

Poverty Among Oklahoma Women Delivering a Live Birth: A Socio-Demographic Profile

Poverty has been recognized as influencing the health of individuals and social systems for well over 150 years.¹ It has been shown that societies with increased poverty have higher rates of morbidity and mortality.¹ Individual and familial poverty have also been shown to decrease life expectancy and increase morbidity.¹ For example, the 1988 National Maternal and Infant Health Survey found the infant mortality rate was 60% higher and the post-neonatal mortality rate was twice as high among women living in poverty as those women living above the poverty level.² Furthermore, increased poverty has been associated with increased rates of low birth weight, pre-term births and hospitalization.^{3,4,5} For instance, the National Survey of Family Growth found 7.7% of single live births to women living below the poverty level were low birth weight, compared to only 6.2% of those with a higher income.⁵ Additionally, lower socioeconomic status is associated with other known risk factors for adverse pregnancy outcomes.⁴ Poverty is clearly an important health issue for the maternal and child population of Oklahoma.

In 1995, 13.8% of the United States population lived in poverty, while 17.1% of Oklahomans lived in poverty.⁶ Only five states and the District of Columbia had a higher percentage of persons living in poverty than Oklahoma.

This report was produced in recognition of the importance of poverty as a risk factor for poor health outcomes and the need for information on poverty among the special population of pregnant women and infants in Oklahoma. The goal of this report is to describe the poverty status of women giving birth in Oklahoma. The seriousness of the problem and the volume of data warranted dividing the analysis of poverty and pregnancy in Oklahoma into two parts. Part one is a descriptive report and focuses on presenting the extent and magnitude of poverty in this specific Oklahoma population. Thus, this issue provides a baseline for future studies as well as for targeting issues known to be associated with poverty and populations at high risk of pov-

erty. The second part, a PRAMS-Gram to follow, entitled *Poverty Among Oklahoma Women Delivering a Live Birth: Relationships to Birth Outcomes, Life Events, and Prenatal Care*, will discuss some of the outcomes, behaviors, and stresses associated with poverty.

Background

The Federal Poverty thresholds were defined in 1964 as three times the cost of the U.S. Department of Agriculture's 1961 Economy Food Plan.³ These thresholds are updated annually by the Census Bureau and are maintained for statistical purposes. The Federal Poverty Guidelines are a simplified version of the poverty thresholds and are used for administrative purposes. The Department of Health and Human Services (HHS) issues the Federal Poverty

In Oklahoma

Among women with a recent live birth in Oklahoma...

- One-third (32%) of women live below 100% of the Federal Poverty Level.
- Three in five (60%) women live below 185% of the Federal Poverty Level.
- Sixty-one percent of African-American women live below 100% of the Federal Poverty Level compared to 28% of white women.
- Over 60% of women age 19 or younger live below 100% of the Federal Poverty Level compared to less than 20% of women age 30-34.
- Over 65% of women age 19 or older with eight or fewer years of education live below 100% of the Federal Poverty Level compared to only 6% of women with 16 or more years of education.
- Twenty percent of women with incomes from a job or business live below 100% of the Federal Poverty Level.
- Forty-four percent of women living below 100% of the Federal Poverty Level had an income from a job or business.

Guidelines each year. The guidelines show the upper income limits for families of various sizes defined as living in poverty (Figure 1). Many state and federal programs, however, use the Federal Poverty Level to determine eligibility for benefits. For example, the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) financial eligibility level is 185% of the Federal Poverty Level, Oklahoma Medicaid eligibility is at 185% (effective December 1, 1997) for pregnant women and children born on or after October 1, 1983, and Food Stamps are available for those below 133% of the Federal Poverty Level. To calculate income limits at 185% of the Federal Poverty Level, the income guidelines listed in Figure 1 are multiplied by 1.85; for example, a family of four with an income below \$29,693 lives below 185% of the Federal Poverty Level.

Figure 1 1997 HHS Federal Poverty Guidelines

Size of Family Unit	48 Contiguous States and D.C.	Alaska	Hawaii
1	\$7,891	\$9,870	\$9,070
2	10,610	13,270	12,200
3	13,330	16,670	15,330
4	16,050	20,070	18,640
5	18,770	23,470	21,590
6	21,490	26,870	24,720
7	24,210	30,270	27,850
8	26,930	33,670	30,980
For each additional person add...	2,720	3,400	3,130

Despite the importance of income and poverty level as indicators for both benefit packages and adverse health outcomes, U.S. birth and death certificates do not routinely collect this information. This analysis will use data from the Oklahoma Pregnancy Risk Assessment Monitoring System (PRAMS) to examine the poverty level of women delivering a live birth in Oklahoma between April 1988 and March 1995.

