



# **OUTCOMES OF COMMUNITY CLINIC-BASED DELIVERIES IN A WISCONSIN AMISH COMMUNITY**



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# Background

- Amish culture and customs
- Amish approach to health care
- The Amish and childbirth
- LaFarge Birthing Center

# The Amish



# Amish culture and customs

- Wear plain clothes
- Do not own cars, telephones, or use electricity
- Most have farming and/or trade occupations
- No education past 8<sup>th</sup> grade
- Marry within the Amish community
- Strong disapproval of having children out of wedlock (low teen pregnancy rate)
- Use of birth control and abortion prohibited
- Most women have many children (mean=7-8)

# Amish approach to healthcare

- ❑ Do not have health insurance
- ❑ Do not participate in government programs
- ❑ Seek care that will minimize cost
- ❑ Do not sue for medical malpractice
- ❑ Little focus on preventive medicine
- ❑ Ability to eat and do work = healthy
- ❑ Many children not immunized
- ❑ Reliance on alternative medicine and herbal remedies

# The Amish and Childbirth

- Risk factors include:
  - Short birth intervals
  - More births to older women
  - Grandmultiparity
  - High-fat, high-sugar diet
  - Obesity
  - Psychologic stress
  - Lack of medical insurance
  - Few prenatal visits
  - Initiate prenatal care late, especially with increasing parity
  - High rate of at-home births attended only by laymidwives

# The Amish and Childbirth

- Benefits include:
  - Low use of cigarettes and alcohol
  - Low teen pregnancy rate
  - Role of mother highly valued
  - Extensive social network for informational and emotional support

# The LaFarge Birthing Center

- Established in 1993 as an alternative to home or hospital birth
- Located in Western Wisconsin
- 16 miles from nearest hospital – Vernon Memorial Hospital in Viroqua, WI
- Provides 24 hour per day obstetrical services
- Staff includes two family practice physicians and a physician's assistant/midwife





**LaFarge**  
Medical Clinic-VMH

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# Study Objective

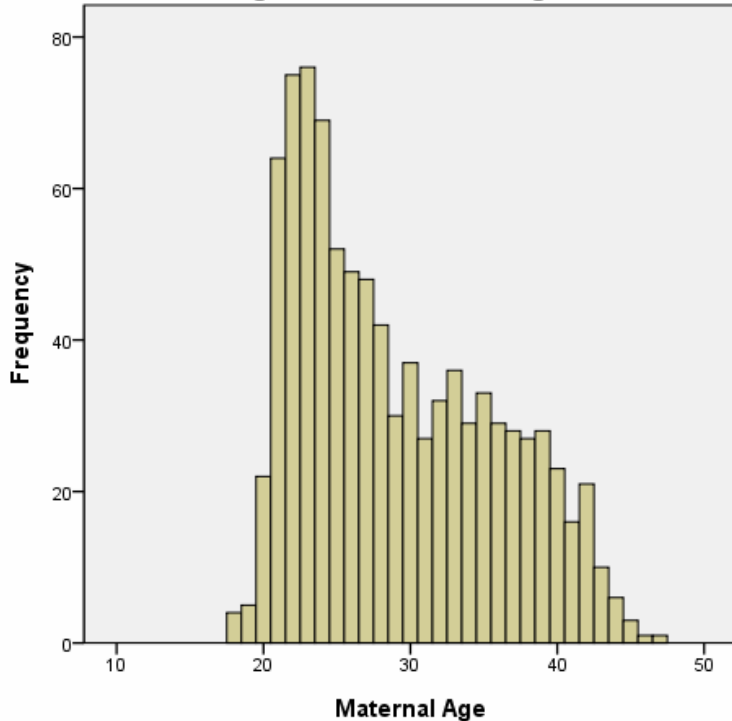
- To examine birth experience and maternity care outcomes at a clinic specializing in management of Amish women with high-risk pregnancies

