UTAH DEPARTMENT OF HEALTH

Utah Health Status Update:
Zika Virus

March 2017

The Zika virus was announced as a public health emergency of international concern on February 1, 2016. At that time, Zika transmission was reported in 23 countries and territories of the Americas. With an elevated level of concern and uncertainty, several Utah Department of Health programs, local health districts, and community partners responded quickly to prevent the Zika virus from profoundly impacting Utah mothers, infants, and families. In collaboration with several other programs, the Bureau of Epidemiology (BOE) and the Utah Birth Defect Network (UBDN) are monitoring the potential impact of Zika virus in Utah.

The BOE monitors results of individuals tested in Utah for Zika virus. As of January 30, 2017, 28 persons have tested positive for Zika virus, of which 11 were pregnant females. All of the persons were infected in an area with active Zika virus transmission, except one individual with no known risk factors besides being in contact with a family member who tested positive for Zika virus.

Of the 11 pregnant females, eight delivered infants with no visual abnormalities, two had fetal deaths (spontaneous abortions), and one was lost to follow up. Tissues were collected for both fetal deaths; recent results indicate the presence of Zika virus in both cases.

The UBDN, in collaboration with the Centers for Disease Control and Prevention, is completing rapid surveillance on all Utah births occurring in 2016 with birth defects potentially associated with Zika virus infection. The purpose of this continued surveillance is to identify infants at risk for congenital Zika virus syndrome who were not detected previously. The list of birth defects associated with Zika virus can be found at https://tinyurl.com/hh2bhsr. Diagnosis with a birth defect potentially associated with Zika virus infection does not confirm congenital Zika virus syndrome in an infant.

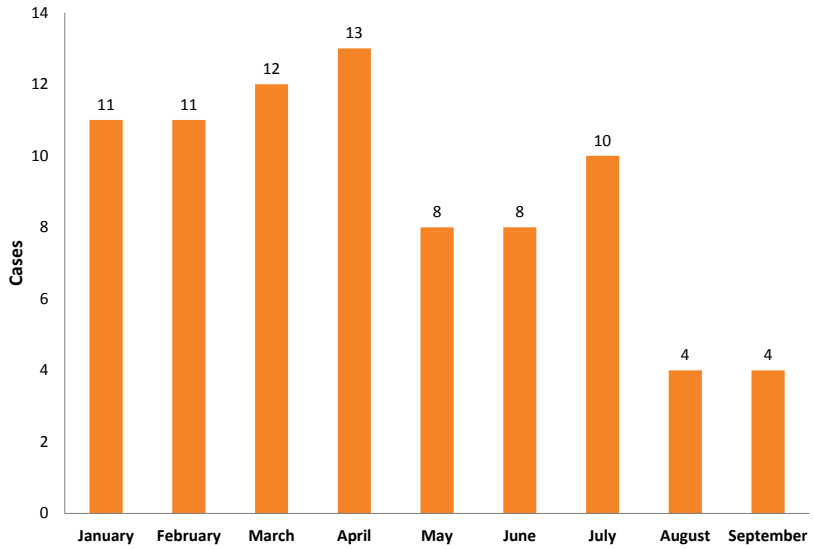
At this time, the UBDN has reviewed 81 Utah births with birth defects potentially associated with Zika virus infection (Figure 1); however, only two cases have been tested for Zika virus infection due to the lack of known risk factors sufficient for testing. Both cases with birth defects potentially associated with Zika virus infection who were tested were negative for Zika virus after testing. Testing through public health requires evidence that the mother has been exposed to Zika virus either by travel or by unprotected sexual intercourse with someone who has traveled to an area with Zika virus transmission. Serologic testing has been shown

