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MARICOPA COUNTY  
MATERNAL AND CHILD HEALTH  
NEEDS ASSESSMENT 2003

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PRODUCED BY  
MARICOPA COUNTY DEPARTMENT OF PUBLIC  
HEALTH

DIVISIONS OF  
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MATERNAL, CHILD & FAMILY HEALTH

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## Acknowledgements

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## **Document Information**

The 2003 Maternal and Child Health Needs Assessment is located on the Maricopa County Department of Public Health website, [http://www.maricopa.gov/public\\_health/epi](http://www.maricopa.gov/public_health/epi). Questions pertaining to the data in this document should be addressed to the division of EPI/BDPR at [epidemiology@mail.maricopa.gov](mailto:epidemiology@mail.maricopa.gov). Questions pertaining to MCDPH's maternal and child health programs and services should be directed to Rose Howe, Family Health Partnerships Manager at 602-372-1441.

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## Section I. Executive Summary

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The purpose of this needs assessment is to evaluate the status of maternal and child health (MCH) in Maricopa County; to assist MCH programs in identifying needs; and to encourage the use of data analysis in policy formulation and program design. There are three components to this year's assessment: a) Perinatal Periods of Risk (PPOR) analyses for Maricopa County, Maryvale, and South Phoenix, b) the Pregnancy Risk Assessment Monitoring System (PRAMS) survey of South Phoenix mothers, and c) the Oral Health Needs Assessment survey of South Phoenix pregnant women.

PPOR is a new method to analyze standard vital registration records (births, infant deaths, and fetal deaths) that is based in a prevention framework. To prioritize and target prevention and intervention efforts to those areas where they may be most effective, the PPOR approach essentially partitions fetal and infant (feto-infant) deaths into four areas that correspond to specific intervention points in the health care continuum: Maternal health and prematurity, maternal care, neonatal care, and infant health. In addition, the approach provides an estimate of the amount of fetal and infant mortality that is preventable (excess mortality), by comparing the feto-infant mortality rates in select population groups to a comparison group within the population that has low mortality rates. The data consist of births, fetal deaths, and infant deaths in Maricopa County, the South Phoenix area, and the Maryvale neighborhood during the period 1996 through 2000.

PRAMS is a survey, originally designed by the Centers for Disease Control and Prevention (CDC), that collects information regarding maternal needs, experiences, and behaviors that occur during the period just prior to conception through infancy. This information is not available elsewhere and these experiences can affect both health care utilization and birth outcomes. The data consist of 262 South Phoenix residents who delivered a live infant between December of 1999 and mid-March of 2000. The data presented in this document are a subset of the full questionnaire:

- AHCCCS (Arizona Health Care Cost Containment System) coverage prior to pregnancy;
- Health insurance coverage, not including AHCCCS, prior to pregnancy;
- Reasons for not using birth control when the woman was not trying to get pregnant;
- Psychosocial stressors in the year prior to delivery;
- Satisfaction with prenatal care;
- Topics discussed during prenatal care visits;
- Services received during pregnancy;
- Depression following delivery;
- Infant's sleep position;
- Infant's exposure to second-hand smoke;
- Whether the infant was seen by a provider during the first week of life;
- Whether the infant went for care as frequently as the mother wished;
- Barriers to routine well-baby care.

In addition, a survey of the oral health knowledge, attitudes, behaviors, and needs of pregnant women in South Phoenix is presented. Although recent research has revealed strong links between oral health and total health and probable relationships between oral health and birth

outcomes, these relationships may not be fully appreciated by the public and some health professionals. The survey included questions about demographic groups, attitudes and beliefs, access to care, reason for last dental visit, reason for not getting dental care, and type of dental insurance coverage. The survey was distributed at three of the largest clinics that serve pregnant women in the South Phoenix area. A total of 205 pregnant women completed the survey. More than half (51%) of the respondents reported zip codes indicating residence in South Phoenix.

## **Key Findings**

All of the key findings for the PPOR, PRAMS, and Oral Health analyses are listed at the back of the document beginning on page 59.

### **Perinatal Periods of Risk (PPOR)**

In Maricopa County, the total F-IMR during the period from 1996 through 2000 was 8.5 deaths (per 1,000 live births and fetal deaths) and the excess F-IMR was 2.7 deaths (per 1,000 live births and fetal deaths), suggesting that 32% of the fetal and infant deaths were potentially preventable. The total F-IMR in Maryvale during the same period was similar at 8.8 deaths (per 1,000 live births and fetal deaths) and the excess F-IMR was 3.0 deaths; 34% of the fetal and infant deaths were potentially preventable. The total F-IMR in South Phoenix was 10.6 deaths (per 1,000 live births and fetal deaths) and the excess F-IMR was 4.8 deaths; 45% of the fetal and infant deaths were potentially preventable. One of the largest contributors to these excess rates was “maternal health and prematurity.” These findings suggest that women’s health prior to conception played a prominent role in determining fetal and infant outcomes. Focusing prevention or intervention programs on women’s health prior to conception should yield larger reductions in the overall excess fetoinfant mortality rate than focusing on other points in the health care continuum.

The excess fetoinfant mortality rates in all three areas (Maricopa County, Maryvale, and South Phoenix) were much higher for women with a high school education or less education than for women with some education beyond high school. Education, a risk factor amenable to modification, consistently showed the largest impact on fetoinfant mortality rates (above age and race/ethnicity). These findings confirm that furthering education is a strong predictor and determinant of health status.

Each race/ethnicity showed a different pattern of findings across the excess fetoinfant mortality map suggesting that programs might consider targeting these groups differently. In Maricopa County, African Americans’ highest rate was in the “maternal health/prematurity” category, followed by the “infant health” category. Native Americans’ highest rate was in the “infant health” category, followed by the “maternal care” category. For Hispanics, the “maternal health/prematurity” and “maternal care” categories were equally high. Whites’ highest rate was in the “maternal health/prematurity” category, followed by the “maternal care” category.

