UTAH DEPARTMENT OF HEALTH

Utah Health Status Update:

Primary Cesarean Delivery

June 2013

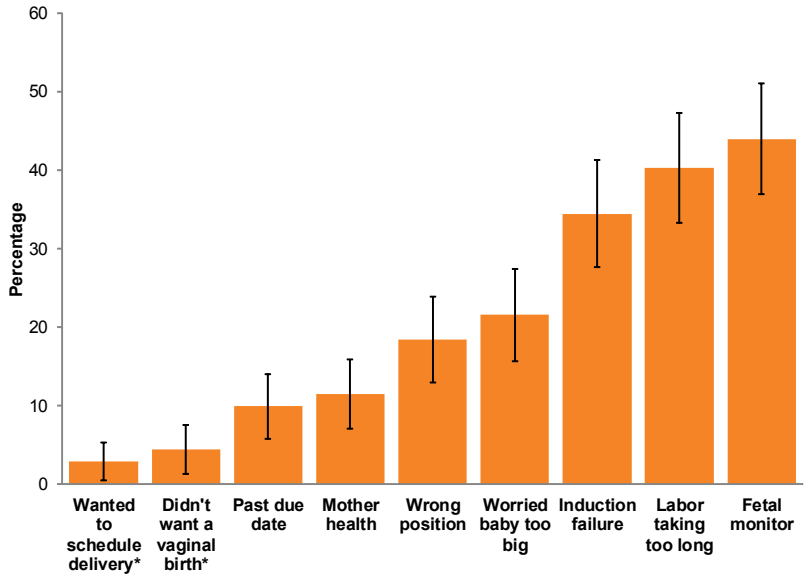
Data show that the rate of cesarean delivery has been on an upward trend over the last decade. In the United States, cesarean delivery increased more than 50% between 1996 and 2009; however, in the last three years this rate appears to be stabilizing. Nationwide, the rate of cesarean deliveries reached 32.8% in 2010 and remained unchanged in 2011.[1] Cesareans are the most common surgical procedure performed on any individual aged 18-44 years old.[2] Cesareans are the second most common procedure billed to all payers, including Medicaid and private or group insurance and regularly cost twice as much as a vaginal delivery.[3] Over 90% of women in the United States who have a cesarean will have a repeat cesarean during a subsequent pregnancy.[4] Cesarean delivery has an increased risk of complications and re-hospitalization when compared to vaginal delivery.

In April 2013, a report by the American College of Obstetricians and Gynecologists (ACOG) made recommendations that "physicians should use caution when honoring cesareans on maternal request."[5] The report looked at the short- and long-term risks associated with maternal requested cesarean and found an association with longer maternal hospital stays, higher infection rates, higher anesthetic complications and lower initial breastfeeding rates when compared to planned vaginal delivery. Additionally, the evidence suggests an association with complications during future deliveries including placenta previa, placenta accreta, bladder and bowel injuries, uterine rupture, and the potential need for hysterectomy.[5]

- **The U.S. cesarean section rate doubled between 1996 and 2009.**
- **The primary cesarean section rate among low-risk Utah women was 6.6% during 2009-2011.**
- **In the majority of cases, the decision to proceed with a cesarean section was made by the health care provider during the labor process.**
- **The three main reasons cited for cesarean section among low-risk women were fetal problems during labor, labor taking too long, and failed labor inductions.**

Reasons for Primary Cesarean Delivery

Figure 1. Self-reported reasons for primary cesarean delivery among low-risk women, Utah, 2009-2011



* Use caution in interpreting; the estimate has a relative standard error greater than 30% and does not meet UDOH standards for reliability.
Source: Utah PRAMS.

Healthy People 2020 has set the national goal to reduce cesarean section among low-risk women (full-term, singleton, and vertex presentation) to 23.9%.[4] Utah has successfully surpassed this national goal.

In order to better understand reasons for cesarean deliveries 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, a sample of approximately 200 women is selected. These mothers are sent a PRAMS survey questionnaire on their experiences before, during and after pregnancy. Survey responses are weighted to represent all live births to Utah mothers.

Beginning in 2009, women were asked, "What was the reason that your new baby was born by cesarean delivery?" Women were also asked whose idea it was to have a cesarean delivery. For the purposes of this analysis, low-risk women are defined as women with delivery of a single fetus at 37 weeks or greater with baby positioned head down. Data presented represent live births in Utah during 2009-2011.

