UTAH DEPARTMENT OF HEALTH

Utah Health Status Update:
Major Depression

October 2014

Major depression is defined as having severe symptoms that interfere with a person's ability to work, sleep, study, eat, and enjoy life. Symptoms of major depression may include fatigue or loss of energy, feelings of worthlessness or guilt, impaired concentration, loss of interest in daily activities, appetite or weight changes, sleep changes, and recurring thoughts of death or suicide. Despite the availability of effective treatments for major depression, such as medications and/or psychotherapeutic techniques, it often goes unrecognized and untreated.

The Patient Health Questionnaire (PHQ-9), based on the Diagnostic and Statistical Manual Fourth Edition criteria for major depressive disorder and adapted for telephone surveys, was used to diagnose depressive disorders.[1] The PHQ-9 was included in the 2013 Utah Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS is a random-digit-dialed telephone survey of noninstitutionalized persons 18 years of age and older. Survey respondents were classified as having current major depression based on a validated algorithm.

In Utah, 4.4% of adults had current major depression. Utah adults who identified as being homosexual (12.8%), bisexual (21.9%), making less than $25,000 annually (9.5%), and having less than a high school education (11.8%) had higher rates of current major depression (Table 1). Southeastern and Weber-Morgan Health Districts also had higher rates (11.0% and 7.8% respectively).

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- **Adults who are homosexual or bisexual or those with low education or low income had higher rates.**
- **Adults who reported using tobacco or excessive alcohol or who were physically inactive or obese had higher rates.**
- **Adults with chronic diseases had higher rates.**
- **Utah adults who reported experiencing even just one adverse childhood experience had higher rates.**

Current Major Depression Demographics

Table 1. Percentage of adults reporting current major depression by selected demographic characteristics, Utah, 2013 BRFSS

Demographic Characteristics	% Reporting Depression	95% Confidence Interval		Increased/ Decreased Risk
Utah Adults	**4.4**	**3.7**	**5.2**	**--**
Sex				
Male	3.6	2.7	4.9	=
Female	5.1	4.1	6.3	=
Sexual Orientation				
Heterosexual	4.2	3.5	5.1	=
Homosexual*	12.8	4.8	29.8	↑
Bisexual*	21.9	9.2	43.6	↑
Age Group				
18-34	4.0	2.8	5.5	=
35-49	4.8	3.3	6.8	=
50-64	5.6	4.2	7.3	=
65+	2.9	1.8	4.6	=
Race and Ethnicity				
White, non-Hispanic	4.3	3.6	5.2	=
Hispanic	5.8	3.3	10.1	=
Income				
<$25,000	9.5	7.2	12.4	↑
$25,000-$49,999	3.6	2.5	5.3	=
$50,000-$74,999	3.8	2.3	6.2	=
$75,000+	2.0	1.3	3.1	↓
Education				
<HS	11.8	7.5	18.1	↑
HS/GED	5.3	4.0	6.9	=
HS+	4.2	3.2	5.6	=
College	1.5	1.0	2.2	↓

*Interpret with caution; data do not meet UDOH standards for reliability.

Current Major Depression Lifestyle Behaviors

Table 2. Percentage of adults reporting current major depression by selected lifestyle behaviors, Utah, 2013 BRFSS

Lifestyle Behaviors	% Reporting Depression	95% Confidence Interval		Increased/ Decreased Risk
General Health and Sleep				
Fair or Poor Health	18.5	14.5	23.4	↑
<7 hrs/night sleep	8.1	6.4	10.3	↑
Substance Use				
Current Smoker	13.4	9.6	18.3	↑
Never Smoker	3.1	2.4	4.0	↓
Binge Drinking	8.8	5.7	13.2	↑
Chronic Drinking	10.8	5.8	19.2	↑
Physical Activity Guidelines				
Met Aerobic/Strength	1.8	0.9	3.5	↓
Met Aerobic Only	3.6	2.4	5.2	=
Met Strength Only	3.6	2.0	6.2	=
Unmet Aerobic/Strength	6.8	5.4	8.6	↑
Body Mass Index				
Normal	4.3	3.2	5.9	=
Overweight	3.8	2.7	5.3	=
Obese	5.9	4.4	8.0	↑