KEY FINDINGS

- **As of January 30, 2017, 28 persons have tested positive for Zika virus, of which 11 were pregnant females.**
- **At this time, the UBDN has reviewed 81 Utah births with birth defects potentially associated with Zika virus infection; however, only two cases have been tested for Zika virus infection due to the lack of known risk factors sufficient for testing.**
- **According to UBDN data, pregnancy outcomes from births with Zika virus-associated defects include 69 live births, five fetal deaths (≥20 weeks gestation), six terminations of pregnancy, and one miscarriage (<20 weeks gestation) during January–September 2016.**
- **The most frequently reported birth defects potentially associated with Zika virus infection reported to the UBDN for Utah resident births from January 1 to September 30, 2016 was microcephaly with 11 cases.**

Potential Zika-associated Birth Defects

Figure 1. Births with defects potentially associated with Zika virus infection, Utah resident births, January–September 2016



Note: Case ascertainment is not complete for August 2016 and September 2016.

to be effective only 2–12 weeks after exposure to Zika virus and many of the mothers followed by UBDN are outside of that window or did not have a travel exposure to warrant testing. The UBDN has received no reports of congenital Zika virus syndrome in Utah as of January 2017. Surveillance for all cases is ongoing, as the UBDN will collect information on these infants up to two years of life.

Congenital Zika virus syndrome is a result of maternal infection of Zika virus passed from mother to baby in the prenatal period. Further criteria for congenital Zika virus syndrome diagnosis can be found at http://jamanetwork.com/journals/jamapediatrics/fullarticle/2579543. Table 1 presents pregnancy outcomes for Utah resident births with defects potentially associated with Zika virus collected by the UBDN from January 1 to September 30, 2016. This includes 69 live births, five fetal deaths (>20 weeks gestation), six terminations of pregnancy, and one miscarriage (<20 weeks gestation).

Table 2 presents the most frequently reported birth defects potentially associated with Zika virus infection reported to UBDN for Utah resident births, January 1 to September 30, 2016. Microcephaly was the most reported defect with 11 cases.

Further, the UBDN, in collaboration with the local health departments, follow up on infants born to mothers who tested positive for Zika virus infection at two, six, and 12 months after delivery to ensure that the proper developmental milestones are achieved.

Testing guidelines for Zika virus infection can be found at http://health.utah.gov/epi/diseases/zika/.

The BOE, UBDN, and other Utah Department of Health programs will continue to collaborate internally and with external partners to prevent and monitor Zika virus and congenital Zika virus syndrome in Utah. For further information, please visit http://health.utah.gov/zika/.

Potential Zika-associated Birth Defect Outcomes

Table 1. Pregnancy outcomes for all births with birth defects potentially associated with Zika virus infection, Utah resident births, January–September 2016

Pregnancy Outcome	Cases
Live Birth	69
Fetal Death (≥20 weeks)	5
Termination	6
Miscarriage (<20 weeks)	1

Most Common Potential Zika-related Birth Defects

Table 2. Most frequently reported birth defects potentially associated with Zika virus, Utah resident births, January–September 2016

Diagnosis*	Cases
Microcephaly	11
Anencephaly	9
Congenital cataract	9
Holoprosencephaly	7
Club foot	7

*Diagnoses are not mutually exclusive. One birth can have multiple Zika virus-associated defects.

For additional information about this topic, contact Amy Steele, UBDN, amysteele@utah.gov; Dallin Peterson, BOE, ddpeterson@utah.gov; or the Office of Public Health Assessment, Utah Department of Health, (801) 538-9191, email: chdata@utah.gov.

Breaking News, March 2017

Intergenerational Poverty

In 2012, the Utah Legislature adopted the Intergenerational Poverty Mitigation Act. This Act created the Intergenerational Welfare Reform Commission, requiring the Department of Workforce Services to combine forces with other state agencies to measurably reduce the incidence of children who remain in poverty, as they become adults.[1] After several years of examining data related to persons in intergenerational poverty, the Commission has chosen to focus prevention efforts in the areas of childhood development, education, family economic stability, and health. Five- and 10-year goals have been developed and indicators chosen to measure progress. The Utah Department of Health (UDOH) is one of the state agencies that has been involved in this effort. UDOH will be working to increase access to home visitation programs for high-risk families, increase participation in Baby Watch Early Intervention, evaluate health provider shortage areas, monitor the percentage of children and adults covered by health insurance, and measure receipt of services for those who need services. More information can be found at the Utah Intergenerational Poverty Initiative website (http://jobs.utah.gov/edo/intergenerational/).