## **PRAMS in South Phoenix**

Approximately 61% of the women who recently delivered a baby in South Phoenix did not have insurance or AHCCCS coverage prior to becoming pregnant. Coverage increased with more education: 80% of the women with less than a ninth grade education did not have coverage, whereas 28% of the women with some education beyond high school did not have coverage. Although concern usually centers on women receiving health care when they are pregnant, the body of evidence showing that preconception health care is important to birth outcomes is growing. Evidence from the PPOR analyses suggests that one of the largest contributors to excess fetal and infant mortality is preconception health.

About 32% of survey respondents were not trying to get pregnant and were not using any form of birth control when they conceived their most recent baby. Of these women, 42% identified barriers to birth control as the reason for not doing anything to keep from getting pregnant. These barriers included husbands or partners not wanting to use birth control (21%), trouble obtaining birth control (11%), and birth control side effects (11%).

South Phoenix mothers were generally satisfied with the prenatal care experience. Most mothers (90%) were satisfied with the understanding and respect the staff showed them when obtaining prenatal care. Fewer women were satisfied with the amount of time the physician or nurse spent with them (74%) and the time spent in the waiting room (72%). Of course, the main issue to consider with these results is whether these women have had any other type of prenatal care services with which to compare.

Approximately 38% of South Phoenix respondents laid their babies on their backs to sleep. About 50% of the mothers laid their babies on their sides to sleep while another 11% of South Phoenix mothers still typically placed their infants on their stomach to sleep. Although the side sleep position reduces the risk of SIDS relative to the stomach sleep position, the risk is even lower with the back sleep position. Back-To-Sleep campaigns may not be reaching the whole South Phoenix community. Additional methods to raise awareness of the decreased risk of SIDS by placing babies on their back to sleep may be worth considering.

## **Oral Health Key Findings**

Now that oral diseases are becoming recognized as potential risk factors for adverse birth outcomes, it is necessary to focus on the seriousness of oral infections and the preventable nature of most oral diseases. Dental prevention and treatment services must be achievable for all pregnant women and women of childbearing ages. Half of oral health survey respondents (50.3%) could not afford dental care and 71.5% did not have dental insurance. During the current pregnancy, 93.5% of respondents had not been to the dentist. It is important to note that the sampled mothers, by virtue of the selection methodology, were already receiving prenatal care services. A higher need for dental services would be expected from those not accessing prenatal care services.

Although most of the respondents (94.4%) agreed that the health of their mouth was important, many respondents did not know or were undecided about whether the health of their mouth

during pregnancy could affect their unborn baby's health (46.6%), a tooth would be lost with every pregnancy (40.7%), or whether it was safe to get dental care during pregnancy (62.7%).

Improving the public's understanding of the links between oral health and total health may help reduce health disparities. Many opportunities exist to improve the public's perception of oral health and to increase their awareness regarding the connections between oral health and total health. Improving access to dental insurance and dental care services will be necessary.

Your response to this document is important to us. Please complete the five-minute Users Survey at the back of this document. This document can be accessed on the MCDPH web site, [http://www.maricopa.gov/public\\_health/epi/](http://www.maricopa.gov/public_health/epi/).

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## Section II. Introduction

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The mission of the Maricopa County Department of Public Health (MCDPH) is “to promote, preserve, and protect the health of people and communities in Maricopa County.” As part of this mission, the Divisions of “Maternal, Child & Family Health” (MCFH) and “Epidemiology and Bio-Defense Preparedness and Response” (EPI/BDPR) conduct an annual maternal and child health (MCH) needs assessment.

The purpose of the needs assessment is to evaluate the status of maternal and child health in Maricopa County and to assist MCH programs with identifying needs and to “turn data into action” by encouraging the use of data analysis in policy formulation and program design.

Needs assessments should have four components:

1. Objective measures of health status, population-socioeconomic status (SES), and health needs;
2. The health needs as expressed by the target population;
3. Measurements of available services;
4. A set of priorities derived from the three components above that serve as a guide for the planning and implementation of interventions to fulfill the unmet needs.

Due to limited resources, the MCDPH needs assessment cannot cover all four components each year. This year’s assessment contains elements of the first and second components. All sections of the needs assessment contain objective measures of health status presented along with demographic measures. Each year MCDPH develops a separate Implementation Plan as a result of the findings in this assessment (component 4). Needs are great and resources are limited, therefore a few community needs are selected each year to focus on. The MCH Advisory Group assists in making the selections of needs in which to concentrate.

In order to assist MCH professionals and community leaders in better understanding fetal and infant mortality so that they may devise and implement strategic plans to reduce this mortality, results from the Perinatal Periods of Risk (PPOR) analyses that were conducted for Maricopa County, Maryvale, and South Phoenix are included. PPOR provides objective measures of health status. This methodology incorporates fetal mortality in the data analysis, an element not usually present in the needs assessment. Additionally, it presents the data in a manner that improves the usefulness of the data by suggesting possible directions for intervention.

For this year’s needs assessment, individuals from the target population of South Phoenix provided information regarding their health care experiences and health needs. This was done using the results from the PRAMS (Pregnancy Risk Assessment Monitoring System) survey, conducted in 2000, that provides information on mothers’ perceived barriers to care, patient education, and patient satisfaction with their services.

This year’s needs assessment also includes a section on oral health. MCDPH\MCFH\Office of Oral Health conducted a survey of the oral health needs of pregnant women in South Phoenix

during 2002. The survey provides information on oral health KABB (knowledge, attitudes, behaviors, and beliefs) related to access to care, barriers to care, and insurance coverage.

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## Section III. Perinatal Periods of Risk

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Perinatal Periods of Risk (PPOR)<sup>1,2</sup> is a multidisciplinary approach to understanding the complex issues contributing to fetal and infant mortality. The PPOR approach provides direction for prioritizing and targeting prevention and intervention efforts to reduce mortality at specific points in the health care services continuum. The approach translates natality, mortality, and morbidity data into useful information for health workers, policy makers, and communities. There are two equally important components to the approach: a) analyzing data to identify intervention areas in the health care system during the perinatal time period, and b) community mobilization to facilitate a sustained effort to reduce fetal and infant mortality.