Overall, 87.9% of women were defined as low-risk. Of these women, 6.6% had a primary cesarean. Figure 1 shows the reasons for cesarean birth as reported by these women. The top three reasons for cesarean delivery were problems with the baby during labor as indicated by the fetal monitor, labor taking too long, and failed labor induction. As seen in Figure 2, a significant

majority (79.2%) of low-risk women who had cesareans reported that the decision was made by their health care provider during labor. Of the remaining, 13% reported that the provider had decided to do a cesarean prior to labor, while only a small proportion reported that they requested the cesarean. The significant differences identified between low-risk women who had a primary cesarean and low-risk women who delivered vaginally were; mother not married, had an unintended pregnancy, had a report of labor induction, were obese prior to pregnancy (with a primary cesarean rate of 30.3%), were non-white, and non-hispanic.

Research has shown that obese women are more likely to have longer labors and are six times more likely to have a cesarean delivery due to failure to progress, which was one of the most frequently cited reasons that women reported for having a cesarean.[6] The current analysis on obesity and its relationship with cesareans is limited due to small numbers and will require additional years of data to fully evaluate. This finding also underscores the need for counseling of all women of reproductive age on the benefits of maintaining a healthy weight.

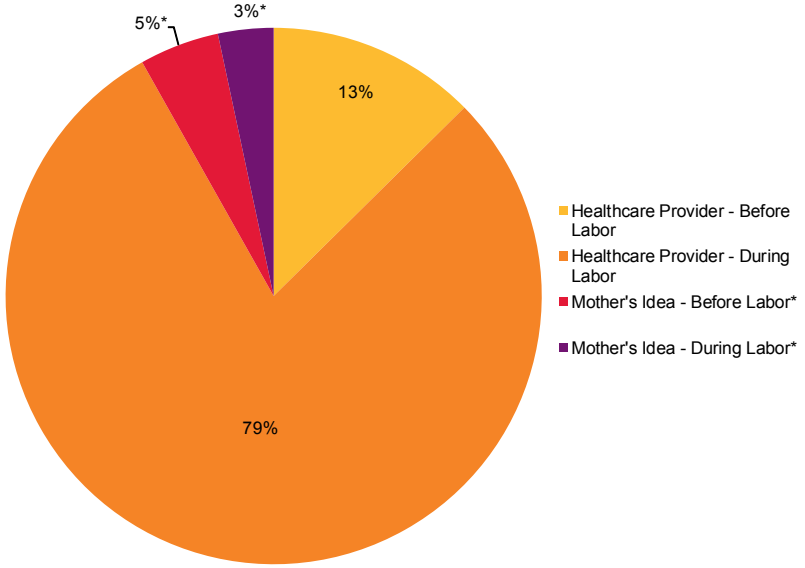
Recommendations published in a 2012 article in *Obstetrics and Gynecology* on preventing primary cesarean delivery include the following:

- Patient counseling prior to any first cesarean should include long term effects on future reproductive health and subsequent pregnancy risks.
- Labor induction and planned cesareans should be performed only when medically indicated. Non-medically indicated labor induction should occur only after 39 weeks and in the presence of a favorable cervix.
- Diagnosis of failed induction should be made only after meeting ACOG guidelines for adequate attempt.
- Adequate time for normal labor (latent, active, first, and second stages) should be allowed unless expedited delivery is medically indicated.
- Given reassuring maternal and fetal status, diagnosis of arrest of labor should not be made until adequate time, as defined by ACOG, has passed.[4]

If these recommendations are followed, the rate of cesarean delivery among low-risk women will likely decrease, and Utah will be well on its way to being a leader in this Healthy People 2020 goal.

Decision and Timing for Primary Cesarean Delivery

Figure 2. Decision and timing for primary Cesarean delivery among low-risk women, Utah, 2009-2011



* Use caution in interpreting; the estimate has a relative standard error greater than 30% and does not meet UDOH standards for reliability.
Source: Utah PRAMS.

References

1. Hamilton, B. M., JA ; Ventura, SJ: Births: Preliminary Data for 2011. In National Vital Statistics Reports, vol. 61. National Center for Health Statistics, Hyattsville, MD:, 2012.
2. Sakala, C., and Corry, M. P.: Achieving the institute of medicine's six aims for improvement in maternity care. Womens Health Issues 18: 75-8 (2008).
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5. Committee Opinion No. 559: Cesarean delivery on maternal request. American College of Obstetricans and Gynecologist. Obstet Gynecol 121; 904-7 (2013).