One Third of Utah Children Are at Risk of Remaining in Poverty

Source: Utah's Fifth Annual Report on Intergenerational Poverty, Welfare Dependency, and the Use of Public Assistance, September 2016. http://jobs.utah.gov/edo/intergenerational/igp16.pdf.

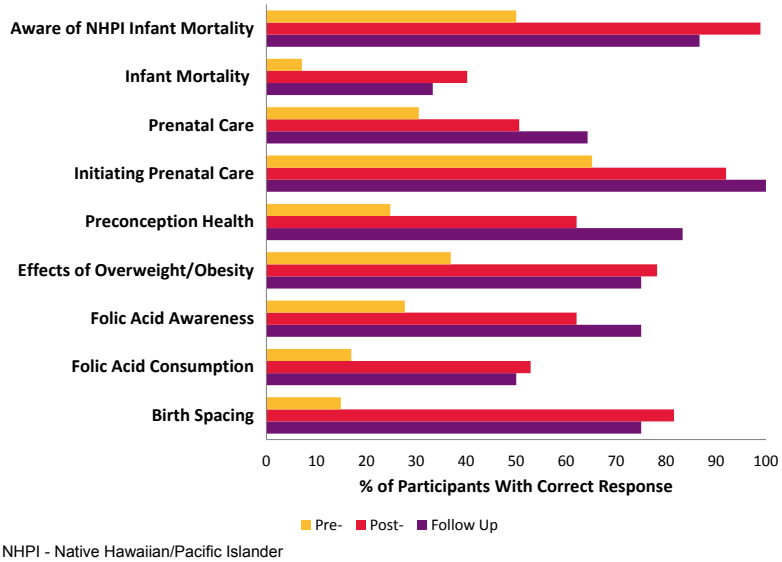
1. Intergenerational Poverty Project, http://jobs.utah.gov/edo/intergenerational/commission.html. Accessed 2/9/2017.

Community Health Spotlight, March 2017

Program Outputs from "It Takes a Village"

Five organizations hosted six implementation sites in Pacific Islander communities across the Wasatch Front between April and July 2016 for the *It Takes A Village: Giving Our Babies the Best Chance Program* to improve elevated rates of poor pregnancy outcomes in these communities. Community facilitators administered 141 pre-questionnaires and 87 post-questionnaires among participants, most being Tongan, Samoan, or Fijian. One in four had experienced a poor birth outcome, primarily miscarriages followed by gestational diabetes and infant mortality.

Program Outputs for Knowledge



NHPI - Native Hawaiian/Pacific Islander

Program evaluation showed a substantial improvement of participants' awareness that Pacific Islanders in Utah experience higher infant mortality rates (50% to 98.9%). Increases in knowledge ranged between 20–40% for infant mortality, prenatal care, when to initiate prenatal care, preconception health, folic acid, who should take folic acid, and effects of overweight/obesity on babies. Understanding of birth spacing increased the most (14.9% to 81.6%). Self-efficacy improved overall with the largest improvements in behaviors related to folic acid, overweight/obesity, breastfeeding, and birth spacing. Finally, all participants would recommend the program to other Pacific Islanders.

Informed by program outputs and a facilitator focus group, the Office of Health Disparities is revising the program for re-release in 2018.