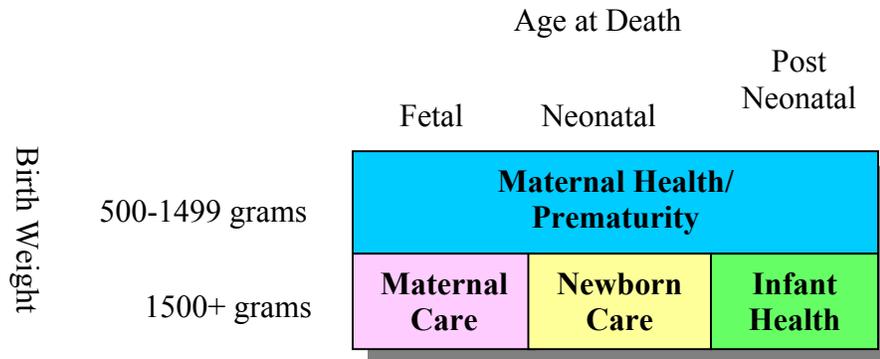
Dr. Brian McCarthy and colleagues in the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC) Collaborating Center in Perinatal Care developed the framework for PPOR and applied the approach in developing and developed countries. Research to validate the approach in U.S. cities began in 1997 as a collaborative effort among CityMatCH, University of Nebraska Medical Center, CDC, National March of Dimes, and Health Resources and Services Administration: Maternal and Child Health Bureau (HRSA/MCHB), in which Maricopa County participated as one of 15 original urban areas. Based on the research results, the data analyses and the approach to community mobilization were refined and CitiMatCH is leading the effort to disseminate the information.

As described, there are two main components of PPOR, the data analytic component and the community mobilization. These components proceed simultaneously, interacting and learning from one another to build a richer understanding of the problem and indicate possible directions for solutions. Although the discussion in this document focuses more on the data analysis component, community support and input are integral to the PPOR process. The community helps clarify the data and is the motivating force for initiating change and sustaining the efforts. Community partners, mobilizers, and maternal and child health stakeholders are identified and engaged at the beginning of the process for collaboration. Identifying key citizens who are already committed to community improvement is necessary. Community mobilizers may need training on the infant mortality issues in their community, the process of engaging others, the PPOR process, and possibly interpreting and using data. Community mobilizers then conduct numerous one-on-one sessions with other key stakeholders to engage support, build alliances, and educate others about the data.

The first phase of data analysis (Phase I) begins by calculating fetal and infant mortality (feto-infant mortality). Typically, infant mortality rates are calculated by examining only deaths following live births; however, fetal deaths with a gestation of 24 or more weeks (six months) and a birth weight greater than 500 grams are also included in the PPOR approach. Therefore, the data do not include spontaneous and induced abortions. The data include linked birth and death certificate data in the county for the combined years of 1996 through 2000 (see the methodology section for more information). The overall feto-infant mortality rate is then mapped to (parceled into) four categories (maternal health/prematurity, maternal care, newborn care, and infant health), based on the age at death and birth weight of the child. Figure 1 shows the map of feto-infant mortality. The age at death is categorized into three groups: a) fetal deaths are those

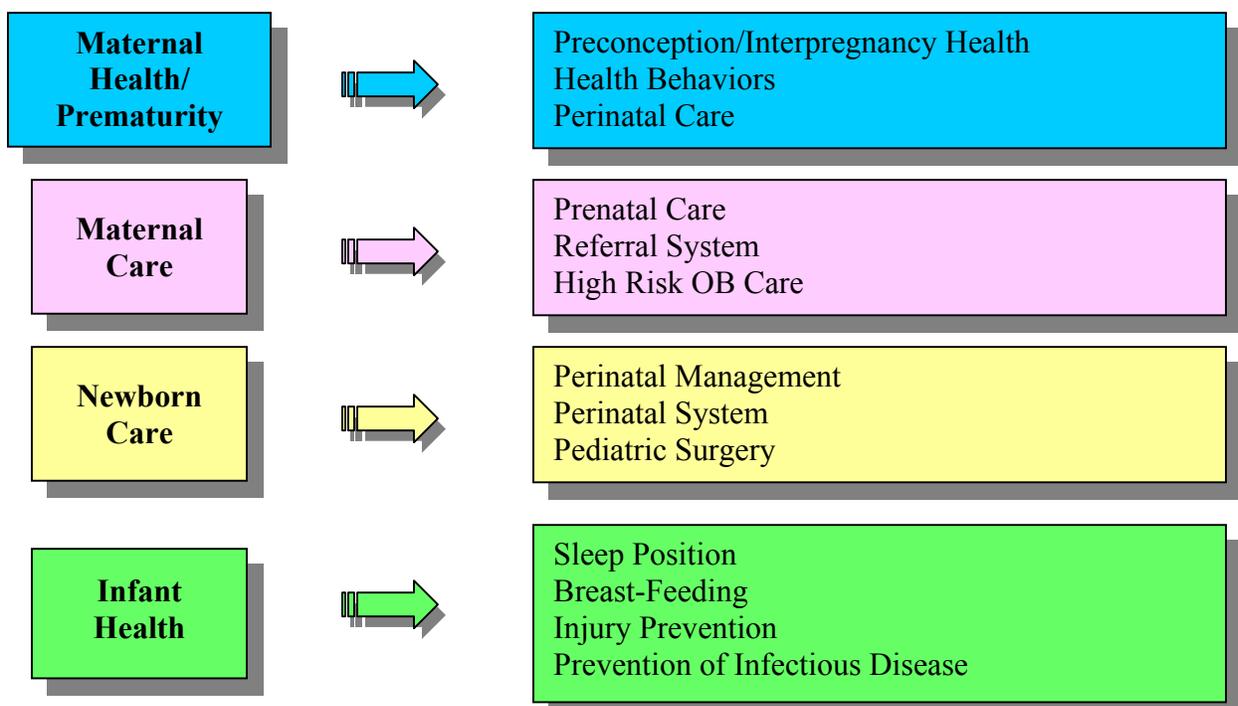
deaths that occur between 24 weeks gestation and birth, b) neonatal deaths are those deaths that occur between birth and the first 28 days of life, and c) post neonatal deaths occur between 28 days of life and one year of life. Birth weight is categorized into very low birth weight births (500-1499 grams/1.1-3.3 lbs) and all other births (1500 grams/3.3 lbs or more), including low birth weight births, normal birth weight births, and high birth weight births. Note that fetal deaths prior to 24 weeks gestation and mortality with birth weights less than 500 grams are not included in the analyses.