The burden of depression is compounded as depression appears to be associated with behaviors linked to other chronic diseases. Depression is associated with poor sleep[2] and, of Utah adults who reported getting less than seven hours of sleep each night, 8.1% had current major depression. Depression is an established risk factor for smoking and drinking. Utah adults who reported current smoking, binge drinking, and chronic drinking also had higher rates of current major depression (13.4%, 8.8%, and 10.8%, respectively).

Physical activity reduces depressive symptoms, even among individuals who are not clinically depressed.[3] Physical inactivity and obesity are modifiable risk factors for depression[4], and Utah adults who don't meet physical activity aerobic and strength guidelines and who are obese had higher rates of current major depression (6.8% and 5.9%, respectively) (Table 2). Utah adults who reported negative health outcomes such as high blood pressure, arthritis, current asthma, and limited in activities, had higher rates of current major depression (Figure 1).

Adverse childhood experiences (ACE) questions were also included in the 2013 BRFSS. ACEs have been linked to adverse health outcomes such as mental health disorders later in life.[5] Utah adults who reported experiencing even just one ACE had higher rates of current major depression (Figure 2).

Behavioral health problems often co-occur with chronic diseases and may exacerbate health outcomes. Behavioral health professionals should include chronic disease and injury in assessments and treatment and clinical professionals should assess mental health. Integrating physical and behavioral health care is a vital and necessary approach for holistic, quality health care.

October 2014 Utah Health Status Update

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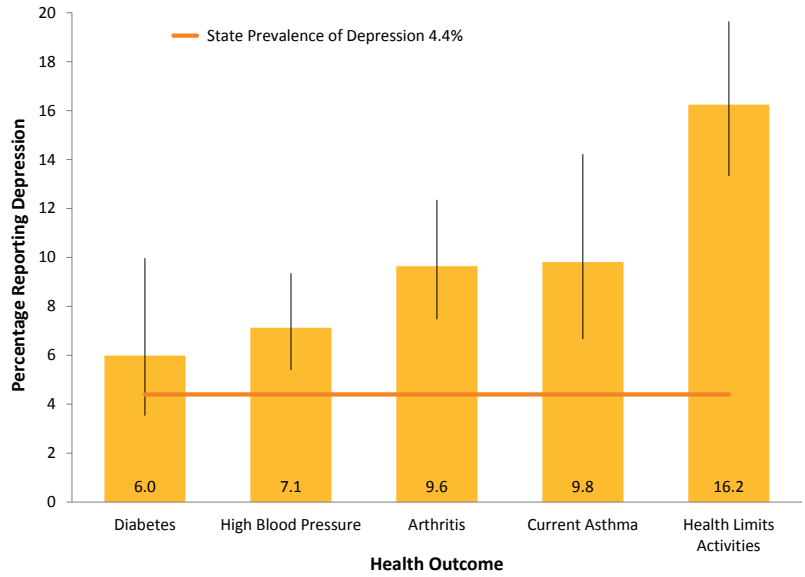
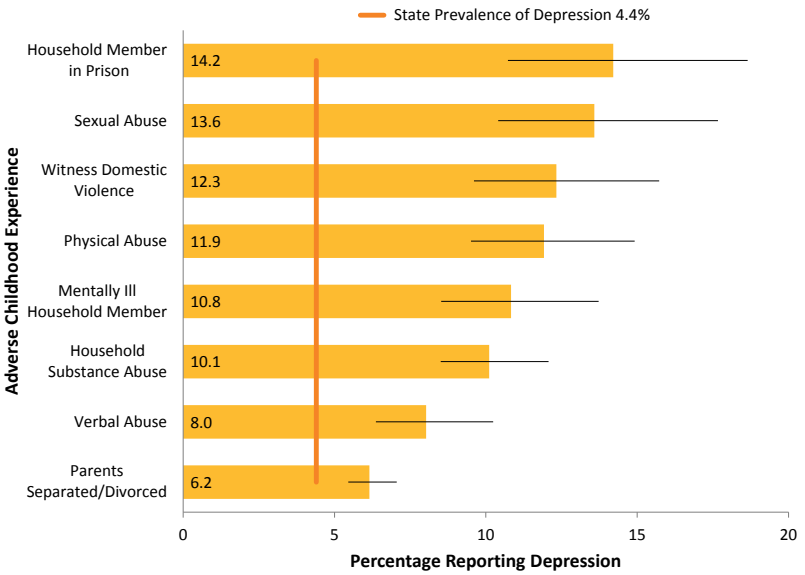
Current Major Depression and Health Outcomes