# Methods

- Review of literature on Amish culture and use of health care
- Examined hand-written records of 938 Amish and Mennonite deliveries from 1993-2010
- Outcome measures included maternal and fetal outcomes and complications, mode of delivery, number of prenatal visits, infant weight, APGAR scores, and use of labor augmentation

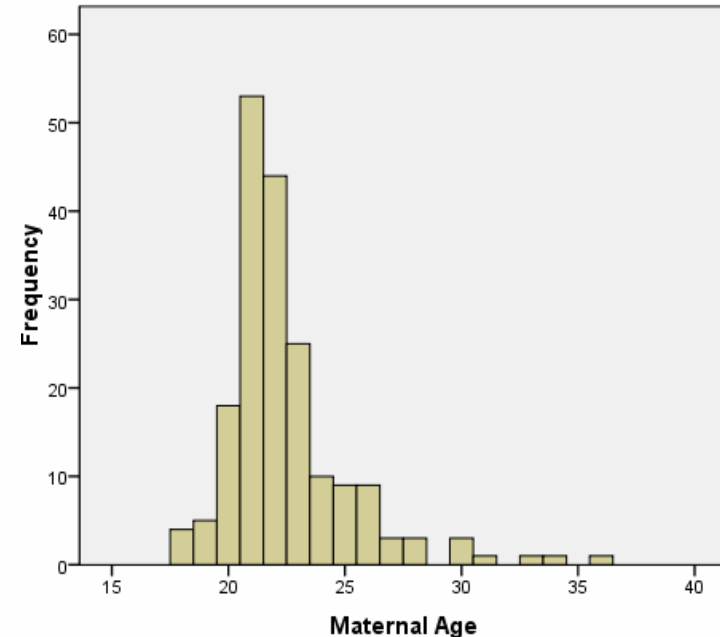
# Maternal Demographics

Age of Women Delivering at Birth Center



Mean =29.03  
