

# Utah Health Status Update:

## *Induction of Labor in Utah*

November 2011

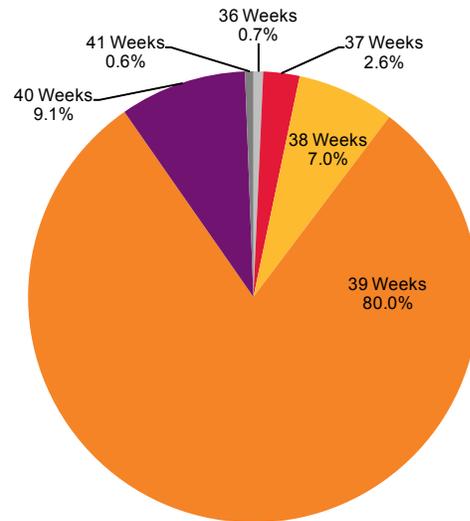
Labor induction for the convenience of either the pregnant woman or the health care professional, otherwise known as elective induction, is a practice that is increasing nationwide. Since 1990, the rate of induction has more than doubled in the United States<sup>1</sup>. It is hypothesized that elective inductions may be contributing to the nationwide rise in preterm birth. In a recent analysis of the literature on inductions, the Agency for Healthcare Research and Quality (AHRQ) notes that the overall rate of induction of labor is rising faster than the rate of pregnancy complications that would lead to a medically indicated induction<sup>1</sup>.

Of particular concern with elective inductions are those that happen prior to 39 weeks of pregnancy. Research supports that elective induction prior to 39 weeks holds increased risks for both mother and infant. The American College of Obstetricians and Gynecologists has recommended that no induction occur before 39 completed weeks without medical reason<sup>2</sup>. In 2010 The Joint Commission issued new Perinatal Core Measures for hospitals. Measure PC-01 addresses elective delivery at 37-39 weeks of completed gestation. Utah has been a leader in hospitals that have policies to restrict elective

- **Since 1990, the rate of induction has more than doubled in the United States<sup>1</sup>.**
- **Research supports that elective induction prior to 39 weeks holds increased risks for both mother and infant.**
- **With the efforts of hospitals statewide, Utah has been successful in decreasing rates of elective induction. However, data show that some early elective inductions still occur.**
- **Women with elective inductions were more likely to be married, of White race, non-Hispanic ethnicity, multiparous, and have private insurance at the time of delivery.**

### Elective Induction by Gestational Age

Figure 1. Gestational age of infants born by elective inductions



Source: Pregnancy Risk Assessment Monitoring System (PRAMS)

inductions prior to 39 weeks. However, even with these recommendations and policies, elective inductions prior to 39 weeks still take place.

Until the recent revision of the U.S. certificate of live birth, identifying elective induction was difficult. The 2003 birth certificate revision, adopted by Utah in 2009, incorporated a new variable on elective induction. However, a recent study by the Ohio Perinatal Quality Collaborative found that birth certificates overestimated non-medically indicated inductions<sup>3</sup>.

In order to better understand induction practices in Utah, two questions were added to the Utah Pregnancy Risk Assessment Monitoring System (PRAMS) survey. PRAMS is a postpartum survey of women who have had a recent live birth. Each month, PRAMS selects a sample of approximately 200 women and sends a survey questionnaire on experiences before, during and after pregnancy. Survey responses are weighted to represent all live births to Utah residents.

Beginning in 2009, women were asked “Did your doctor, nurse, or other health care worker try to induce your labor (start your contractions using medicine)?” Women who respond yes are then asked “Why did your doctor, nurse, or other health care worker try to induce your labor?” For the purposes of this analysis, women who responded that their labors were induced because they wanted to schedule their delivery or they wanted to give birth with a specific health care provider and no medical reason for the induction was noted by mother or on the birth certificate were considered to have had an elective induction.

In 2009, 46.6% of all Utah women reported that their labors were induced. Reviewing reasons for the induction, combined with risk data from the birth certificate, 13.9% of all women with a live birth had an induction

that was for elective purposes. Characteristics of women who had elective inductions are shown in Table 1. Women with elective inductions were more likely to be married, of White race, non-Hispanic ethnicity, multiparous, and have private insurance at the time of delivery.

Figure one shows the gestational ages of infants born by elective inductions. Eighty percent of elective inductions were to women at 39 weeks. Just over ten percent of elective inductions (approximately 750 deliveries) were to women who were less than 39 weeks of pregnancy. Due to small numbers, we were unable to examine data for these women as a separate group. With additional years of data, this will become possible.

