

Utah Health Status Update:

Home Birth Trends in Utah, 1992–2005

December 2006

Utah Department of Health

Introduction

For centuries giving birth at home was the norm throughout the world. Since the beginning of the 20th century, with advances in scientific medicine, emphasis has been increasingly placed on the hospital as the safest birth environment for both mother and newborn. In reaction to this medicalization of childbirth and fueled by the consumer and women's movements, the 1970s brought renewed interest in home birth. Nevertheless, much controversy has arisen regarding the relative safety of home birth. Studies comparing birth outcomes associated with home birth vs. hospital birth have been contradictory. Results of some studies have documented home birth as a relatively safe option, while others have observed elevated risk associated with home birth.

The rate of home birth in Utah has fluctuated around 1.2% over the past decade. However, Utah's rate has been much higher than the nation's. In 2000, the proportion of home births in Utah was double the national rate (1.4% vs. 0.6%, Figure 1). Too little is known about the birth outcomes among the home birth population. This study was conducted to examine birth outcomes among Utah women planning and delivering infants at home.

Methods

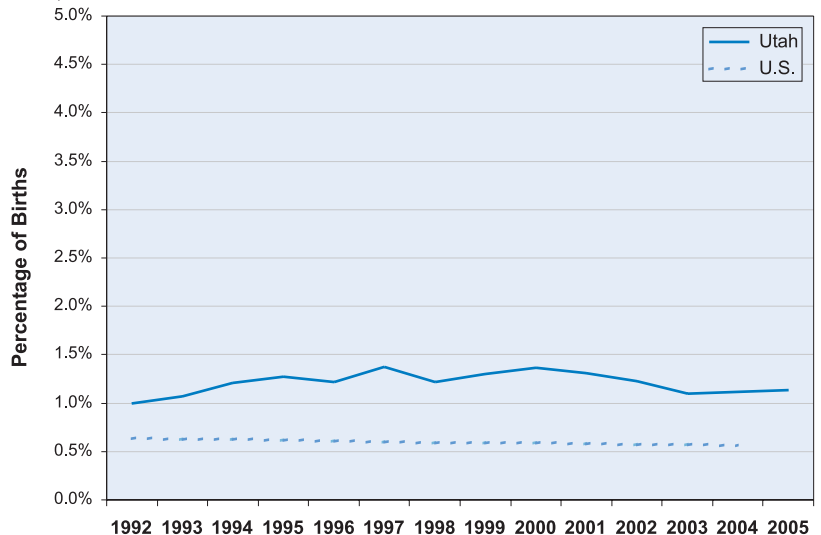
Utah birth certificate data from 1992 to 2005 were used for this study. A home birth was defined as a birth both intended for delivery at home and occurring at home. This study excluded unplanned home births and planned home births delivered elsewhere. The outcomes of home births were compared with all births in Utah.

Results

There were 624,897 births during 1992–2005, of which 7,605 (1.2%) were planned home births. Table 1 compares demographic profiles of home birth mothers with all birth mothers. Compared to all births, women who planned home births were more likely to be older, married, and multiparous. They were less likely

Home Births

Figure 1. Percentage of live births planned and delivered at home, Utah and U.S., 1992–2005



Demographics of Mothers

Table 1. Demographic profiles of planned home birth mothers and all birth mothers, Utah, 1992–2005

Maternal Characteristic	Percent	
	Planned Home Births (n=7,605)	All Births (n=624,897)
Age		
Under 25 Years	33.1%	40.4%
25–34 Years	50.3%	50.7%
Over 34 Years	16.6%	8.9%
Education		
Less Than High School Graduate	17.3%	16.9%
High School Graduate	40.9%	37.9%
Post- High School Education	41.8%	45.2%
Hispanic	3.5%	11.3%
Married	90.9%	83.3%
Smoked During Pregnancy	1.3%	8.1%
Prenatal Care in 1st Trimester	81.8%	70.8%
Parity		
Nulliparous	17.0%	35.6%
Multiparous	83.0%	64.4%

to be Hispanic. Home birth mothers were much less likely to have used tobacco during pregnancy than overall birth mothers (1.3% vs. 8.1%, $p < .05$). The majority of home births (79.8%) were attended by midwives.

Complications of labor and delivery, as collected in birth certificate data, were far less common in home births than all births, with the exception of measures of length of labor (*prolonged labor* and *precipitous labor*, Figure 2). Home births had lower incidence of bleeding such as *abruptio placenta* or *placenta previa*. However, home births were associated with increased risk in the *other excessive bleeding* category compared to all births (2.2% vs. 0.9%).