Methods

Poverty level in the PRAMS data set is determined using two questions. The first question asks the family's monthly income. The second question asks for information on the number of adults and children in the household.

Each woman's poverty level was determined based on the Federal Poverty Guidelines of the year of her delivery. Annual income was determined by multiplying the average monthly income by 12. Poverty Level was based on income at the time the woman

became pregnant. Household size was measured at the time the questionnaire was completed. For the purpose of calculating Federal Poverty Level, the family size at the time the woman became pregnant was assumed to be the same as that when she completed the questionnaire, excluding the new infant(s).

There are two major limitations of this study. First, income and family size are measured at two different points in time. Although the addition of the infant is accounted for, family income and size can both change during pregnancy. This may be due to factors such as divorce, separation, death, or marriage during pregnancy. For this report, poverty levels were established to represent income at the time of pregnancy rather than after the baby's birth. The second limitation is the self-reported nature of the data; it cannot be independently verified.

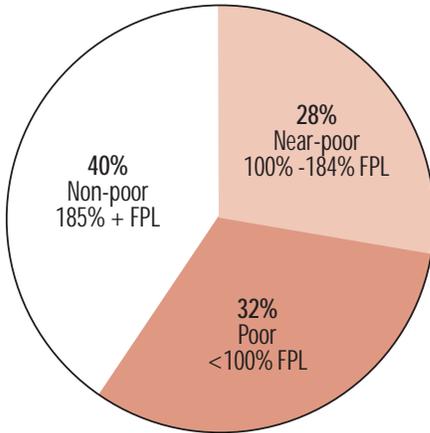
PRAMS respondents were stratified into three categories: the *poor*, women below 100% of the Federal Poverty Level (see Figure 1); the *near-poor*, those between 100% and 184% of the Federal Poverty Level; and the *non-poor*, those at 185% of the Federal Poverty Level or above. These poverty levels were defined to most closely match program income level eligibility requirements for state administered assistance programs. In order to describe poor women in Oklahoma, comparisons will focus on differences between poor and non-poor women; however, data on the near-poor will be presented in the tables for the reader's benefit. Overall prevalence and demographic characteristics associated with various poverty levels are examined. Frequency distributions and 95% confidence intervals (95%CI) are presented. All differences discussed in the narrative are significant at an $\alpha=0.05$ level. It is important to note that this study represents only women delivering a live birth, not the entire population of women in Oklahoma, thus our findings will differ considerably from census information. Poverty among this group of primarily young families is likely to be higher than the overall state poverty rate.

PRAMS is a population-based survey of Oklahoma women with a recent delivery. Analysis weights were applied to adjust for selection probability and non-response. By using weighted analysis, researchers can make strong statements about the preconception and perinatal periods for the entire population of women in Oklahoma delivering a live birth. Thus, state-specific decisions on policy and program development can be made. A stratified systematic sampling approach is used to select approximately 200 new mothers each month from the state's live birth registry. Up to three mailed questionnaires are used to solicit a response. Telephone interviews are attempted for non-respondents. Data for this report reflect live births occurring between April 1988 and March 1995. The response rate was 71%. The PRAMS data set includes information collected from 11,750 mothers. This analysis includes information from 9,540 mothers (81.2%) who have information on both income and household size. The following are the sample sizes for the questions used in this analysis: Maternal race-9,403; Maternal age-9,540; Education among mothers age 19 or older-8,465; Marital status on birth certificate-9,491; Income source-9,484. All data represent state estimates.

Results

One-third (32%) of women with a recent live birth in Oklahoma were poor, i.e., below 100% of the Federal Poverty Level (Figure 2). Another 28% were near-poor, i.e., between 100% and 184% of the Federal Poverty Level. Thus, in Oklahoma three in five (60%) of women delivering a live birth were either poor or near-poor.

Figure 2 Federal Poverty Level Among Oklahoma Women Delivering a Live Birth 1988-1995



Socio-Demographic Profile

The level of poverty varied among different socio-demographic groups (Table 1). A full 61% of African-American women and 49.4% of Native American women lived below poverty at the time of their pregnancy compared to 27.7% of white women. White women were twice as likely to be non-poor than either African-American or Native American women (43.9% v 22.9% or 21.1% respectively). Even though African-American and Native American women were over-represented among the poor, white women accounted for 70.9% of all women delivering a live birth who lived below poverty (Table 2).