**Figure 1. Map of Feto-Infant Mortality**



All of the very low birth weight deaths are categorized into the “maternal health and prematurity” group. Fetal deaths with a birth weight of 1500 grams or more fall into the “maternal care” group. The “newborn care” group consists of neonatal deaths with a birth weight of 1500 grams or more. Finally, the “infant health” group consists of post neonatal deaths with a birth weight of 1500 grams or more.

**Figure 2. Map Connections to Action**



The labels for each category within the map suggest the area to focus on for prevention or intervention efforts. In Figure 2 each category in the map is shown connected to areas that may be considered for preventive action. If, for example, there is a high mortality rate in the “maternal health/prematurity” category, then interventions may need to focus on the mother’s health prior to conception, the mother’s overall health behaviors (e.g., smoking or pregnancy intendedness), or perinatal care. Alternatively, a high mortality rate in the infant health category would suggest interventions that focus on the babies sleep position to reduce SIDS, the benefits of breast feeding, access to medical homes, or preventing infectious diseases and injuries.

After fetoinfant mortality is mapped, the potential for fetoinfant mortality reduction is then determined by directly comparing the mortality rates in the area to the mortality rates in a reference group. The reference group is chosen based on its low fetoinfant mortality rate. The reference group for the following analyses is Maricopa County, non-Hispanic White women who are over the age of 20 and have some education beyond high school. The difference between the area and reference group rates is considered “excess” mortality and can be described as an “opportunity gap.” The approach assumes that the whole population should be able to experience the same low fetoinfant mortality rate as any group within the population.

By partitioning fetoinfant mortality into these components and determining the amount of excess (preventable) mortality, efforts to reduce mortality can be focused on those components that contribute the most to excess fetoinfant mortality rather than general prevention efforts.

Phase II analyses attempt to ascertain reasons for the excess mortality in the categories with the highest excess rates. The approach to the analyses depends on the results of Phase I and the community’s input. If the Phase I analyses indicate a high excess mortality rate in the “maternal care” category, then Phase II analyses may attempt to determine whether the women received adequate prenatal care. Phase II is necessary for efficient and effective targeting.

The Virginia G. Piper Charitable Trust provided a grant to MCDPH to use the PPOR approach in the Phoenix neighborhoods of Maryvale and South Phoenix. MCDPH, in partnership with the Maryvale Healthy Mothers, Healthy Babies coalition and the South Phoenix Healthy Start, recently presented the results of the first phase of the analyses to the two communities. Currently, community action leaders are forming groups to discuss the implications for their community and to provide input for the second phase of analyses. Phase II analyses will attempt to ascertain the reasons for the excess mortality and these analyses should be completed during the fall of 2003. Ultimately, the communities will examine potential intervention programs.

The following sections include the PPOR Phase I analyses for all of Maricopa County, Maryvale, and South Phoenix. Each area is presented in a separate section.

## A. Maricopa County

### Feto-Infant Mortality

During the period from 1996 to 2000, there were a total of 1,925 fetal and infant (feto-infant) deaths and 226,259 live births and fetal deaths in Maricopa County. The corresponding total feto-infant mortality rate (F-IMR) in the county was 8.5 deaths per 1,000 live births and fetal deaths. Which means that for every 1,000 recognized pregnancies with 6 months or more gestation, 8.5 resulted in either a miscarriage or the death of a baby.

Figure 3 shows the county's PPOR "map" for the years 1996 through 2000. The map shows the overall F-IMR divided into four cells that suggest the prevention/intervention direction for the deaths in that group. The highest group-specific feto-infant mortality rate of 2.8 deaths per 1,000 live births and fetal deaths occurred in the "maternal health and prematurity" category. In other words, "maternal health/prematurity" contributed 2.8 deaths to the total rate of 8.5 deaths; the mortality rates in the four map-areas sum to the total feto-infant mortality rate. The second highest group-specific F-IMR was 2.1 (deaths per 1,000 live births and fetal deaths) in the "maternal care" category. The F-IMR was 1.8 (deaths per 1,000 live births and fetal deaths) for both the "newborn care" and "infant health" categories.

**Figure 3. Map of Maricopa County's Feto-Infant Mortality Rate**

		Age at Death		
		Fetal	Neonatal	Post Neonatal
Birth Weight	500-1499 g.	Maternal Health/Prematurity <b>2.81</b>		
	1500+ g.	Maternal Care <b>2.12</b>	Newborn Care <b>1.79</b>	Infant Health <b>1.79</b>

During the same time period, 1996 to 2000, the reference group (consisting of Maricopa County, non-Hispanic White women who were at least 20 years of age and had some education beyond high school) had a total F-IMR of 5.8 deaths per 1,000 live births and fetal deaths. There were a total of 571 feto-infant deaths and 98,823 live births and fetal deaths during the period. Figure 4 shows the reference group's map of feto-infant mortality. Similar to the Maricopa County map, the highest group-specific F-IMR was in the "maternal health/prematurity" category (1.9 deaths per 1,000 live births and fetal deaths).

**Figure 4. Map of the Reference Group’s Feto-Infant Mortality Rate**

		Age at Death		
		Fetal	Neonatal	Post Neonatal
Birth Weight	500-1499 g.	Maternal Health/Prematurity <b>1.85</b>		
	1500+ g.	Maternal Care <b>1.04</b>	Newborn Care <b>1.50</b>	Infant Health <b>1.39</b>

**Excess Feto-Infant Mortality**

Figure 5 shows the excess feto-infant mortality in the county, as well as the method to obtain the excess. The map on the far left is the county’s F-IMR map (same as Figure 3). The middle map is the reference group’s F-IMR map (same as Figure 4). The map on the far right is the excess F-IMR for the county. Subtracting the reference group’s F-IMR (5.8) from the county’s F-IMR (8.5) yielded an excess F-IMR of 2.7 deaths per 1,000 live births and fetal deaths. The amount of excess mortality suggests the extent to which the F-IMR could be theoretically reduced in the county. If the F-IMR did not differ across groups, then there would have been 2.7 fewer feto-infant deaths per 1,000 live births and fetal deaths in the county during the period 1996 to 2000. Note that the individuals in the reference group were not removed from the countywide numbers, providing a conservative estimate of the excess.