Std. Dev. =6.665  
N =923

Age if first birth



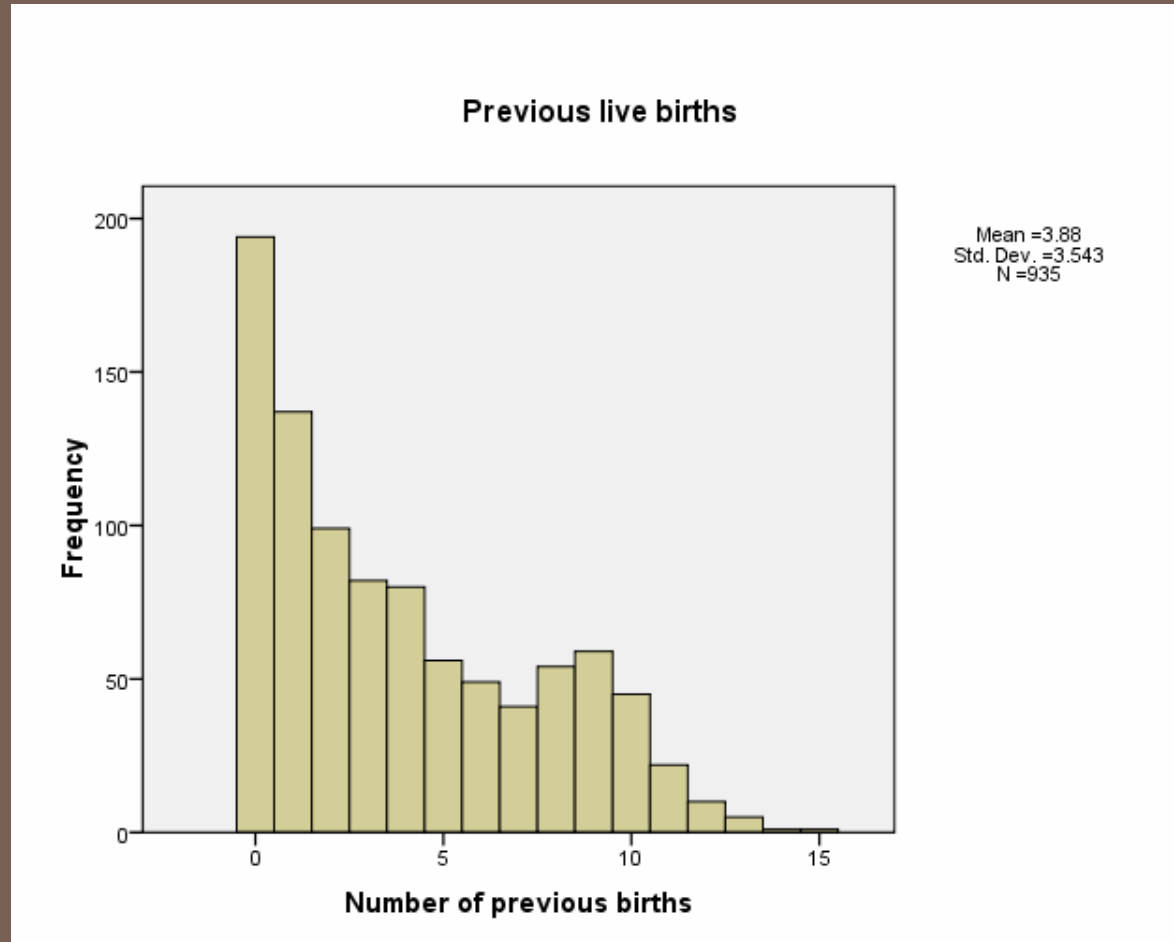
Mean =22.48  
Std. Dev. =2.719  
N =190

Mean age of women  
delivering at clinic = 29  
years

Mean age at first birth  
= 22.5 years

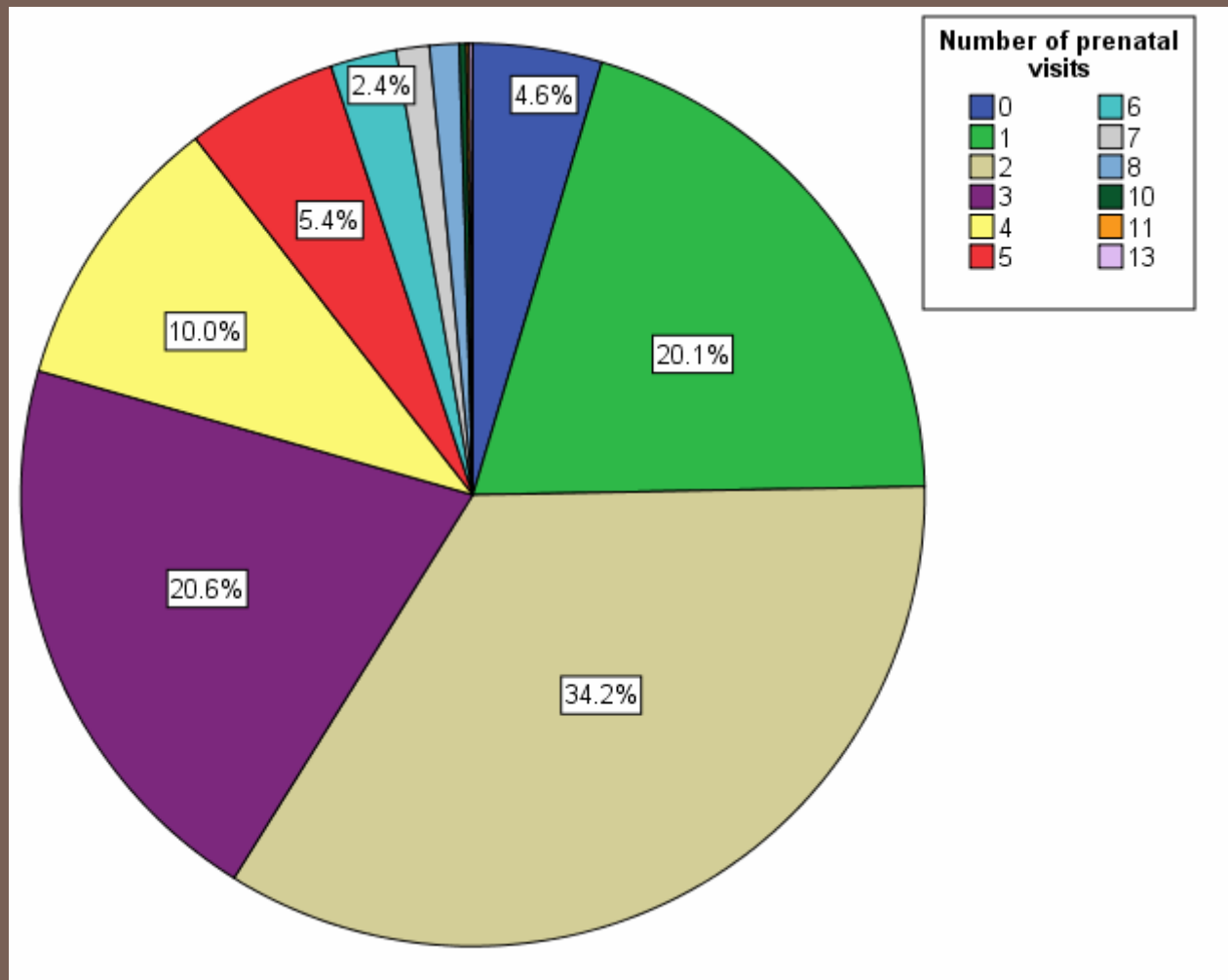
# Maternal Demographics

- This was first live birth for 21% of moms and second birth for 15%
- Mean number of previous births was 3.9 (median is 3)
- 25% of women had 7 or more previous live births