Age was also associated with living in poverty (Table 1). Over 60% of women age 19 or younger having a live birth lived below 100% of the Federal Poverty Level compared to less than 20% of women age 30-34. Still, over three-quarters (76.1%) of women delivering a live birth and living in poverty were age 20 or older (Table 2).

A low level of education was also associated with living in poverty (Table 1). In order to eliminate women who have not had a chance to finish high school, this analysis looked only at women age 19 or older.

Table 1 Poverty Status of Oklahoma Women Delivering a Live Birth by Socio-demographic Characteristics

Characteristics	Poor <100% FPL		Near-poor 100%-184% FPL		Non-poor ≥185% FPL	
	%	95% CI	%	95% CI	%	95% CI
Race						
White	27.7	(26.1,29.4)	28.4	(26.8,30.0)	43.9	(42.1,45.6)
African-Amer.	61.0	(54.4,67.6)	16.1	(11.3,20.8)	22.9	(17.3,28.5)
Native Amer.	49.4	(43.8,55.0)	29.5	(24.4,34.5)	21.1	(16.7,25.5)
Other	27.3	(14.7,39.9)	30.5	(17.8,43.3)	42.2	(28.8,55.5)
Age						
≤ 19	60.3	(55.5,65.1)	30.6	(26.1,35.1)	9.1	(6.3,11.9)
20-24	41.4	(38.4,44.3)	32.4	(29.7,35.1)	26.2	(23.7,28.8)
25-29	22.2	(19.8,24.7)	25.9	(23.3,28.4)	51.9	(49.0,54.8)
30-34	17.4	(14.5,20.3)	20.7	(17.8,23.7)	61.9	(58.3,65.4)
≥ 35	25.0	(19.7,30.3)	25.9	(20.7,31.2)	49.1	(43.1,55.0)
Education¹						
< 8 yrs	65.5	(52.5,78.4)	24.7	(13.1,36.4)	9.8*	(1.4,18.3)
9-11 yrs	55.4	(50.3,60.6)	32.7	(27.8,37.5)	11.9	(8.5,15.4)
12 yrs	34.4	(31.9,37.0)	34.8	(32.2,37.3)	30.8	(28.4,33.2)
13-15 yrs	25.1	(22.0,28.2)	26.7	(23.7,29.7)	48.2	(44.7,51.6)
16+ yrs	5.7	(4.0,7.4)	13.6	(11.1,16.1)	80.7	(77.8,83.5)
Marital Status²						
Unmarried	70.1	(66.5,73.7)	19.9	(16.8,23.0)	10.0	(7.7,12.3)
Married	22.0	(20.5,23.5)	29.7	(28.1,31.3)	48.3	(46.5,50.1)
Source of Income						
Job/Business	18.7	(17.2,20.2)	29.8	(28.2,31.5)	51.5	(49.7,53.3)
Public Assis.	77.3	(74.3,80.3)	20.0	(17.1,22.9)	2.7	(1.6,3.8)
Others	71.0	(58.6,83.4)	19.8	(9.1,30.5)	9.2*	(0.8,17.6)

CI= Confidence Interval
*cell size < 20

¹ Excludes mothers less than 19 years old.
² Marital status on birth certificate.

Over 65% of respondents age 19 or older with eight or fewer years of education lived in poverty compared to only 6% of women with 16 or more years of education. Nonetheless, 64% of women living below poverty and delivering a live birth had at least 12 years of education (Table 2).

Finally, women who were listed as unmarried on the birth certificate were more likely to live in poverty (Table 1). Seventy percent of single women lived in poverty and only 10% lived at or above 185% of the FPL. However, over half, 53.1%, of women living in poverty were listed as married on the birth certificate (Table 2).

Delivering A Live Birth in Oklahoma by Poverty Status 1988 -1995

As is expected, the majority (77.3%) of women with a family income from public assistance lived in poverty (Table 1). However, almost 20% of women with incomes from a job or business lived below the Federal Poverty Level (Table 1). Moreover, 44% of

women living in poverty and delivering a live birth in Oklahoma had an income from a job or business (Table 2). In short, a large portion of poor Oklahoma women giving birth were part of the "working poor."