**Figure 5. Maricopa County Opportunity Gap (Excess Feto-Infant Mortality Relative to the Reference Group) Potential for Reduction**

Maricopa County		Reference		Excess
Total F-IMR = 8.5	-	5.8	=	2.7
<b>2.81</b>	-	<b>1.85</b>	=	<b>0.95</b>
2.12   1.79   1.79	-	1.04   1.50   1.39	=	1.08   0.29   0.41
<b>Opportunity Gap</b>				

Each of the group-specific rates in the map was subtracted from the corresponding group rate in the reference map in the same manner that the total population rate was subtracted. Both the county and the reference group showed the highest F-IMR in the “maternal health and prematurity” group; however, the highest excess group-specific rate was in the “maternal care” category (1.1 per 1,000 live births and fetal deaths). The lowest excess F-IMR rate occurred in the “newborn care” category with 0.3 deaths per 1,000 live births and fetal deaths.

**Figure 6. Maricopa County Potential for Reduction:  
Excess Rates Expressed as Number of Deaths**

		Age at Death		
		Fetal	Neonatal	Post Neonatal
Birth Weight	500-1499 g.	Maternal Health/Prematurity <b>216</b>		
	1500+ g.	Maternal Care <b>244</b>	Newborn Care <b>65</b>	Infant Health <b>92</b>

If the whole county’s F-IMR was similar to the reference group’s F-IMR, there would have been 618 fewer fetoinfant deaths in the five-year period than actually occurred. See Figure 6 for the translation of excess rates into number of excess deaths over the five-year period. Of those 618 fetoinfant deaths, 216 were in the “maternal health/prematurity” group, 244 were in the “maternal care” group, 65 were in the “newborn care” group, and 92 were in the “infant health” group. These excess deaths represented 32.1% of the fetoinfant mortality in Maricopa County during the period 1996 through 2000.

These findings suggest that successful prevention and intervention efforts focused on “maternal care” and “maternal health/prematurity” should yield larger reductions in the overall excess fetoinfant mortality rate more than focusing on other points in the health care systems continuum. Although there is room for improvement in all areas, some categories contribute fewer deaths to the overall excess rate than others, for example, “newborn care.”

### Excess Feto-Infant Mortality for Selected Population Groups

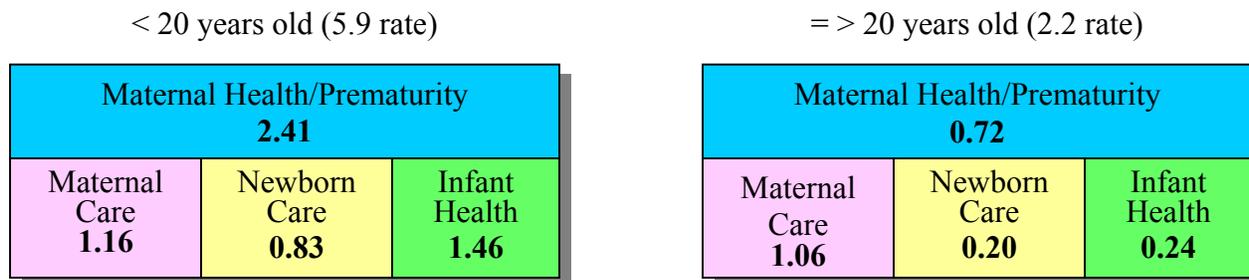
The excess rates were also examined by population groups to determine which groups contributed more to the excess fetoinfant mortality. Risk factors within each population group can affect fetoinfant mortality. This knowledge allows prevention efforts to be further focused on those groups with higher mortality rates.

Maternal age was categorized into two groups: women under 20 years old and women 20 or more years of age. Figure 7 shows the excess fetoinfant mortality rate map for women less than

20 years of age and women 20 or more years of age. For women less than the age of 20, there were a total of 360 feto-infant deaths and 30,941 live births and fetal deaths. For women 20 or more years of age, there were a total of 1,563 feto-infant deaths and 195,207 live births and fetal deaths. The excess F-IMR for women less than 20 years of age (5.9 deaths per 1,000 live births and fetal deaths) was more than twice the excess rate for those women who were 20 or more years of age (2.2 deaths per 1,000 live births and fetal deaths).

For younger women, the highest excess group-specific rates were in the “maternal health/prematurity” and the “infant health” categories. In contrast, the highest group-specific excess rates for the older women were in the “maternal health/prematurity” and “maternal care” categories. Although the “maternal care” category was the highest group-specific excess rate for older women, the rate was still not as high as the “maternal care” category for younger women (their third highest rate). Prevention efforts targeting “infant health” in Maricopa County need to be distributed, taking into consideration high rates in one population and a high number of deaths in the other population. Although the “infant health” rate was higher for women under 20 years of age (1.5 versus 0.2 rate), the number of feto-infant deaths for women 20 or more years of age was higher (360 versus 1,563 feto-infant deaths).

**Figure 7. Maricopa County Excess Feto-Infant Mortality by Age Group**



**Figure 8. Maricopa County Excess Feto-Infant Mortality by Education Group**



The level of maternal education was dichotomized into two groups: women with a high school education or less ( $\leq 12$  years) and women with any education beyond high school ( $> 12$  years). There were a total of 844 and 952 fetoinfant deaths and 65,524 and 154,567 live births and fetal deaths for women with a high school education or less and women with some education beyond high school, respectively. The excess rate of fetoinfant deaths varied considerably with maternal education level (see Figure 8). The excess F-IMR for women with a high school education or less (7.1 deaths per 1,000 live births and fetal deaths) was 18 times higher than the excess F-IMR for women with some education beyond high school. It is important to point out that education is an antecedent factor for other measures such as income levels, access to care, and behavioral patterns and a proxy measure for socioeconomic status (SES). Therefore, increasing the population's education level would not necessarily decrease all the risk factors for fetoinfant mortality but it would help to improve outcomes dependent on incomes, behaviors, and access to care. For women with a high school education or less, "maternal care" (3.1 deaths per 1,000 live births and fetal deaths) and "maternal health/prematurity" (2.5 deaths per 1,000 live births and fetal deaths) showed the highest excess F-IMRs.