The March of Dimes and the California Maternal Quality of Care Collaborative have developed a toolkit for reducing non-medically indicated deliveries before 39 weeks. The kit provides implementation strategies for facilities and providers. The Utah Department of Health invites all delivering facilities that do not have policies regarding elective inductions prior to 39 weeks to review this toolkit. The kit is available on-line at [www.cdph.ca.gov/programs/mcah/Documents/MCAH-EliminationOfNon-MedicallyIndicatedDeliveries.pdf](http://www.cdph.ca.gov/programs/mcah/Documents/MCAH-EliminationOfNon-MedicallyIndicatedDeliveries.pdf).

The toolkit also provides educational messages that providers can use when discussing elective induction with their patients. One of the discussion points is educating women about how the baby develops through 39 weeks, particularly in regard to fetal brain development, the risks to baby for early induction (increased neonatal intensive care admissions), and the increased risks for cesarean sections to mother. The March of Dimes has developed patient education materials “Healthy Babies are Worth the Wait” that can be found on their website ([www.marchofdimes.com](http://www.marchofdimes.com)).

With the efforts of hospitals statewide, Utah has been successful in decreasing rates of elective induction. However, data show that some early elective inductions still occur. The Maternal and Infant Health Program will continue to track rates and educate Utah women and providers on the risks of induction before 39 weeks.

#### References

1. Agency for Healthcare Research and Quality. Maternal and neonatal outcomes of elective in-

## Percentage of Women who Reported Elective Labor Induction, Utah, 2009

	Percentage	95% Confidence Interval
<b>Maternal Age</b>		
19 and younger	**	**
20 to 24	12.6%	(9.0-16.2)
25 to 29	15.0%	(11.6-18.4)
30 to 34	17.8%	(13.6-22.0)
35 and older	9.7%	(3.7-14.5)
<b>Education Level</b>		
Less than high school	8.2%	(5.3-11.1)
Completed high school	14.6%	(10.4-18.8)
Some college	14.0%	(10.6-17.4)
College graduate	16.1%	(12.0-20.2)
<b>Marital Status</b>		
Married	15.8%	(13.5-18.1)
Unmarried	6.0%	(3.2-8.8)
<b>Race</b>		
White	15.4%	(13.2-17.6)
Some race other than white	5.6%	(2.2-9.0)
<b>Ethnicity</b>		
Hispanic	7.8%	(4.5-11.1)
Non-Hispanic	15.5%	(13.2-17.8)
<b>Payer for Delivery</b>		
Medicaid	10.9%	(8.1-13.7)
Private/Group insurance	16.0%	(13.3-18.7)
No Insurance	**	**
<b>Parity</b>		
Primiparous	6.9%	(4.5-9.3)
Multiparous	17.3%	(14.7-19.9)
<b>Urban/Rural Residence</b>		
Urban	13.2%	(11.0-15.4)
Rural	16.1%	(12.0-20.2)

\*\* The estimate has been suppressed because the relative standard error is greater than 50% or the observed number of events is very small and not appropriate for publication.

Source: Pregnancy Risk Assessment Monitoring System (PRAMS), 2009

1. Agency for Healthcare Research and Quality. AHRQ Evidence Report/Technology Assessment No. 176. Rockville (MD): AHRQ; 2009.
2. American College of Obstetricians and Gynecologists. Induction of Labor. ACOG Practice Bulletin No. 107. Washington, DC: ACOG; 2009.
3. Bailit JL; Ohio Perinatal Quality Collaborative. Rates of labor induction without medical indication are overestimated when derived from birth certificate data. *Am J Obstet Gynecol.* 2010 Sep;203(3):269.e1-3.

## November 2011 Utah Health Status Update

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## Breaking News, November 2011

### Trends in Autism Spectrum Disorders (ASD)

Autism Spectrum Disorders (ASD) have become relatively common childhood neurodevelopmental disorders. Individuals with ASDs have varying levels of pervasive impairment in thinking, feeling, language, and the ability to relate to others. These disorders are usually first diagnosed in early childhood. The Utah Department of Health (UDOH) Children with Special Health Care Needs (CSHCN) Bureau has focused its efforts on the importance of the needed collaborations to develop a comprehensive system of care for those with an ASD and their families.

CSHCN efforts to address ASD include:

1. The Utah Autism Initiative (UAI), a multi-agency committee tasked to identify and improve gaps in the services provided to those with ASDs.
2. The Utah ASD State Plan committee develops ongoing recommendations for statewide efforts to address the needs and concerns related to identification, diagnosis and treatment of ASDs.
3. The Utah Autism Treatment Fund. Donations made to this fund would go toward increasing access to early intensive behavioral therapy for children with ASDs.
4. Multidisciplinary, diagnostic clinics in 8 locations throughout Utah. These clinics offer evaluations for children who have developmental delays.
5. The Utah Registry for Autism and Developmental Disabilities (URADD) which provides data about ASDs in Utah.