Table 2 Socio-demographic Characteristics of Women Delivering a Live Birth in Oklahoma by Poverty Status 1988-1995

Characteristics	Poor <100% FPL		Near-poor 100%-185% FPL		Non-poor ≥186% FPL	
	%	95% CI	%	95% CI	%	95% CI
Race						
White	70.9	(68.1-73.8)	84.6	(82.2-86.6)	89.4	(87.9-91.1)
African-Amer.	14.2	(11.8-16.5)	4.3	(2.4-3.0)	4.3	(3.1-5.4)
Native Amer.	13.6	(11.6-15.7)	9.5	(2.6-7.6)	4.7	(3.6-5.7)
Other	1.3	(0.6-1.9)	1.6	(6.5-0.8)	1.6	(0.9-2.2)
Age						
≤19	23.9	(21.3-26.6)	14.3	(12.0-16.6)	2.9	(2.0-3.9)
20-24	40.1	(37.1-43.0)	36.9	(33.9-39.8)	20.6	(18.6-22.7)
25-29	20.7	(18.3-23.1)	28.3	(25.6-31.1)	39.3	(36.8-41.7)
30-34	10.0	(8.2-11.7)	14.0	(11.9-16.0)	28.7	(26.5-31.0)
≥35	5.3	(4.0-6.6)	6.5	(5.0-8.0)	8.5	(7.1-9.8)
Education¹						
< 8 yrs	4.4	(3.0-5.9)	1.8	(0.8-2.7)	6.4	(0.0-0.9)
9-11 yrs	25.2	(22.2-28.2)	15.8	(13.2-18.4)	3.9	(2.7-5.0)
12 yrs	46.6	(43.3-49.8)	50.0	(46.8-53.3)	29.8	(27.4-32.0)
13-15 yrs	19.9	(17.3-22.5)	22.6	(19.9-25.2)	27.3	(24.9-29.4)
16+ yrs	3.9	(2.7-5.0)	9.8	(8.0-11.7)	38.4	(36.3-41.3)
Marital Status²						
Unmarried	46.9	(43.9-49.9)	15.7	(13.2-18.1)	5.4	(4.2-6.7)
Married	53.1	(50.1-56.1)	84.3	(81.9-86.8)	94.6	(93.3-95.8)
Source of Income						
Job/Business	44.2	(41.2-47.2)	82.9	(80.5-85.3)	98.1	(97.5-98.9)
Public Assis.	52.3	(49.2-55.3)	15.9	(13.6-18.2)	1.5	(0.9-2.1)
Others	3.5	(2.4-4.6)	1.2	(0.5-1.8)	0.4*	(0.0-0.7)

CI= Confidence Interval

¹ Excludes mothers less than 19 years old.

*cell size < 20

² Marital status on birth certificate.

Discussion

The purpose of this work was to describe poverty among women delivering a live birth in Oklahoma. Ultimately, the goal of this report is to improve the adverse health outcomes frequently associated with poverty by identifying those women in poverty and ensuring they have access to necessary health and social support networks. It is important for health providers and policy makers to understand that almost two-thirds of Oklahoma's women giving birth live below or near the Federal Poverty Level. Poor women in Oklahoma come from all ages and racial groups, but poverty is highest among young women and minority women. It is also worth noting that although most of Oklahoma's poor are on public assistance, nearly as many are "working poor."

Effective December 1, 1997, children and pregnant women up to 185% of the Federal Poverty Level are Medicaid eligible (eligibility was previously at 150% of the FPL). It is estimated that over 27,000 low-income women delivering a live birth in Oklahoma are now eligible to participate in Medicaid. In preparation for this increase, several steps have been taken in Oklahoma to ease the process of application, such as streamlining the eligibility determination and ensuring enrollment with a health care provider in a timely fashion. The Medicaid application has been reduced from 21 pages to one page front and back. Extensive efforts are planned to provide outreach to this newly eligible population. Outstationed workers will be placed in libraries, discount stores and other non-traditional locations. Furthermore, local county health departments will also provide applications and assist clients in enrolling with a health care provider. The client may mail in their application and will no longer be required to have a face to face interview to complete the application process. Enormous strides have been achieved by these recent changes which have long been identified as needed by this vulnerable population.

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Jerry R. Nida, M.D., M.P.H.
Commissioner of Health

Sara Reed DePersio, M.D., M.P.H.
Deputy Commissioner & State Health Officer
Personal Health Services

Richard R. Lorenz, M.S.P.H., Deputy Chief
Maternal & Child Health Service

Emily DeCoster, M.P.H., Director
PRAMS Program

Wanda Thomas, Surveillance Manager
PRAMS Program

Edd Rhoades, M.D., M.P.H., Chief
Maternal & Child Health Service

PRAMS Program
Maternal & Child Health Service
Oklahoma State Department of Health
1000 NE Tenth Street
Oklahoma City, OK 73117-1299
(405) 271-6761

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