Figure 1. Percentage of adults reporting current major depression by selected health outcomes, Utah, 2013 BRFSS



Depression and Adverse Childhood Experiences

Figure 2. Percentage of adults reporting current major depression by adverse childhood experiences, Utah, 2013 BRFSS



References

1. Pinto-Meza A, Serrano-Blanco A. *Assessing depression in primary care with the PHQ-9: can it be carried out over the telephone?* J Gen Intern Med. 2005 Aug;20(8):738-42.
2. Moreh E, Jacobs JM, Stessman J. Fatigue, function, and mortality in older adults. *J Gerontol A Biol Sci Med Sci* 2010 [Epub ahead of print].
3. Conn VS. Depressive symptom outcomes of physical activity interventions: Meta-analysis findings. *Ann Behav Med* 2010; [Epub ahead of print].
4. Ten Hacken NH. Physical inactivity and obesity: Relation to asthma and chronic obstructive pulmonary disease? *Proc Am Thorac Soc* 2009;6:663-667.
5. Felitti V. The Relationship of Adverse Childhood Experiences to Adult Health: Turning gold into lead, Kaiser Permanente Medical Care Program.

Breaking News, October 2014

Utah Asthma Program (UAP) and CDC Epi-Aid Investigation in TriCounty Local Health Department (LHD)

State and TriCounty public health officials teamed up with the Centers for Disease Control and Prevention (CDC) to investigate reasons for high asthma-related emergency department (ED) visits and hospitalizations in TriCounty. ED visits in TriCounty (47 per 10,000) were more than double Utah's rate (22 per 10,000), even though the proportion of persons with asthma in the TriCounty region (9.0%) is similar to that of the state (8.2%).

Asthma emergency medical care is costly. The 2012 average charge for asthma ED visits in TriCounty was $1,288, and the 2012 average charge for hospitalizations was $11,262. Furthermore, these numbers have grown exponentially over time. From 2002 to 2011, TriCounty saw a 185% increase in the median charge for asthma-related ED visits. These data are part of a larger report, the Asthma Emergency Department Cost Report, which can be found at http://www.health.utah.gov/asthma/pdf_files/Data/EDCostReport.pdf.

In June 2014, epidemiologists from the Utah Department of Health and CDC developed a list of questions about the medical care that people with asthma received before visiting an ED or being hospitalized and the medical treatment and education the patients received in the ED or hospital. The questions focused on assessing factors related to asthma care. To answer the questions, data were abstracted from 275 ED and hospital discharge records collected between January 1, 2013 and December 31, 2013 from two major hospitals in TriCounty.

Results:

- Asthma-related ED visits usually involved people who were 18–64 years of age. Asthma-related hospitalizations usually involved people who were 17 years of age or younger.
- Approximately one in four asthma-related ED visits and hospitalizations involved a person without health insurance.
- Most (79%) asthma-related ED visits and hospitalizations involved a person who was not taking medications regularly to control asthma.
- About one in five asthma-related ED visits and hospitalizations involved someone currently smoking tobacco.