In 2006, the Centers for Disease Control and Prevention (CDC) estimated that one in 110 U.S. 8 year olds had an ASD. This year, URADD reported a prevalence of 1 in 77 Utah 8-year-olds utilizing 2008 data. URADD reported a 2002 prevalence of 1 in 154. There are many reasons for this increase and include changes in ASDs diagnostic criteria and tools and increases in both public and professional awareness of ASD. Researchers are looking at other possible contributing factors such as genetics and environmental factors.

## Community Health Indicators Spotlight, November 2011

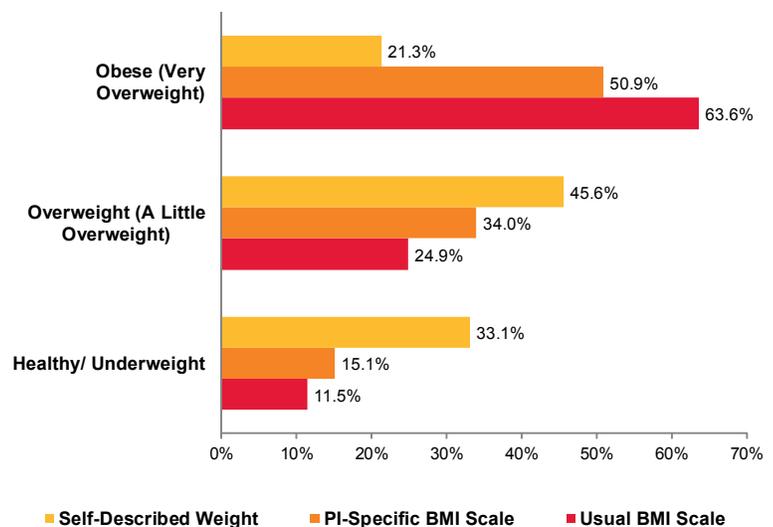
### Obesity among Utah Pacific Islanders

The UDOH, Office of Health Disparities Reduction recently surveyed 605 Utah adult Pacific Islanders and found that 63.6% (58.9-68.0) were obese, which is defined as a body mass index (BMI) over 30. The statewide obesity rate was 23.1% (21.9-24.3; 2010 BRFSS).

However, some studies have suggested that Pacific Islanders can be healthy at a larger BMI than can be tolerated by people of European descent<sup>1</sup>. Researchers in New Zealand have developed a BMI scale specifically for people of Pacific Island descent<sup>2</sup>. Using this scale, about half of Utah Pacific Islander adults (50.9%, 46.2-55.6) are still identified as obese.

Many overweight Pacific Islanders were not aware that they were overweight. Although only 15.1% of PIs were at healthy weight or low weight BMIs according to the PI-specific scale, 33.1% perceived their weight as healthy or underweight.

### Self-Perceived Weight and Actual BMI among Utah Pacific Islanders, 2011



Data Source: Utah Pacific Islander Survey, 2011

1. See [http://apjcn.nhri.org.tw/server/apjcn/volume18/vol18.3/finished/13\\_1503\\_404-411.pdf](http://apjcn.nhri.org.tw/server/apjcn/volume18/vol18.3/finished/13_1503_404-411.pdf) and <https://researchspace.auckland.ac.nz/bitstream/handle/2292/4675/15608799.pdf?sequence=1>

2. According to the New Zealand Pacific Islander scale, overweight is a BMI higher than 26, instead of 25, and obese is a BMI higher than 32, instead of 30. See <http://www.everybody.co.nz/tool-06fb03f0-0ebf-4c02-8551-c1db35f6fb7b.aspx>

# Monthly Health Indicators Report

(Data Through September 2011)

