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# Out-of-Hospital Births in Oregon

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PUBLIC HEALTH DIVISION  
Maternal and Child Health Section

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# Presentation Outline

- **Background**
  - Where do births happen in Oregon and who attends these births?
  - Do birth place and attendant matter?
- **Public Health Division Report on 2012 Births**
  - Pursuant to 2011 Legislation (HB2380)
  - Perinatal case fatality review
- **Public health considerations**

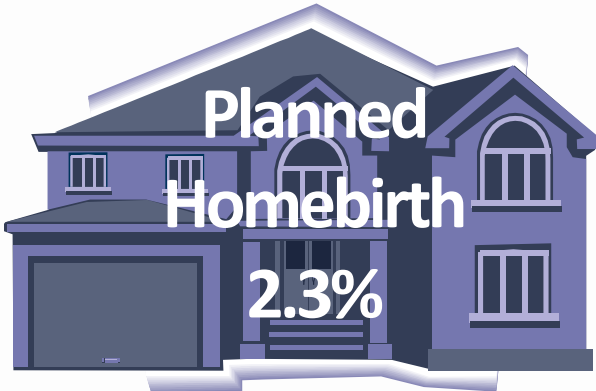
# Where do births in Oregon occur?



**Hospital**  
**96.2%**



**Freestanding  
Birth Center**  
**1.3%**



**Planned  
Homebirth**  
**2.3%**

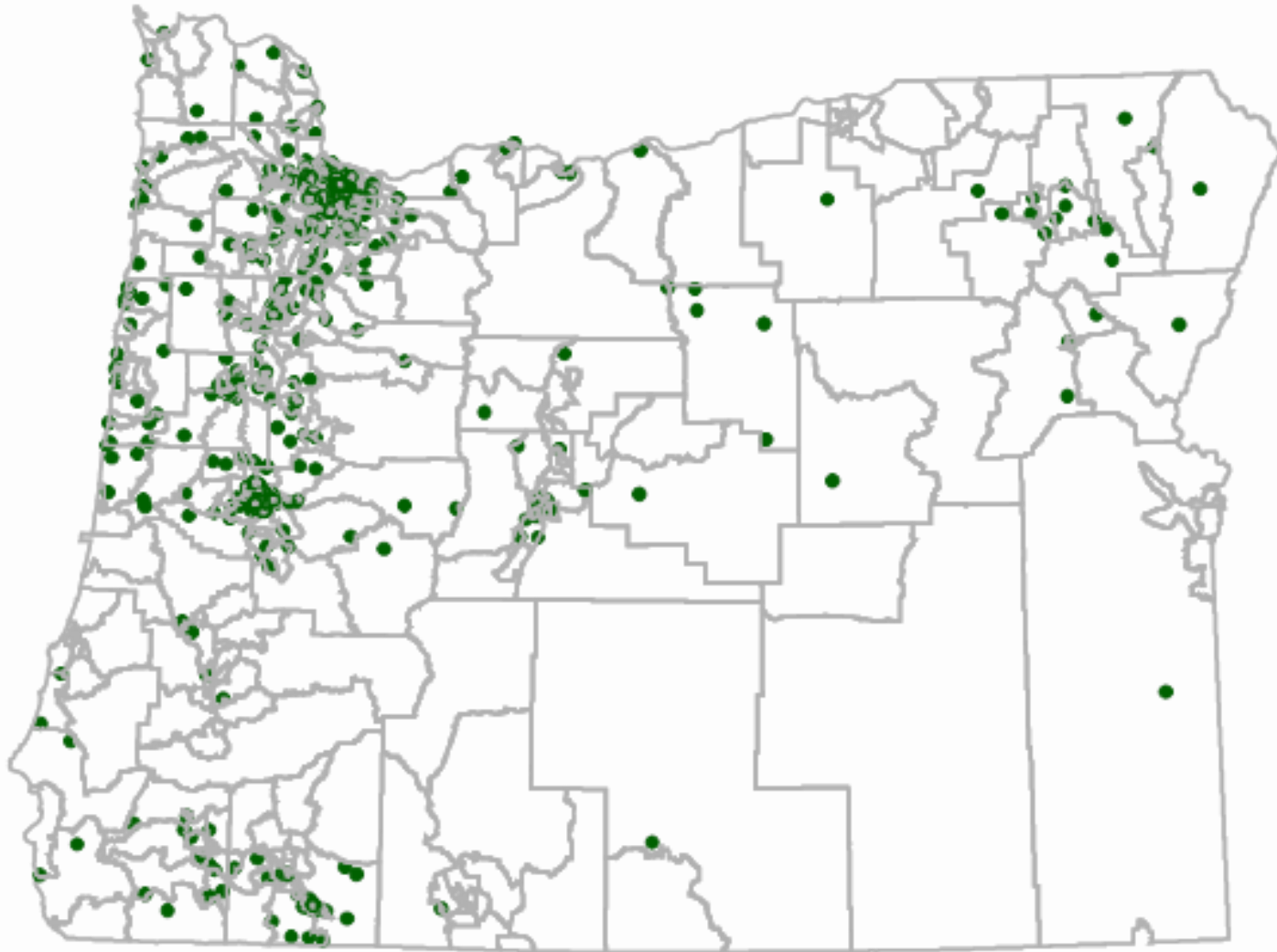


**Other**  
**0.2%**

# Percent of Out-of-Hospital Births

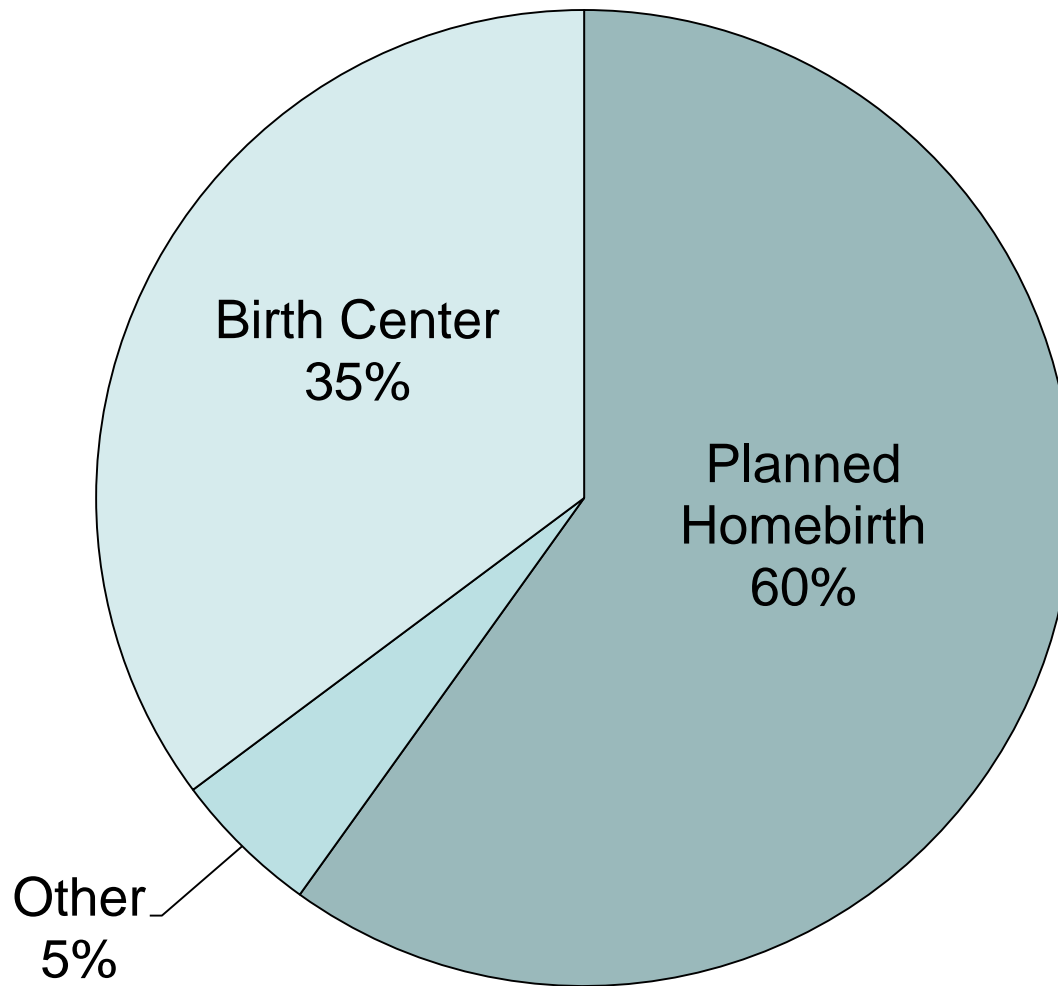


# Out of Hospital Births in Oregon, 2012



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# Out-of-Hospital Births, Oregon, 2012



# Who attends Oregon Births?

## 2012 Oregon Occurrence Births by Attendant Type

Planned Attendant Type	Total Births (#)	Total Births (%)
State Total	45,566	100%
MDs & DOs	36,269	80%
Certified Nurse Midwives	7,521	17%
Licensed Direct-Entry Midwives	1,075	2%
Unlicensed Direct-Entry Midwives	200	<1%
Naturopathic Physicians	221	<1%
Other	280	<1%

# Midwives in Oregon

CERTIFIED NURSE	DIRECT-ENTRY
Masters Degree	None High-school diploma Certificate of Midwifery
RN License	Voluntary Licensing
Hospitals, birthing centers, home	Birthing centers, home
CNM	Licensed (LDEM) Unlicensed (DEM)



# Do Birth Place and Birth Attendant matter?

"Bring  
Birth  
Home"



"Home  
delivery is  
for pizza."



