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OREGON PUBLIC HEALTH DIVISION • OREGON HEALTH AUTHORITY

OUT-OF-HOSPITAL BIRTHS IN OREGON – 2012

During the course of the 20th century, childbearing practices changed considerably in the United States. In 1940, 44% of births occurred out of hospital; this proportion had declined to 1% by 1970, a figure which has remained pretty stable since. The proportion of births that occur out of hospital varies by geography; Oregon ranks among the top 10 U.S. states in the percentage of births that occur out of hospital.[1]

In order to accurately assess the number of out-of-hospital births (e.g., at a freestanding birthing center or home), the 2011 Oregon Legislature passed HB 2380. This bill required the Public Health Division to collect data on the birth certificate on planned place of birth and planned birth attendant type, and report annually on the outcomes of these births. In addition, for 2012, we conducted a special study of deaths in full-term infants whose mothers intended to deliver out of hospital. This *CD Summary* presents key findings from these analyses.*

DEFINITIONS

New birth certificate questions. The specific questions added to the birth certificate were: "Did you go into labor planning to deliver at home or at a freestanding birthing center? If yes, what was the planned primary attendant type at the onset of labor?"

Place of Birth. Oregon mothers give birth in hospitals, hospital-affiliated birthing centers, freestanding birthing centers, home, and even beneath the pine trees. Hospitals and birthing centers are considered healthcare facilities and are licensed and regulated as such; home settings are not. For example, birthing centers are restricted from performing certain high-risk births (e.g., multiple gestations, breech presentation);† home settings are not.

Birth Attendants. Several provider types deliver babies in Oregon. These include: Medical Doctors (MDs), Doctors of Osteopathic Medicine (DOs), Naturopathic Doctors (NDs), Certified Nurse midwives (CNMs), Direct Entry midwives (DEMs), and other (unlicensed) midwives. CNMs are registered nurses licensed by the Oregon Board of Nursing who have passed a national professional certification examination. DEMs are independent practitioners educated in the discipline of midwifery through self-study, apprenticeship, a midwifery school, or a university-based program (distinct from nursing), and may be licensed or unlicensed in Oregon. "Other midwife" (e.g., traditional midwife, granny midwife) includes uncertified midwifes with informal training (e.g. self-study or apprenticeship). As of January 1, 2015, all providers must be licensed, except for a very few traditional midwives.‡

Perinatal Deaths. For the perinatal death study, we reviewed birth and death certificates and medical charts for term fetal (≥37 weeks' gestation) and early neonatal (first 6 days of life) deaths among planned out-of-hospital births. This perinatal mortality review was conducted per national guidelines (*www.nfimr.org*).

FINDINGS

During 2012, 42,011 live term births occurred in Oregon. Of these 2,021 (4.8%) were planned as an out-of-hospital birth. Planned birth attendant type varied by place of birth. Whereas the majority of births planned in-hospital were delivered by MDs and DOs, none of the planned out-of-hospital births had MDs and DOs as the planned birth attendant (Table 1, *verso*). CNMs were the planned attendant in both in-hospital and out-of-hospital births; however, DEMs, and NDs were planned birth attendants only for women who planned to deliver out of hospital. Of note: 379 of 2,021 (18.8 %) planned out-of-hospital births ultimately delivered in-hospital; 24 of the remaining 1,642 (1.5%) out-of-hospital births required neonatal transfer.

Maternal Characteristics. Compared to women who planned in-hospital births, women who planned to deliver out of hospital were *more* likely to be:

- Older (57.2% vs. 42.5% aged ≥30 years)
- White, non-Hispanic (87.7% vs. 67.7%)
- Married (82.1% vs. 64.3%)
- College-educated (45.9% vs. 29.0%)
- Self-pay delivery (28.2 % vs. 1.0%).

They were *less* likely to be:

- Overweight or obese (32.3% vs. 49.1%)
- Smokers (2.1% vs. 10.6%).

Medical Care. Women who planned out-of-hospital births were *more* likely to have no prenatal care (2.8% vs. 0.4%) or inadequate prenatal care (9.8% vs. 4.8%), and *less* likely to begin prenatal care in the first trimester (63.6% vs. 76.6%). Women who planned out-of-hospital births also tended to have lower rates of medical intervention including:

- Epidural/Spinal Anesthesia (11.4% vs. 70.4%)
- Vacuum-assisted delivery (0.8% vs. 2.7%)
- Primary Cesarean delivery (5.9% vs. 16.1%)
- Testing for Group B streptococcal infection (81.5% vs. 97.2%).