**Figure 9. Maricopa County Excess Feto-Infant Mortality by Race/Ethnicity**

	Total	MH/P	MC	NC	IH
<b>Hispanic</b>	3.46	1.39	1.38	0.40	0.29
<b>NH African American</b>	8.16	3.58	0.97	0.86	2.75
<b>NH Native American</b>	4.31	0.87	1.52	0.26	1.66
<b>NH White</b>	1.89	0.57	0.86	0.16	0.30

*Note.* "Total" is the overall F-IMR, "MH/P" refers to maternal health and prematurity; "MC" refers to maternal care, "NC" refers to newborn care, "IH" refers to infant health, and "NH" refers to non-Hispanic.

Figure 9 shows the county's excess fetoinfant mortality map for race/ethnic groups. Race/ethnicity in the U.S. society can be a proxy measure for many risk factors such as socioeconomic status, living conditions, cultural and behavioral patterns, and life stressors. The number of fetoinfant deaths and the number of live births and fetal deaths, respectively, was 118 and 8,466 for non-Hispanic (NH) African Americans, 63 and 6,246 for NH Native Americans, 798 and 86,380 for Hispanics, and 903 and 117,751 for NH Whites. The overall excess fetoinfant mortality rate was highest for NH African Americans (8.2 deaths per 1,000 live births and fetal deaths), followed by NH Native Americans (4.3 deaths per 1,000 live births and fetal deaths), Hispanics (3.5 deaths per 1,000 live births and fetal deaths), and then NH Whites (1.9 deaths per 1,000 live births and fetal deaths).

Each race/ethnicity showed a different pattern of findings across the excess feto-infant mortality map suggesting that programs should consider targeting these groups differently. The highest group-specific rates for NH African Americans were “maternal health/prematurity” (3.6) and “infant health” (2.8). “Infant health” (1.7) was also the highest group-specific rate for NH Native Americans but the second highest rate was in “maternal care” (1.5) rather than “maternal health/prematurity.” The highest group-specific rates for Hispanics and NH Whites were in “maternal care” (1.4 and 0.9, respectively) and “maternal health and prematurity” (1.4 and 0.6, respectively).

## B. Maryvale

### Feto-Infant Mortality

The west Phoenix neighborhood of Maryvale was defined by 5 zip codes: 85017, 85019, 85031, 85033, and 85035. There were a total of 179 fetal and infant (feto-infant) deaths and 20,417 live births and fetal deaths in the Maryvale area during the period 1996 through 2000. The corresponding total feto-infant mortality rate (F-IMR) was 8.8 deaths per 1,000 live births and fetal deaths. Which means that for every 1,000 recognized pregnancies that survived 6 months or more, 8.8 resulted in a miscarriage or the death of a baby. Maryvale’s overall F-IMR during this period was similar to the whole county’s F-IMR (8.5 deaths per 1,000 live births and fetal deaths).



 Maryvale

The West Phoenix neighborhood of Maryvale, Phoenix, Arizona

Figure 10 shows Maryvale’s PPOR map for the years 1996 through 2000. In the map, the overall F-IMR was divided into four cells suggesting the prevention/intervention direction for the deaths in that group. The group-specific rates, shown in the four cells, contribute (or sum) to the total rate. The highest group-specific F-IMR was found in “maternal health/prematurity” category at 3.1 deaths per 1,000 live births and fetal deaths. “Infant health” and “maternal care” followed with rates around 2 deaths per 1,000 live births and fetal deaths while the “newborn care” category showed the lowest rate (1.6 deaths per 1,000 live births and fetal deaths).

**Figure 10. Map of Maryvale’s Feto-Infant Mortality Rate**

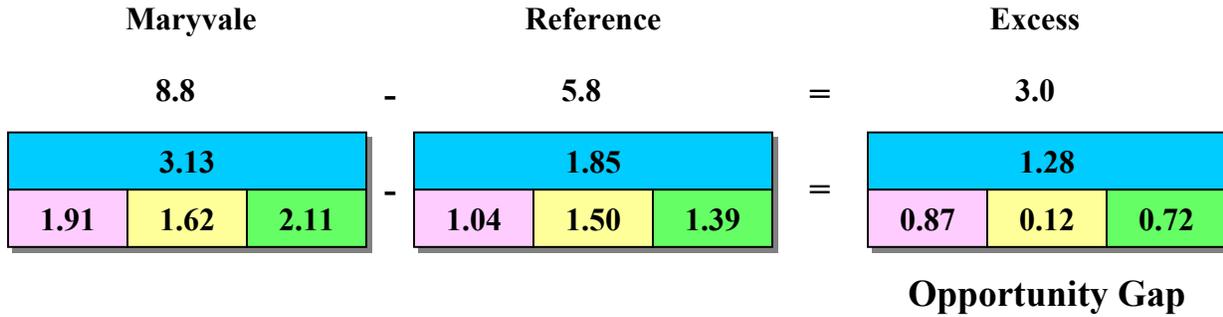
		Age at Death		
		Fetal	Neonatal	Post Neonatal
Birth Weight	500-1499 g.	Maternal Health/Prematurity <b>3.13</b>		
	1500+ g.	Maternal Care <b>1.91</b>	Newborn Care <b>1.62</b>	Infant Health <b>2.11</b>

During the same time period, 1996 to 2000, the reference group (consisting of Maricopa County, non-Hispanic White women who were at least 20 years of age and had some education beyond high school) had a total F-IMR of 5.8 deaths per 1,000 live births and fetal deaths. There were a total of 571 feto-infant deaths and 98,823 live births and fetal deaths during the period. The map of the reference group is shown as the middle map in Figure 11. Similar to Maryvale’s map, the highest group-specific F-IMR was in the “maternal health/prematurity” category (1.9 deaths per 1,000 live births and fetal deaths).