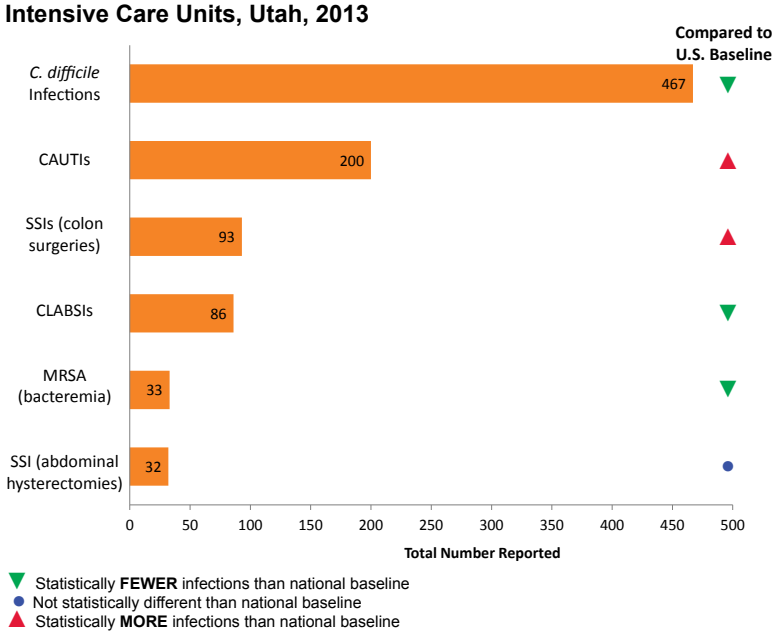
Based on these data, investigators believe that tobacco use, limited access to health care, and limited use of asthma controller medication could be related to the high rates of asthma-related ED visits and hospitalizations in TriCounty.

Community Health Indicators Spotlight, October 2014

Healthcare-associated Infections

Healthcare-associated infections (HAIs) are infections that are acquired while patients are receiving treatment for another condition in a healthcare setting. Utah State regulation (Rule 386-705, Epidemiology, Healthcare-Associated Infection) requires the Utah Department of Health to collect and report data on HAIs. Facilities in Utah submit data (self-reported) about specific HAIs to the Centers for Disease Control and Prevention's National Healthcare Safety Network (NHSN), a secure, online tracking system used by hospitals and other healthcare facilities.

Healthcare-associated Infections in Acute Care Facilities With Intensive Care Units, Utah, 2013



The 2013 Healthcare-Associated Infection Annual Report details Utah's progress toward the goal of reducing and, ultimately, eliminating HAIs. Utah's acute care infection numbers are rated based on comparisons to the national rate (see Figure). The data from long-term acute care facilities, inpatient rehabilitation facilities, and dialysis facilities are not yet comparable to national data. Data from acute care facilities include central line-associated bloodstream infections (CLABSIs) in intensive care units (ICUs), catheter-associated urinary tract infections (CAUTIs) in ICUs, surgical site infections (SSIs)—exclusive to colon surgeries and abdominal hysterectomy surgeries, *Clostridium difficile* (*C. difficile*), and Methicillin Resistant *Staphylococcus aureus* (MRSA) bacteremia infections. Overall, Utah's results for many HAIs are encouraging. As additional data are collected, more specific results will be possible, allowing for increased HAI surveillance and prevention efforts.

Monthly Health Indicators Report

(Data Through August 2014)