# Literature

- “Midwives who were integrated into the [Canadian] health care system with good access to emergency services, consultation, and transfer of care provided care resulting in favorable outcomes for women planning both home or hospital births.” (Hutton, 2009)
- “Planned home birth for low risk women in North America using certified professional midwives was associated with lower rates of medical intervention but similar intrapartum and neonatal mortality to that of low-risk hospital births in the US.” (Johnson, 2000)
- “Less medical intervention during planned home birth is associated with a tripling of the neonatal mortality rate.” (Wax, 2010)

# Why are out of hospital births difficult to study?

- Small numbers
- Difficult to differentiate between planned and unplanned homebirths using vital statistics data
- Difficult to capture OOHB that transfer to hospitals

# Legislative Session 2011: HB 2380

Two new questions are added to the birth and fetal death certificates effective January 1, 2012.

- 1) Did mother go into labor planning to deliver at home or at a freestanding birthing center?
- 2) If yes, the planned primary attendant type at onset of labor was:

In addition, the Public Health Division was required to report on outcomes annually.

# 2012 Report Objectives

1. Describe maternal characteristics and birth outcomes by planned birth place
  - Who, what, where?
2. Identify neonatal deaths and fetal deaths by planned place of birth
  - Perform special perinatal fatality review among out-of-hospital births

# 2012 Report Methods, Objective #1

- Data: 2012 Birth Certificates
- Population: Oregon occurrence
- *Term* live births at  $\geq 37$  weeks gestation

# 2012 Report, Objective #1

- 42,011 live term births
- 2,021 (5%) were planned out of hospital births
  - 379 of those 2,021 (19%) ultimately delivered in hospital
- Planned birth attendant type varied by place of birth

# Maternal Characteristics by Planned Place of Birth, 2012 Births

<b>Maternal Characteristics, 2012 Births</b>	<b>Hospital</b>	<b>Planned OOH</b>
Mother's Age 30+	43%	57%
White, non-Hispanic	68%	87%
Married	64%	83%
College Educated	29%	46%
Self-pay	1%	28%



# Maternal Characteristics by Planned Place of Birth, 2012 Births

Maternal Characteristics, 2012 Births	Hospital	Planned OOH
Overweight/Obese	49%	32%
Tobacco	11%	2%
Gestational Diabetes	7%	2%
Gestational Hypertension	6%	1%

# Maternal Characteristics by Planned Place of Birth, 2012 Births

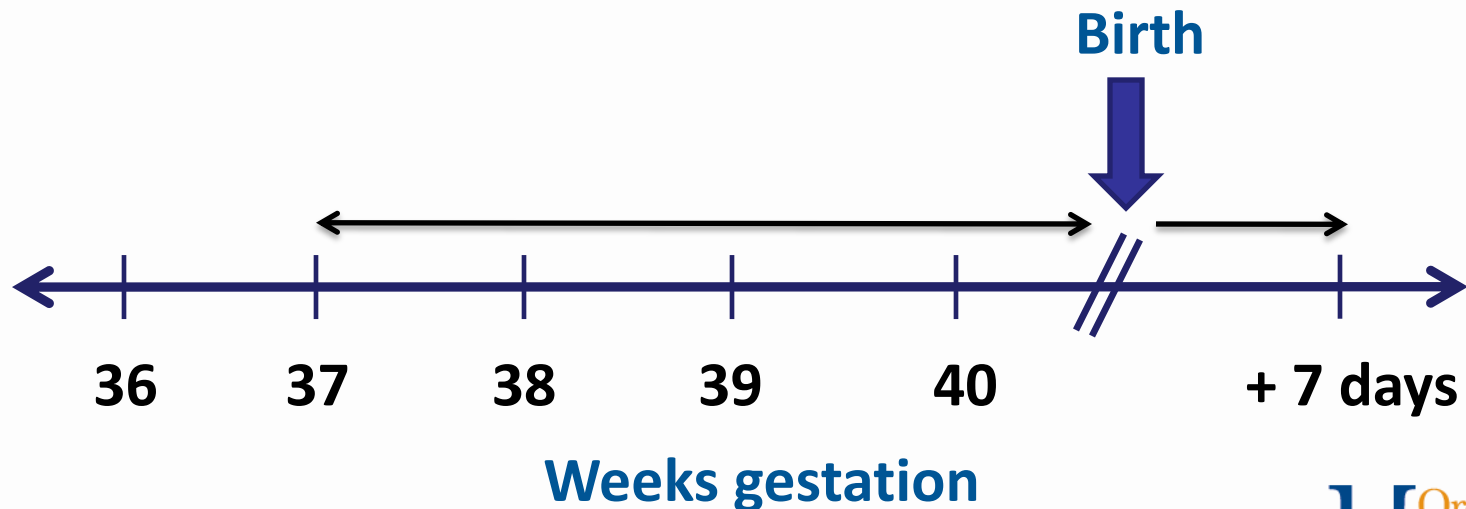
<b>Maternal Characteristics, 2012 Births</b>	<b>Hospital</b>	<b>Planned OOH</b>
Group B Streptococcal Test	97%	82%
First Trimester Prenatal Care	77%	64%
Adequate Prenatal Care	95%	90%

