blaha, M.J., Chiuve, S.E., Cushman, M., Das, S.R., Deo, R.,...Muntner, P. (2017). Heart disease and stroke statistics-2017 update. *AHA Circulation*, 135(10). doi:10.1161/CIR.0000000000000485.

2. Centers for Disease Control and Prevention, National Center for Health Statistics. (2017). Underlying cause of death 1999–2016 on CDC WONDER Online Database [Multiple cause of death files, 1999–2016]. Retrieved from <https://wonder.cdc.gov/mcd.html>.

3. CDC Foundation. (2015). Heart disease and stroke cost America nearly \$1 billion a day in medical costs, lost productivity. Retrieved from <https://www.cdcfoundation.org/pr/2015/heart-disease-and-stroke-cost-america-nearly-1-billion-day-medical-costs-lost-productivity>.

# Monthly Health Indicators Report

## (Data Through December 2017)

Monthly Report of Notifiable Diseases, December 2017	Current Month # Cases	Current Month # Expected Cases (5-yr average)	# Cases YTD	# Expected YTD (5-yr average)	YTD Standard Morbidity Ratio (obs/exp)
Campylobacteriosis ( <i>Campylobacter</i> )	14	25	584	505	1.2
Shiga toxin-producing <i>Escherichia coli</i> ( <i>E. coli</i> )	5	3	138	91	1.5
Hepatitis A (infectious hepatitis)	48	1	155	9	17.6
Hepatitis B, acute infections (serum hepatitis)	1	1	14	9	1.6
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	2	4	0.5
Pertussis (Whooping Cough)	5	62	376	923	0.4
Salmonellosis ( <i>Salmonella</i> )	20	21	385	350	1.1
Shigellosis ( <i>Shigella</i> )	2	2	42	43	1.0
Varicella (Chickenpox)	30	17	221	240	0.9

Quarterly Report of Notifiable Diseases, 4th Qtr 2017	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†	17	31	113	121	0.9
Chlamydia	2,441	2,077	10,088	8,279	1.2
Gonorrhea	638	372	2,548	1,307	2.0
Syphilis	30	16	118	66	1.8
Tuberculosis	8	7	29	32	0.9

Medicaid Expenditures (in Millions) for the Month of December 2017‡	Current Month	Expected/Budgeted for Month	Fiscal YTD	Budgeted Fiscal YTD	Variance - over (under) budget
Mental Health Services§	\$ 8.9	\$ 9.2	\$ 75.3	\$ 76.6	\$ (1.3)
Inpatient Hospital Services	\$ 49.5	\$ 49.6	\$ 122.1	\$ 124.6	\$ (2.5)
Outpatient Hospital Services	\$ 4.3	\$ 4.8	\$ 21.8	\$ 23.9	\$ (2.0)
Nursing Home Services	\$ 41.1	\$ 40.8	\$ 110.1	\$ 114.3	\$ (4.2)
Pharmacy Services	\$ 11.6	\$ 11.3	\$ 60.7	\$ 62.0	\$ (1.3)
Physician/Osteo Services	\$ 8.3	\$ 8.6	\$ 30.7	\$ 31.7	\$ (1.0)
Medicaid Expansion Services	\$ 4.0	\$ 4.1	\$ 12.7	\$ 13.9	\$ (1.2)
TOTAL MEDICAID#	\$ 263.4	\$ 262.1	\$ 1,286.7	\$ 1,291.8	\$ (5.2)

\* Influenza activity rapidly increased during the month of December. As of December 31, 2017, 515 influenza-associated hospitalizations have been confirmed since the start of the influenza season on October 1, 2017. More information can be found at <http://health.utah.gov/epi/diseases/influenza/surveillance/index.html>.  
† Diagnosed HIV infections, regardless of AIDS diagnosis.

Program Enrollment for the Month of December 2017	Current Month	Previous Month	% Change** From Previous Month	1 Year Ago	% Change** From 1 Year Ago
Medicaid	278,807	280,202	-0.5%	288,817	-3.5%
PCN (Primary Care Network)	13,177	13,779	-4.4%	14,572	-9.6%
CHIP (Children's Health Ins. Plan)	19,272	19,334	-0.3%	18,847	+2.3%
Health Care System Measures	Annual Visits			Annual Charges	
	Number of Events	Rate per 100 Population	% Change** From Previous Year	Total Charges in Millions	% Change** From Previous Year
Overall Hospitalizations (2016)	297,106	8.7%	+3.0%	\$ 8,638.0	+8.4%
Non-maternity Hospitalizations (2016)	198,257	5.7%	+2.0%	\$ 7,466.1	+9.2%
Emergency Department Encounters** (2016)	756,376	22.8%	+7.6%	\$ 2,286.3	+21.7%
Outpatient Surgery (2016)	491,566	14.7%	+4.9%	\$ 3,000.6	-0.3%
Annual Community Health Measures	Current Data Year	Number Affected	Percent/Rate	% Change** From Previous Year	State Rank** (1 is best)
Obesity (Adults 18+)	2016	538,700	25.3%	+3.3%	10 (2016)
Cigarette Smoking (Adults 18+)	2016	187,400	8.8%	-3.3%	1 (2016)
Influenza Immunization (Adults 65+)	2016	176,300	54.9%	-6.9%	41 (2016)
Health Insurance Coverage (Uninsured)	2016	265,500	8.7%	-1.1%	n/a
Motor Vehicle Traffic Crash Injury Deaths	2015	247	8.2 / 100,000	+3.7%	19 (2015)
Poisoning Deaths	2015	697	23.3 / 100,000	+6.8%	43 (2015)
Suicide Deaths	2015	609	20.3 / 100,000	+7.8%	47 (2015)
Diabetes Prevalence (Adults 18+)	2016	153,300	7.2%	+2.9%	8 (2016)
Poor Mental Health (Adults 18+)	2016	362,000	17.0%	+6.3%	21 (2016)
Coronary Heart Disease Deaths	2015	1,619	54.0 / 100,000	+1.0%	2 (2015)
All Cancer Deaths	2015	3,091	103.2 / 100,000	+0.1%	1 (2015)
Stroke Deaths	2015	887	29.6 / 100,000	+2.0%	18 (2015)
Births to Adolescents (Ages 15-17)	2016	438	6.1 / 1,000	-12.8%	11 (2016)
Early Prenatal Care	2016	37,880	75.4%	-1.3%	n/a
Infant Mortality	2015	257	5.1 / 1,000	+3.2%	12 (2015)
Childhood Immunization (4:3:1:3:3:1)	2016	37,100	73.6%	0.0%	26 (2016)

‡ This state fiscal year (SFY) 2018 report includes supplemental payments to better match the SFY 2018 Medicaid Forecast Budget which costs have not been included in previous years.  
§ The SFY 2018 Medicaid Forecast Budget includes Mental Health and Substance Abuse services together while this report only accounts for Mental Health services. This is to stay consistent with the previous years reports.  
# Medicaid Expansion Services was added to the Medicaid program in SFY 2018. Total Medicaid costs exclude the Prism Project.  
\*\* Relative percent change. Percent change could be due to random variation.  
†† Treat and release only.  
‡‡ State rank based on age-adjusted rates where applicable.  
Notes: Data for notifiable diseases are preliminary and subject to change upon the completion of ongoing disease investigations. Active surveillance for West Nile Virus will start in June for the 2018 season.