**Excess Feto-Infant Mortality**

Figure 11 shows the excess feto-infant mortality in the Maryvale neighborhood, as well as the method to obtain the excess. The map on the far left is Maryvale’s F-IMR map that was shown above, while the middle map is the reference group’s F-IMR map. The map on the far right is the excess F-IMR for the Maryvale area. Subtracting the reference group’s F-IMR (5.8) from Maryvale’s F-IMR (8.8) yielded an excess F-IMR of 3 deaths per 1,000 live births and fetal deaths. The amount of excess mortality suggests the extent to which the F-IMR can be theoretically reduced in Maryvale. If the F-IMR did not differ across groups, then there would have been 3 fewer feto-infant deaths per 1,000 live births and fetal deaths in Maryvale during the period 1996 through 2000. Note that the individuals in the reference group were not removed from the Maryvale numbers, providing a conservative estimate of the excess. Although Maryvale’s F-IMR was similar to the county’s, the excess death rate of 3 (per 1,000 live births and fetal deaths) suggests that there is room to reduce the feto-infant mortality rate in the area.

**Figure 11. Maryvale Opportunity Gap (Excess Feto-Infant Mortality Relative to the Reference Group)**



Each of the group-specific rates in the map was subtracted from the corresponding group rate in the reference map in the same manner that the total population rate was subtracted. The largest excess rate was in the “maternal health/prematurity” group with 1.3 deaths per 1,000 live births and fetal deaths. “Maternal care” showed an excess rate of 0.9, “infant health” an excess rate of 0.7, and “newborn care” an excess rate of 0.1 deaths per 1,000 live births and fetal deaths.

If Maryvale’s F-IMR was similar to the reference group’s F-IMR, there would have been 61 fewer feto-infant deaths in the five-year period than actually occurred. See Figure 12 for the translation of rates into number of deaths over the five-year period. Of the 61 excess feto-infant deaths, 26 occurred in the “maternal health/prematurity” group, 18 were in the “maternal care” group, 2 were in the “newborn care” group, and 15 were in the “infant health” group. These excess deaths represented 34.1% of the feto-infant mortality in Maryvale.

**Figure 12. Maryvale Potential for Reduction: Excess Rates Expressed as Number of Deaths**

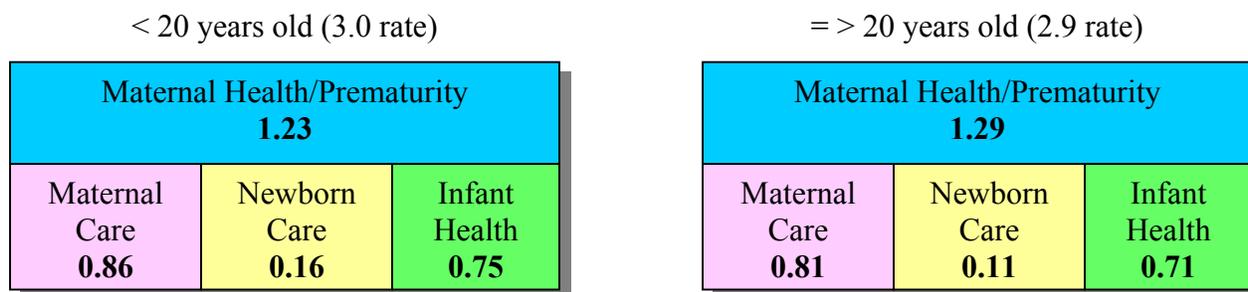
		Age at Death		
		Fetal	Neonatal	Post Neonatal
Birth Weight	500-1499 g.	<b>Maternal Health/Prematurity 26</b>		
	1500+ g.	<b>Maternal Care 18</b>	<b>Newborn Care 2</b>	<b>Infant Health 15</b>

These findings suggest that successful prevention and intervention efforts focused on “maternal health/prematurity” should yield larger reductions in the overall excess feto-infant mortality rate in the area more than focusing on other points in the health care system continuum. Although there is room for improvement in all areas, some categories contribute fewer deaths; for example, “newborn care.”

### Excess Feto-Infant Mortality for Selected Population Groups

The excess rates were also examined by population groups to determine which groups contribute more to the excess feto-infant mortality. Risk factors within each population group can affect infant mortality. This knowledge allows prevention efforts to be further focused on those groups with higher mortality rates.

**Figure 13. Maryvale’s Excess Feto-Infant Mortality by Age Group**



Maternal age was categorized into two groups: women under 20 years old and women 20 or more years of age. For women less than the age of 20, there were a total of 37 feto-infant deaths and 4,212 live births and fetal deaths. For women 20 or more years of age, there were a total of 141 feto-infant deaths and 16,203 live births and fetal deaths. The total excess F-IMR for women less than 20 years of age was very similar to the rate for women 20 or more years of age in Maryvale (3.0 and 2.9 deaths per 1,000 live births and fetal deaths, respectively). Although the overall excess rates were similar for the two age groups, there could have been differences between the maps (i.e., different categories with high rates). The pattern of results across the two maps, however, was the same. Figure 13 shows the excess feto-infant mortality rate map for women less than 20 years of age and women 20 or more years of age.

The level of maternal education was categorized into two groups: women with a high school education or less (<=12 years) and women with any education beyond high school (>12 years). There were a total of 102 feto-infant deaths and 9,796 live births and fetal deaths for women with a high school education or less. For women with some education beyond high school, there were a total of 58 feto-infant deaths and 10,069 live births and fetal deaths. Figure 14 shows the maps of excess feto-infant mortality for both education levels. There was a large difference in the total excess F-IMRs between the two education groups; the excess death rate for women with a high school education or less was 4.6 deaths per 1,000 live births and fetal deaths, while there was essentially no excess for women with some education beyond high school. For those with a high school education or less, the highest excess rate was in “maternal health/prematurity.”

It is important to point out that education is an antecedent factor for other measures such as income levels, access to care, and behavioral patterns and a proxy measure for socioeconomic status (SES). Therefore, increasing the population's education level would not necessarily decrease all the risk factors for feto-infant mortality but it would help to improve outcomes dependent on incomes, behaviors, and access to care.