# Medical Characteristics by Planned Place of Birth, 2012 Births

<b>Medical Characteristics and Outcomes, 2012 Births</b>	<b>Hospital</b>	<b>Planned OOH</b>
Induction/Augmentation of Labor	47%	12%
Epidural/Spinal Anesthesia	70%	11%
Vacuum Assisted Vaginal Birth	3%	1%
Primary Cesarean	16%	6%

## 2012 Report Methods, Objective #2

- Data: 2012 Birth, Fetal Death, & Death Certificates; medical charts
- Population: Oregon occurrence
- *Term* fetal deaths and *term* live births at  $\geq 37$  weeks gestation up to 6 days after birth



# 2012 Neonatal Deaths and Fetal Deaths by Planned Place of Birth

- In 2012 there were 92 *term* fetal deaths and *term* early neonatal deaths
  - 84 were planned hospital births (2.1 per 1,000)
    - 58 term fetal deaths
    - 26 term early neonatal deaths
  - 8 were planned OOH births (4.0 per 1,000)
    - 4 term fetal deaths
    - 4 term early neonatal deaths

# 2012 Neonatal Deaths and Fetal Deaths by Planned Place of Birth

Cause of Death, 2012 Term Fetal and Early Neonatal Deaths	Hospital	Planned OOH
Total rate per 1,000	2.1	4.0
Circulatory System Diseases (I00-I99)	<0.1	0.0
Perinatal Conditions (P00-P96)	0.8	1.5
Congenital Malformations (Q00-Q99)	0.3	0.0
Symptoms & Signs NOC (R00-R99)	0.9	2.5
External Causes (V01-Y89)	<0.1	0.0

# Perinatal Fatality Case Review

4 term fetal deaths  
4 term neonatal deaths

# Perinatal Fatality Case Review

- 6 of 8 pregnancies did not meet low-risk criteria
  - More than 41 weeks gestation (4)
  - Twin gestation (2)
  - Morbid obesity (>40 BMI) (1)



# Perinatal Fatality Case Review

- 2 pregnancies had inadequate or no prenatal care
- 4 mothers declined prenatal ultrasound
- 5 mothers declined Group B streptococcal (GBS) testing
- 2 mothers declined prophylaxis during labor for GBS positive tests

# Perinatal Fatality Case Review

- 6 of 8 transferred to the hospital during labor
  - Indications for transfer from home or birthing center included
    - loss of fetal heart tones (3)
    - prolonged labor (2)
    - decreased fetal movement (2)
    - malpresentation (2)

# Perinatal Fatality Case Review

- Causes of death and major contributing factors
  - Hypoxic ischemic encephalopathy or cardiorespiratory failure (3)
  - Chorioamnionitis (3)
  - Pre-existing, or pregnancy-related maternal disease (2)
  - Respiratory failure (1)
  - Undetermined, umbilical cord wrapped around neck, large baby (1)
  - Undetermined, twin gestation, small baby (2)

# 2012 Report Summary

- Women in Oregon are choosing home birth
  - 5% of births planned out-of-hospital
- Women's preference determined prenatal screening
- Fatality Review found 6 of 8 pregnancies among women planning out-of-hospital births did not meet low-risk criteria

# AUTONOMY

# SAFETY

# Public Health Considerations

- Professional midwife education and training
- Public awareness (informed consent or refusal)
- Appropriate risk stratification and referral guidelines
- Communication between in- and out-of-hospital care providers

# Acknowledgements

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- [Hutton EK, Reitsma AH, Kaufman K.](#) Outcomes associated with planned home and planned hospital births in low-risk women attended by midwives in Ontario, Canada, 2003-2006: a retrospective cohort study. [Birth.](#) 2009 Sep;36(3):180-9.

# ACOG Committee Opinion on Planned Home Birth

February 2011, Reaffirmed 2013

“Although the Committee on Obstetric Practice believes that hospitals and birthing centers are the safest setting for birth, it respects the right of a woman to make a medically informed decision about delivery. Women inquiring about planned home birth should be informed of its risks and benefits based on recent evidence.”

# APHA Policy Statement

January 2001

“Supports efforts to increase access to out-of-hospital maternity care services and increase the range of quality maternity care choices available to consumers...”