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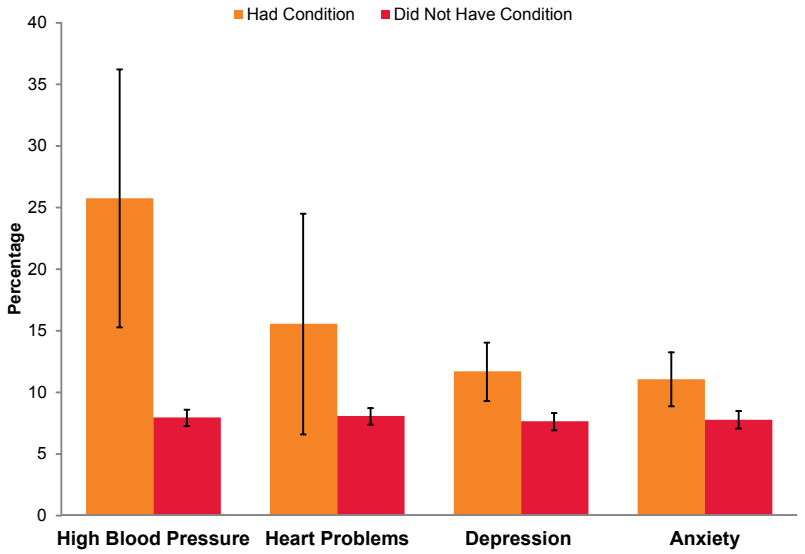
Breaking News, June 2013

Chronic Health Conditions Prior to Pregnancy

Improving a woman's health prior to conception can improve pregnancy outcomes for both mother and infant. Many chronic conditions can be effectively treated prior to pregnancy and may decrease pregnancy complications. Here we examined the effects of selected chronic health conditions on preterm birth (<37 weeks).

Preterm Birth Rates by Selected Chronic Health Conditions, Utah PRAMS, 2009-2011



The Utah Pregnancy Risk Assessment Monitoring System (PRAMS) asked women "During the 3 months before you got pregnant with your new baby did you have asthma, high blood pressure, anemia, heart problems, epilepsy, thyroid problems, depression or anxiety?" Women were asked to check all that apply. Some conditions were more common than others; 12.3% had depression, 12.2% had anxiety, 7.0% had anemia, 6.5% reported asthma, 4.9% had thyroid problems, 1.2% had hypertension, 1% had heart problems, and <1% had epilepsy. Women who reported having hypertension, heart problems, depression and anxiety were significantly more likely to experience a preterm birth.

It is important for women to see a health care provider prior to becoming pregnant to discuss her health history, current medical conditions, as well as any medications that she is taking. Through proper preconception care, providers can identify risk factors and counsel a woman to improve her health before becoming pregnant. The **MotherToBaby** program (formerly Pregnancy Risk Line), **1.800.822.BABY(2229)**, is available to discuss questions about the effect of medications or other substances during pregnancy or breastfeeding.

Community Health Indicators Spotlight, June 2013

Postpartum Visit With a Healthcare Provider

New moms are often focused on the health and well-being of their infant and may overlook their own physical and emotional health. Women are advised to see their provider after delivery. These visits are structured to address physical and emotional health issues that are common during the postpartum period. These may include persistent postpartum bleeding, healing from cesarean delivery, endometritis, urinary incontinence, thyroid disorders, breastfeeding issues, sexual functioning, depression, and future family planning.

Healthy People 2020 identified a developmental objective to increase the proportion of women giving birth who attend a postpartum care visit with a health worker (MCH-19). To measure this objective, the Utah Pregnancy Risk Assessment Monitoring System (PRAMS) asks women, "Since your new baby was born, have you had a postpartum checkup for yourself?"

During 2009-2011, 11% of new mothers **did not** receive a postpartum checkup. These women were significantly more likely to be under the age of 19, have an education level of high school graduation or less, be unmarried, be of Hispanic ethnicity, have an income below 134% of the Federal Poverty Level (FPL), have Medicaid or no insurance, report that the pregnancy was unintended, have had less than adequate prenatal care (PNC), or to have had a previous live birth. Women who did have a postpartum checkup were more likely than women who did not to report using postpartum contraception, placing their infants to sleep on their backs, and breastfeeding their infant at the time of the survey.