PERINATAL DEATHS

Sixty-two term fetal and 30 early neonatal deaths occurred in Oregon during 2012; of these, 8 (4 fetal, 4 early neonatal) occurred among planned out-of-hospital births. The term perinatal mortality rate§ for planned out-of-hospital births (4.0/1,000 pregnancies) was nearly twice that of in-hospital births (2.1/1,000). Among these 8, the median gestational age was 41 weeks (range: 38–42.6 weeks); and the median birth weight was 3515 grams (1927–4835 grams). County of residence was equally split between metro and non-metro counties. Review of prenatal care showed that 2

* The complete report is available at *http://public.health.oregon.gov/BirthDeathCertificates/VitalStatistics/birth/Pages/planned-birth-place.aspx*.

† OAR 333-076-0650 Birthing Centers Service Restrictions, Tables I, II, III.

‡ HB 2997

§ Term perinatal mortality rate = (fetal deaths + early neonatal deaths) / (fetal deaths + live births) x 1,000.

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pregnancies had inadequate or no prenatal care, 4 mothers declined prenatal ultrasound, 5 mothers declined Group B streptococcal (GBS) testing, and 2 mothers declined intrapartum GBS prophylaxis for positive test results.

Canada and Netherlands have established eligibility criteria for out-of-hospital births,[2,3] and the American College of Obstetricians and Gynecologists recommends that women planning out-of-hospital births be "lower risk:" gestational age 36–41 weeks, singleton, vertex position, and absence of preexisting or pregnancy-related maternal disease.[4] However, 6 of 8 of the Oregon pregnancies did not meet these low risk criteria. These pregnancies included: >41 weeks gestation (4); twin gestation (2); morbid obesity (>40 BMI) (1). Planned attendants among these 6: CNMs (1), licensed DEMs (3), unlicensed midwife (1), and ND (1).

Causes of death and major contributing factors included (≥1 may apply):

- Hypoxic ischemic encephalopathy or cardiorespiratory failure (3)
- Chorioamnionitis (3)
- Pre-existing, or pregnancy-related maternal disease (2)
- Respiratory failure, amniotic fluid (1)
- Undetermined, umbilical cord wrapped around neck, large baby (1)
- Undetermined, twin gestation, small baby (2)

COMMENT

A mother's autonomy in deciding where and by whom she gives birth is balanced by a responsibility to provide a safe birth for the child. Mothers may choose out-of-hospital births because they believe that their birth will be less medicalized, and more personalized. Others argue that it is precisely *because* of medical advances that mothers can safely deliver out-of-hospital: ultrasound to determine good placental placement and congenital anomalies; blood tests to determine Rh factor incompatability and gestational diabetes; access to emergency medical transportation and neonatal resuscitation, when needed, to name a few.

Successful home birth movements in other countries have been the result of professional midwife education, established midwife-obstetrician communication and complementary scope of practice, risk determination to identify pregnancies eligible for home birth, and clear guidelines on when to increase the level of care.

Birth, death. Add, substract.
Bookends counted carefully—
Yet middle myst'ry remains.

Table. Live term births by planned place of birth and planned birth attendant, Oregon, 2012

Planned Birth Attendant[1]	Term Births				
	Total[2]	Planned Hospital	Planned Out-of-Hospital		
			Total	Intrapartum Transfer to Hospital	Neonatal Transfer
State Total	42,011	39,990	2,021	379	24
MDs and DOs	33,030	33,030	0	0	0
Certified Nurse Midwives	7,319	6,819	500	202	3
All Direct-Entry Midwives	1,249	0	1,249	147	17
(Licensed)	1,052	0	1,052	85	16
(Unlicensed)	197	0	197	62	1
Naturopathic physicians	219	0	219	22	1
Other	194	141	53	8	3

1. For planned hospital births, actual attendant is used. For planned out-of-hospital births with intrapartum transfer to hospitals, planned attendant type is reported by mother and not verified.
2. Total excludes 79 term births that occurred en route, were unplanned home births, or other out-of-hospital births not otherwise characterized.

REFERENCES

1. MacDorman MF, Menacker F, Declercq E. Trends and characteristics of home and other out-of-hospital births in the United States, 1990–2006. Natl Vital Stats Rep 2010; 58: 1–15. Available at: www.cdc.gov/nchs/data/nvsr/nvsr58/nvsr58_11.PDF
2. Janssen PA, Saxell L, Page LA, Klein MC, Liston RM, Lee SK. Outcomes of planned home birth with registered midwife versus planned hospital birth with midwife or physician. CMAJ 2009; 181:377–83.
3. De Jonge A, Van der Goes BY, Ravelli ACJ, Amelink-Verburg MP, Mol BW, Nijhuis JG, Bennebroek Gavenhorst J, Buitendijk SE. Perinatal mortality and morbitiy in a nationwide cohort of 529,688 low-risk planned home and hospital births. BJOG 2009;116:1177–84.
4. Planned home birth. Committee Opinion No. 476. American College of Obstetricians and Gynecologists. Obstet Gynecol 2011;117:425–8.

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