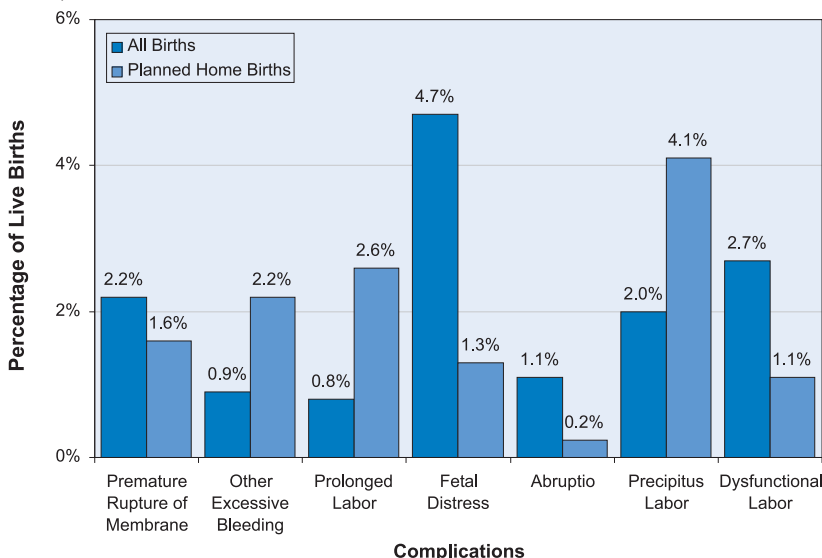
Lower rates of adverse birth outcomes were observed among home birth newborns compared to all newborns. Home birth newborns were much less likely to be found in either the *low birth weight* (< 2,500 grams) or *preterm* (< 37 weeks gestation) categories (Figure 3). Both one-minute and five-minute Apgar scores were higher among newborns born at home than among all newborns (data not shown).

Conclusions

Women with a low risk of obstetric complications are generally eligible to deliver at home. This study found that home birth outcomes compared favorably with those of all births. There were however, some noteworthy differences. Home birth mothers had higher rates of *precipitous labor*, *prolonged labor*, and *other excessive bleeding*. This higher incidence of precipitous labor may be at least partially attributable to the higher proportions of home birth mothers who were multiparous. Prolonged labor among home births may be a function of avoiding drug induced labor and artificial stimulation of labor. It is difficult to explain the higher risk of excessive bleeding among home birth mothers. It will be important to further examine the causes of excessive bleeding in home births. These factors, along with the contradictory findings of previous studies, all point toward the imperative for further study regarding the safety of home births.

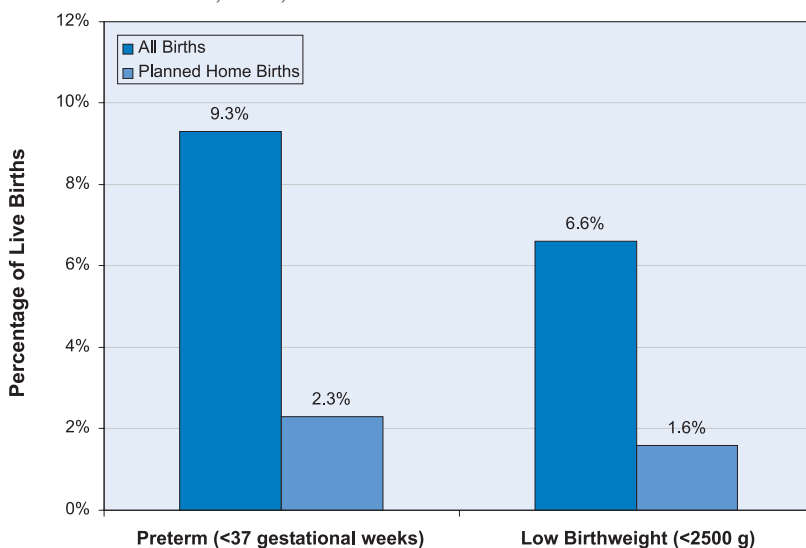
Obstetric Complications

Figure 2. Comparison of obstetric complications, home births and all births, Utah, 1992–2005



Newborn Birth Outcomes

Figure 3. Percentage of births that were preterm or low birth weight, home births and all births, Utah, 1992–2005



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Monthly Health Indicators Report

(Data Through October 2006)