Monthly Health Indicators Report

(Data Through April 2013)

Monthly Report of Notifiable Diseases, April 2013	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)	32	27	114	93	1.2
Shiga toxin-producing Escherichia coli (E. coli)	6	4	19	12	1.6
Hepatitis A (infectious hepatitis)	3	0	4	3	1.5
Hepatitis B, acute infections (serum hepatitis)	0	1	1	4	0.3
Influenza	Weekly updates at http://health.utah.gov/epi/diseases/flu				
Meningococcal Disease	1	0	2	2	0.9
Pertussis (Whooping Cough)	21	44	230	169	1.4
Salmonellosis (Salmonella)	28	27	79	86	0.9
Shigellosis (Shigella)	1	4	7	11	0.6
Varicella (Chickenpox)	25	55	101	239	0.4
Quarterly Report of Notifiable Diseases, 1st Qtr 2013	**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†	10	28	10	28	0.4
Chlamydia	1,828	1,740	1,828	1,740	1.1
Gonorrhea	149	93	149	93	1.6
Syphilis	16	7	16	7	2.2
Tuberculosis	8	9	8	9	0.9
Medicaid Expenditures (in Millions) for the Month of April 2013	**Current Month**	**Expected/ Budgeted‡ for Month**	**Fiscal YTD**	**Budgeted‡ Fiscal YTD**	**Variance - over (under) budget**
Capitated Mental Health	$ 7.0	$ 11.2	$ 114.1	$ 114.9	$ (0.9)
Inpatient Hospital	$ 29.4	$ 27.5	$ 236.9	$ 282.0	$ (45.1)
Outpatient Hospital	$ 3.7	$ 3.4	$ 55.7	$ 68.5	$ (12.8)
Long Term Care	$ 13.1	$ 13.4	$ 134.3	$ 134.4	$ (0.1)
Pharmacy§	$ 7.9	$ 16.7	$ 117.9	$ 114.5	$ 3.4
Physician/Osteo Services	$ 4.4	$ 7.1	$ 65.4	$ 72.6	$ (7.2)
TOTAL HCF MEDICAID	$172.4	$ 169.9	$1,688.9	$1,698.7	$ (9.8)

Program Enrollment for the Month of April 2013	Current Month	Previous Month	% Change¶ From Previous Month	1 Year Ago	% Change¶ From 1 Year Ago
Medicaid	260,437	261,894	-0.6%	254,394	+2.4%
PCN (Primary Care Network)	9,298	9,123	+1.9%	16.215	-42.7%
CHIP (Children's Health Ins. Plan)	34,711	35,173	-1.3%	36,839	-5.8%
	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 (2011)	280,830	9.3%	+0.8%	$ 5,818.8	+7.4%
Non-maternity Hospitalizations (2011)	175,847	5.7%	+3.8%	$ 4,909.9	+7.9%
Emergency Department Encounters (2011)	665,925	22.4%	+1.7%	$ 1,309.5	+12.8%
Outpatient Surgery (2010)	362,106	12.4%	+13.2%	$ 1,764.0	+20.4%
Annual Community Health Measures	**Current Data Year**	**Number Affected**	**Percent/ Rate**	**% Change¶ From Previous Year**	**State Rank# (1 is best)**
Obesity (Adults 18+)	2011	472,400	24.4%	+1.3%	12 (2011)
Cigarette Smoking (Adults 18+)	2011	229,300	11.8%	+2.7%	1 (2011)
Influenza Immunization (Adults 65+)	2011	147,400	56.9%	-15.5%	41 (2011)
Health Insurance Coverage (Uninsured)	2011	377,700	13.4%	+26.4%	n/a
Motor Vehicle Traffic Crash Injury Deaths	2010	231	8.1 / 100,000	+0.1%	19 (2009)
Poisoning Deaths	2010	342	12.0 / 100,000	-38.1%	47 (2009)
Suicide Deaths	2010	479	16.8 / 100,000	+5.8%	n/a
Diabetes Prevalence (Adults 18+)	2011	129,600	6.7%	-1.8%	6 (2011)
Poor Mental Health (Adults 18+)	2011	315,300	16.3%	-0.4%	17 (2011)
Coronary Heart Disease Deaths	2010	1,488	52.2 / 100,000	-0.4%	2 (2008)
All Cancer Deaths	2010	2,791	98.0 / 100,000	+7.9%	1 (2008)
Stroke Deaths	2010	736	25.8 / 100,000	-1.4%	13 (2008)
Births to Adolescents (Ages 15-17)	2010	876	14.3 / 1,000	-13.2%	17 (2009)
Early Prenatal Care	2010	38,124	73.1%	+2.1%	n/a
Infant Mortality	2010	251	4.8 / 1,000	-9.0%	3 (2008)
Childhood Immunization (4:3:1:3:3:1)	2010	38,900	70.6%	-7.8%	12 (2010)

† Diagnosed HIV infections, regardless of AIDS diagnosis.
‡ Budget has been revised to include supplemental funding from 2011 General Session.
§ Includes only 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 West Nile virus has ended until the 2013 season.