# Use of Prenatal Care

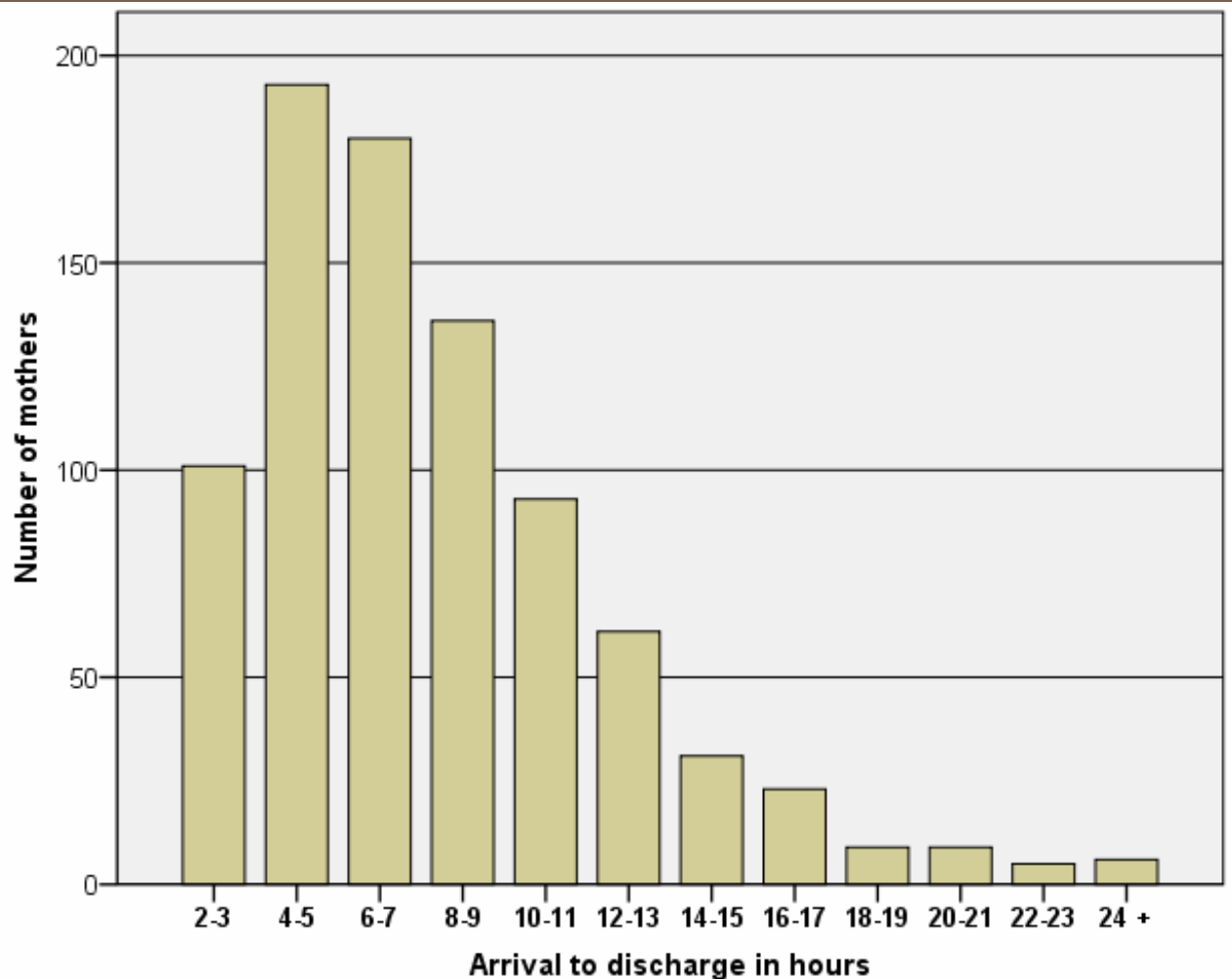
- Mean number of prenatal visits  $\approx 2.5$
- Most women in the US have 10-15 prenatal visits



# Time spent in the birth center from arrival to discharge

- Average time from delivery to discharge  $\approx$  2.5 hours

- Most women in the US stay in the hospital 24-48 hours after a normal vaginal delivery



# Transfer In and Hospital Transfers

- 88 patients (9.5%) transferred to birth center after unsuccessful home birth attempt
  - 90% of these patients had a successful vaginal delivery at the birth center.
- 7.6% of patients transferred from birth center to hospital due to malpresentation, failure to progress, preeclampsia, postpartum hemorrhage, etc.
  - Of the 69 malpresentations encountered at the birth center, 45 went on to deliver in the clinic (65%)

# Perinatal Deaths

- Perinatal death = fetal deaths + neonatal deaths
  - Fetal deaths:  $\geq 20$  weeks gestation and death before delivery
  - Neonatal deaths: live at birth but death  $< 28$  days
- Clinic rates
  - 15 fetal deaths (16.2/1000); 5 neonatal deaths (5.4/1000); total of 20 out of 938 births (21.3 per 1000)
- Wisconsin 2008 rates
  - Fetal death rate 5.3/1000; neonatal death rate 4.6/1000; total 9.9/1000

# Results

- 42 postpartum hemorrhages (4.5% of all births)
  - Four transferred to hospital
- 3.9% of births resulted in a cesarean section
- 8.7% of all births were Vaginal Births after Cesarean (VBACs)
  - 88 out of 92 (95.6%) primary and non-primary VBACs were successful

# Conclusions

- Positive maternal and fetal outcomes in a low-cost, low-technology setting
- Low cesarean rate and high VBAC rate with few complications is informative to all birthing settings
  - ▣ US Cesarean section rate is ~33%
  - ▣ Only ~8% of women in US who have had a prior c-section go on to have a successful vaginal birth
- LaFarge Birthing Center can serve as a model for other centers within other Amish communities and in settings within and outside the US with limited access to medical services and technology

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