Monthly Report of Notifiable Diseases, August 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)	49	53	396	315	1.3
Shiga toxin-producing Escherichia coli (E. coli)	9	35	58	89	0.7
Hepatitis A (infectious hepatitis)	0	0	6	5	1.1
Hepatitis B, acute infections (serum hepatitis)	0	1	4	7	0.6
Meningococcal Disease	0	0	1	4	0.2
Pertussis (Whooping Cough)	26	75	640	534	1.2
Salmonellosis (Salmonella)	32	34	252	224	1.1
Shigellosis (Shigella)	1	5	18	24	0.7
Varicella (Chickenpox)	0	10	130	244	0.5
West Nile (Human cases)	1	1	1	2	0.5
Quarterly Report of Notifiable Diseases, 2nd 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†	23	28	50	56	0.9
Chlamydia	2,000	1,684	4,114	3,466	1.2
Gonorrhea	318	102	633	196	3.2
Syphilis	13	13	21	22	0.9
Tuberculosis	9	10	14	19	0.8
Medicaid Expenditures (in Millions) for the Month of August 2014	**Current Month**	**Expected/ Budgeted for Month**	**Fiscal YTD**	**Budgeted Fiscal YTD**	**Variance - over (under) budget**
Capitated Mental Health	$ 28.9	$ 28.8	$ 33.5	$ 34.5	$ (1.1)
Inpatient Hospital	$ 19.0	$ 20.0	$ 21.0	$ 22.2	$ (1.1)
Outpatient Hospital	$ 5.9	$ 6.2	$ 7.2	$ 8.7	$ (1.5)
Long Term Care	$ 17.3	$ 16.9	$ 24.3	$ 23.7	$ 0.6
Pharmacy	$ 12.2	$ 11.5	$ 20.0	$ 19.3	$ 0.7
Physician/Osteo Services	$ 3.0	$ 3.1	$ 4.4	$ 5.6	$ (1.2)
TOTAL HCF MEDICAID	$ 263.3	$ 275.5	$ 372.2	$ 385.7	$ (13.5)

Program Enrollment for the Month of August 2014	Current Month	Previous Month	% Change‡ From Previous Month	1 Year Ago	% Change‡ From 1 Year Ago
Medicaid	276,122	276,382	-0.1%	260,344	+6.1%
PCN (Primary Care Network)	17,155	14,091	+21.7%	15,807	+8.5%
CHIP (Children's Health Ins. Plan)§	15,577	15,473	+0.7%	34,278	-54.6%
	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)	679,926	22.6%	+0.6%	$ 1,447.3	+10.5%
Outpatient Surgery (2011)	376,054	12.7%	+2.5%	$ 1,878.5	+6.5%
Annual Community Health Measures	**Current Data Year**	**Number Affected**	**Percent/ Rate**	**% Change‡ From Previous Year**	**State Rank‖ (1 is best)**
Obesity (Adults 18+)	2013	483,800	24.1%	-0.5%	10 (2012)
Cigarette Smoking (Adults 18+)	2013	207,000	10.3%	-2.2%	1 (2012)
Influenza Immunization (Adults 65+)	2013	162,900	57.4%	+2.5%	40 (2012)
Health Insurance Coverage (Uninsured)	2013	336,500	11.6%	-12.1%	n/a
Motor Vehicle Traffic Crash Injury Deaths	2012	205	7.2 / 100,000	-16.8%	19 (2010)
Poisoning Deaths	2012	661	23.1 / 100,000	+15.6%	45 (2010)
Suicide Deaths	2012	545	19.1 / 100,000	+9.3%	45 (2010)
Diabetes Prevalence (Adults 18+)	2013	142,500	7.1%	-1.1%	14 (2012)
Poor Mental Health (Adults 18+)	2013	328,700	16.4%	+4.6%	12 (2012)
Coronary Heart Disease Deaths	2012	1,580	55.3 / 100,000	-3.4%	3 (2010)
All Cancer Deaths	2012	2,861	100.2 / 100,000	+3.3%	1 (2010)
Stroke Deaths	2012	793	27.8 / 100,000	+0.6%	17 (2010)
Births to Adolescents (Ages 15-17)	2012	668	10.4 / 1,000	-6.6%	11 (2011)
Early Prenatal Care	2012	38,829	75.5%	+1.0%	n/a
Infant Mortality	2012	248	4.8 / 1,000	-12.6%	10 (2010)
Childhood Immunization (4:3:1:3:3:1)	2012	40,600	80.5%	+7.5%	16 (2013)

† Diagnosed HIV infections, regardless of AIDS diagnosis.
‡ % Change could be due to random variation.
§ The 54.6% reduction in CHIP enrollment from 15,577 in the current month to 34,278 in CHIP monthly enrollment a year ago 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 influenza until the 2014–2015 season.