Monthly Report of Notifiable Diseases, October 2006	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)	28	24	247	242	0.9
Enterotoxigenic Escherichia coli (E. coli)	12	10	134	74	1.7
Hepatitis A (infectious hepatitis)	1	3	12	39	0.3
Hepatitis B (serum hepatitis)	1	5	23	35	0.6
Measles (Rubeola, Hard Measles)	0	0	0	0	--
Meningococcal Diseases	0	0	5	6	0.8
Norovirus	0	0*	5	11*	0.4
Pertussis (Whooping Cough)	51	28	712	195	3.5
Salmonellosis (Salmonella)	21	25	239	227	1.0
Shigellosis (Shigella)	13	6	65	41	1.4
Varicella (Chickenpox)	118	47*	700	419*	1.4
Viral Meningitis	16	25	70	145	0.4
West Nile (Human cases/Equine cases)†	6 / 3	1 / 4*	158 / 59	21 / 36	7.4 / 1.6
Notifiable Diseases Reported Quarterly, 3rd Qtr 2006	Current Quarter # Cases	Current Quarter # Expected Cases (5-yr average)	# Cases YTD	# Expected YTD (5-yr average)	YTD Standard Morbidity Ratio (obs/exp)
HIV	20	19	130	60	2.2
AIDS	13	12	50	38	1.3
Chlamydia	1,348	1,042	3,717	2,577	1.4
Gonorrhea	190	128	623	316	2.0
Tuberculosis	8	12	25	27	0.9
Program Enrollment for the Month of October 2006	Current Month	Previous Month	% Change ^s From Previous Month	1 Year Ago	% Change ^s From 1 Year Ago
Medicaid	165,357	168,196	-1.7%	177,992	-7.1%
PCN (Primary Care Network)	17,372	17,093	+1.6%	15,476	+12.3%
CHIP (Children's Health Ins. Plan)	35,270	35,180	+0.3%	33,263	+6.0%

Medicaid Expenditures (in Millions) for the Month of October 2006	Current Month	Expected/Budgeted for Month	Fiscal YTD	Budgeted Fiscal YTD	Variance - over (under) budget
Capitated Mental Health	\$ 5.52	\$ 7.72	\$ 38.45	\$ 40.66	(\$ 2.2)
Inpatient Hospital	\$ 13.96	\$ 14.76	\$ 47.34	\$ 48.14	(\$ 0.8)
Outpatient Hospital	\$ 6.06	\$ 5.55	\$ 21.26	\$ 20.75	\$ 0.5
Long Term Care	\$ 14.85	\$ 14.53	\$ 57.16	\$ 56.84	\$ 0.3
Pharmacy	\$ 9.62	\$ 10.72	\$ 39.32	\$ 40.42	(\$ 1.1)
Physician/Osteo Services	\$ 4.54	\$ 4.78	\$ 20.39	\$ 20.63	(\$ 0.2)
TOTAL HCF MEDICAID	\$ 106.58	\$ 120.26	\$ 422.93	\$ 436.60	(\$ 13.7)
Health Care System Measures	Number of Events	Rate per 100 Population	% Change ^s From Previous Year	Total Charges in Millions	% Change ^s From Previous Year
Overall Hospitalizations (2005)	268,652	10.0%	-1.3%	\$ 3,501.7	+8.6%
Non-maternity Hospitalizations (2005)	161,474	5.8%	-1.6%	\$ 2,914.5	+8.2%
Emergency Department Encounters (2004)	627,078	24.2%	-4.2%	\$ 456.6	+14.7%
Outpatient Surgery (2004)	303,123	11.7%	+6.0%	\$ 845.3	+15.6%
Annual Community Health Measures	Current Data Year	Population at Risk	Number Affected	Percent/Rate	% Change ^s From Previous Year
Overweight and Obesity (Adults 18+)	2005	1,740,474	942,900	54.2%	-3.9%
Cigarette Smoking (Adults 18+)	2005	1,740,474	200,600	11.5%	+9.7%
Influenza Immunization (Adults 65+)	2005	212,582	148,300	69.7%	-7.6%
Health Insurance Coverage (Uninsured)	2005	2,528,926	292,800	11.6%	+13.5%
Motor Vehicle Crash Injury Deaths	2005	2,528,926	292	11.6 / 100,000	-4.5%
Suicide Deaths	2005	2,528,926	344	13.6 / 100,000	-11.1%
Diabetes Prevalence	2005	2,528,926	104,200	4.1%	+8.7%
Coronary Heart Disease Deaths	2005	2,528,926	1,567	62.0 / 100,000	-4.6%
All Cancer Deaths	2005	2,528,926	2,512	99.3 / 100,000	+0.4%
Births to Adolescents (Ages 15-17)	2005	58,374	917	15.7 / 1,000	+5.8%
Early Prenatal Care	2005	51,517	40,587	78.8%	+1.0%
Infant Mortality	2005	51,517	231	4.5 / 1,000	-13.3%
Childhood Immunization (4:3:1:3:3)	2005	50,043	37,100	74.1%	+3.9%

* Due to limited historical data, the average is based upon 3 years of data for norovirus, varicella, and West Nile virus infections.
 § % Change could be due to random variation.

Note: Active surveillance has ended for influenza until the 2006 season.