Monthly Report of Notifiable Diseases, September 2011	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)	16	27	354	280	1.3
Shiga toxin-producing Escherichia coli (E. coli)	12	16	150	97	1.5
Hepatitis A (infectious hepatitis)	0	1	4	8	0.5
Hepatitis B, acute infections (serum hepatitis)	0	1	7	10	0.7
Meningococcal Disease	1	1	10	6	1.8
Pertussis (Whooping Cough)	10	30	331	286	1.2
Salmonellosis (Salmonella)	28	32	246	258	1.0
Shigellosis (Shigella)	5	5	43	34	1.3
Varicella (Chickenpox)	23	39	267	485	0.6
West Nile (Human cases)	1	15	3	54	0.1
Quarterly Report of Notifiable Diseases, 3rd Qtr 2011	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†	13	25	57	85	0.7
Chlamydia	1,671	1,516	5,089	4,456	1.1
Gonorrhea	77	137	193	434	0.4
Tuberculosis	6	5	29	22	1.3
Medicaid Expenditures (in Millions) for the Month of September 2011	Current Month	Expected/Budgeted‡ for Month	Fiscal YTD	Budgeted‡ Fiscal YTD	Variance - over (under) budget
Capitated Mental Health	\$ 3.2	\$ 2.9	\$ 31.9	\$ 33.1	\$ (1.2)
Inpatient Hospital	\$ 19.1	\$ 23.1	\$ 46.6	\$ 57.0	\$ (10.4)
Outpatient Hospital	\$ 8.4	\$ 12.5	\$ 20.2	\$ 24.0	\$ (3.7)
Long Term Care	\$ 12.8	\$ 12.5	\$ 33.2	\$ 38.8	\$ (5.6)
Pharmacy§	\$ 13.6	\$ 16.5	\$ 40.2	\$ 40.1	\$ 0.1
Physician/Osteo Services	\$ 6.8	\$ 7.3	\$ 16.6	\$ 17.3	\$ (0.7)
<b>TOTAL HCF MEDICAID</b>	<b>\$117.9</b>	<b>\$ 138.1</b>	<b>\$ 328.2</b>	<b>\$ 364.6</b>	<b>\$ (36.4)</b>

Program Enrollment for the Month of September 2011	Current Month	Previous Month	% Change¶ From Previous Month	1 Year Ago	% Change¶ From 1 Year Ago
Medicaid	245,970	247,627	-0.7%	226,181	+8.7%
PCN (Primary Care Network)	15,336	15,820	-3.1%	14,225	+7.8%
CHIP (Children's Health Ins. Plan)	37,535	38,641	-2.9%	40,675	-7.7%
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 (2010)	274,576	9.0%	-2.6%	\$ 5,416.2	+5.9%
Non-maternity Hospitalizations (2010)	167,340	5.3%	-0.9%	\$ 4,552.5	+5.9%
Emergency Department Encounters (2009)	684,176	23.3%	-1.1%	\$ 1,081.4	+22.9%
Outpatient Surgery (2009)	311,442	10.6%	+1.9%	\$ 1,465.7	+14.7%
Annual Community Health Measures	Current Data Year	Number Affected	Percent/Rate	% Change¶ From Previous Year	State Rank# (1 is best)
Obesity (Adults 18+)	2010	454,700	23.1%	-4.0%	11 (2010)
Cigarette Smoking (Adults 18+)	2010	180,100	9.1%	-6.9%	1 (2010)
Influenza Immunization (Adults 65+)	2010	175,900	68.2%	-0.8%	23 (2010)
Health Insurance Coverage (Uninsured)	2010	301,900	10.6%	-5.6%	n/a
Motor Vehicle Traffic Crash Injury Deaths	2009	227	8.1 / 100,000	-16.6%	15 (2007)
Poisoning Deaths	2009	543	19.4 / 100,000	+7.0%	49 (2007)
Suicide Deaths	2009	445	15.9 / 100,000	+15.3%	n/a
Diabetes Prevalence (Adults 18+)	2010	128,000	6.5%	+0.2%	15 (2010)
Poor Mental Health (Adults 18+)	2010	296,100	15.0%	+6.8%	17 (2010)
Coronary Heart Disease Deaths	2009	1,469	52.5 / 100,000	-4.4%	1 (2007)
All Cancer Deaths	2009	2,543	90.8 / 100,000	+1.1%	1 (2007)
Stroke Deaths	2009	734	26.2 / 100,000	-2.2%	14 (2007)
Births to Adolescents (Ages 15-17)	2009	992	16.5 / 1,000	-10.6%	19 (2008)
Early Prenatal Care	2009	38,562	71.6%	-9.6%	n/a
Infant Mortality	2009	285	5.3 / 1,000	+11.4%	4 (2007)
Childhood Immunization (4:3:1:3:3:1)	2009	41,500	76.6%	+4.1%	16 (2009)

† Diagnosed HIV infections, regardless of AIDS diagnosis.

‡ Budget has been revised to include supplemental funding from 2011 General Session.

§ Only includes the gross pharmacy costs. Pharmacy Rebate and Pharmacy Part-D amounts are excluded from this line item.

¶ % Change could be due to random variation.

# 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 for influenza virus has ended until the 2011-2012 season.