Monthly Health Indicators Report

(Data Through January 2017)

Monthly Report of Notifiable Diseases, January 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 (*Campylobacter*)	9	28	9	28	0.3
Shiga toxin-producing *Escherichia coli* (*E. coli*)	1	3	1	3	0.4
Hepatitis A (infectious hepatitis)	0	0	0	0	0.0
Hepatitis B, acute infections (serum hepatitis)	0	0	0	0	0.0
Meningococcal Disease	0	0	0	0	--
Pertussis (Whooping Cough)	4	72	4	72	0.1
Salmonellosis (*Salmonella*)	21	20	21	20	1.0
Shigellosis (*Shigella*)	0	3	0	3	0.0
Varicella (Chickenpox)	7	31	7	31	0.2
West Nile (Human Cases)	0	0	0	0	--
Quarterly Report of Notifiable Diseases, 4th Qtr 2016	**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	29	108	113	1.0
Chlamydia	2,385	1,989	9,487	7,817	1.2
Gonorrhea	527	283	2,102	943	2.2
Syphilis	17	12	86	49	1.7
Tuberculosis	6	7	20	34	0.6
Medicaid Expenditures (in Millions) for the Month of January 2017	**Current Month**	**Expected/ Budgeted for Month**	**Fiscal YTD**	**Budgeted Fiscal YTD**	**Variance - over (under) budget**
Capitated Mental Health	$ 17.0	$ 16.9	$ 90.1	$ 92.8	$ (2.7)
Inpatient Hospital	$ 3.0	$ 2.4	$ 59.5	$ 60.7	$ (1.2)
Outpatient Hospital	$ 2.8	$ 3.5	$ 25.9	$ 26.2	$ (0.3)
Long Term Care	$ 16.3	$ 16.2	$ 130.4	$ 131.1	$ (0.7)
Pharmacy	$ 9.0	$ 9.0	$ 61.7	$ 62.0	$ (0.3)
Physician/Osteo Services	$ 3.2	$ 3.7	$ 22.8	$ 25.6	$ (2.7)
TOTAL MEDICAID	$ 200.4	$ 201.5	$ 1,490.0	$ 1,493.1	$ (3.1)

Program Enrollment for the Month of January 2017	Current Month	Previous Month	% Change‡ From Previous Month	1 Year Ago	% Change‡ From 1 Year Ago
Medicaid	288,371	288,817	-0.2%	291,698	-1.1%
PCN (Primary Care Network)	14,378	14,572	-1.3%	18,504	-22.3%
CHIP (Children's Health Ins. Plan)	18,951	18,847	+0.6%	17,000	+11.5%
	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 (2014)	281,302	8.9%	-0.8%	$ 7,281.6	+11.8%
Non-maternity Hospitalizations (2014)	177,881	5.5%	-1.1%	$ 6,200.8	+11.6%
Emergency Department Encounters (2014)	710,266	22.9%	+2.6%	$ 1,760.5	+13.2%
Outpatient Surgery (2013)	404,303	13.1%	+7.3%	$ 2,167.9	+11.5%
Annual Community Health Measures	**Current Data Year**	**Number Affected**	**Percent/ Rate**	**% Change‡ From Previous Year**	**State Rank§ (1 is best)**
Obesity (Adults 18+)	2015	510,400	24.5%	-4.7%	8 (2015)
Cigarette Smoking (Adults 18+)	2015	189,600	9.1%	-6.2%	1 (2015)
Influenza Immunization (Adults 65+)	2015	181,600	59.0%	+1.9%	36 (2015)
Health Insurance Coverage (Uninsured)	2015	263,600	8.8%	-14.6%	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+)	2015	145,800	7.0%	-1.4%	10 (2015)
Poor Mental Health (Adults 18+)	2015	333,300	16.0%	+0.6%	18 (2015)
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)	2015	489	6.9 / 1,000	-11.7%	13 (2015)
Early Prenatal Care	2015	38,803	76.4%	+0.2%	n/a
Infant Mortality	2015	257	5.1 / 1,000	+3.2%	13 (2014)
Childhood Immunization (4:3:1:3:3:1)	2015	37,400	73.6%	-1.3%	35 (2015)

† Diagnosed HIV infections, regardless of AIDS diagnosis.
‡ Relative percent change. Percent change could be due to random variation.
§ 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 has ended for influenza until the 2017–2018 season.