**Figure 14. Maryvale's Excess Feto-Infant Mortality by Education Group**

< = 12 years (4.6 rate)			> 12 years (-0.02 rate)		
<b>Maternal Health/Prematurity 2.33</b>			<b>Maternal Health/Prematurity -0.26</b>		
<b>Maternal Care 1.51</b>	<b>Newborn Care -0.07</b>	<b>Infant Health 0.86</b>	<b>Maternal Care -0.05</b>	<b>Newborn Care -0.01</b>	<b>Infant Health 0.30</b>

Analyses were also conducted for racial/ethnic groups. Race/ethnicity in the U.S. society can be a proxy measure for many risk factors such as socioeconomic status, living conditions, cultural and behavioral patterns, and life stressors. During the five year period, there were a total of 116 feto-infant deaths and 13,383 live births and fetal deaths for Hispanics; 40 feto-infant deaths and 4,647 live births and fetal deaths for non-Hispanic (NH) Whites; 17 feto-infant deaths and 1,340 live births and fetal deaths for NH African Americans; and 5 feto-infant deaths and 566 live births and fetal deaths for NH Native Americans. African Americans had the highest total excess F-IMR (6.9 per 1,000 live births and fetal deaths). The number of feto-infant deaths was too small to partition the overall rate into categories for NH African Americans and the total NH Native American rate was unstable due to the small number of births and feto-infant deaths to this population group in this area.

Figure 15 shows Maryvale's excess feto-infant mortality map for NH Whites and Hispanics. The overall excess F-IMR for NH Whites was almost identical to the Hispanic's excess rate (2.8 and 2.9 deaths per 1,000 live births and fetal deaths, respectively). Although the overall excess rates were similar, the pattern of mortality across the prevention maps differed. The highest group-specific excess F-IMR fell in the "maternal care" category for NH Whites but it fell in the "maternal health/prematurity" category for Hispanics.

**Figure 15. Maryvale’s Excess Feto-Infant Mortality Rate by Race/Ethnicity**

Non-Hispanic White (2.8 rate)

<b>Maternal Health/Prematurity</b> <b>0.73</b>		
<b>Maternal Care</b> <b>1.32</b>	<b>Newborn Care</b> <b>0.01</b>	<b>Infant Health</b> <b>0.77</b>

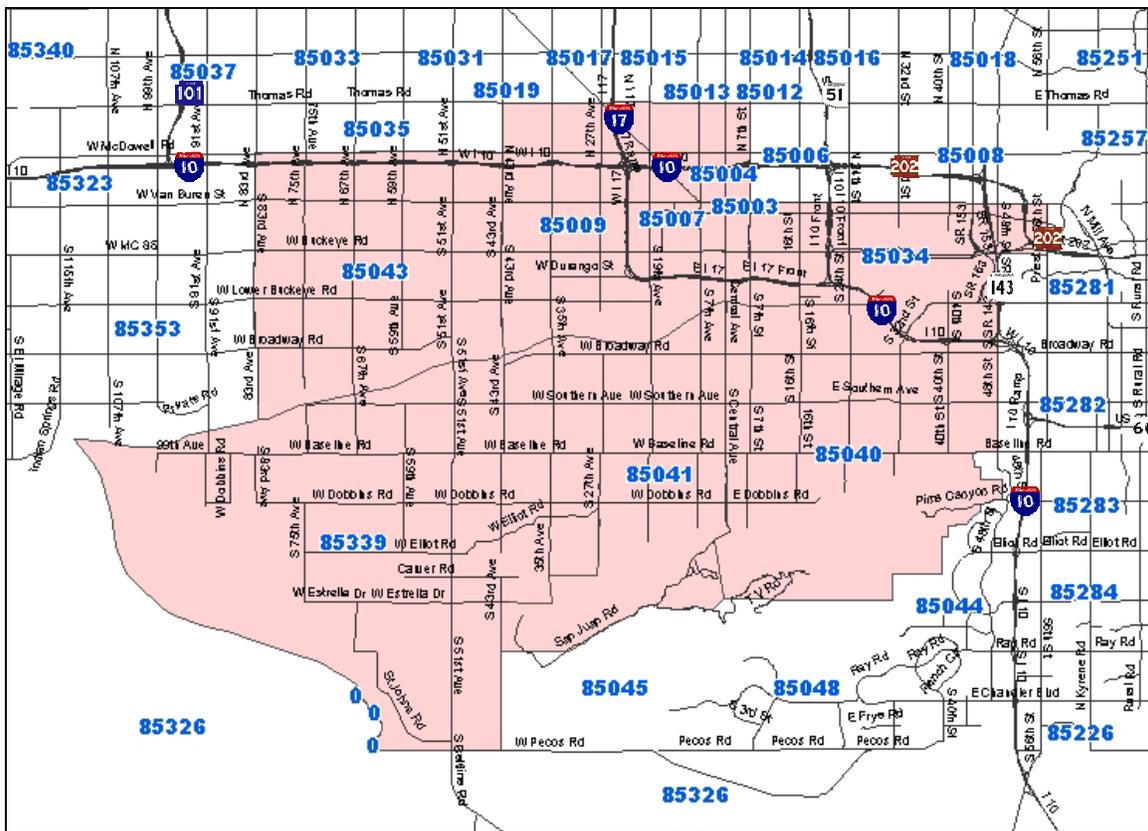
Hispanic (2.9 rate)

<b>Maternal Health/Prematurity</b> <b>1.43</b>		
<b>Maternal Care</b> <b>0.60</b>	<b>Newborn Care</b> <b>0.29</b>	<b>Infant Health</b> <b>0.56</b>

### C. South Phoenix

#### Feto-Infant Mortality

The South Phoenix neighborhood was defined by 10 zip codes: 85003, 85004, 85007, 85009, 85034, 85040, 85041, 85042, 85043, and 85339. From 1996 through 2000, there were a total of 245 fetal and infant (feto-infant) deaths and 23,225 live births and fetal deaths in the South Phoenix area. The corresponding total feto-infant mortality rate (F-IMR) was 10.6 deaths per 1,000 live births and fetal deaths. Which means that for every 1,000 recognized pregnancies that survived 6 months or more, 10.6 resulted in either a miscarriage or the death of a baby. The South Phoenix rate during the period was higher than the county’s rate (8.5 deaths per 1,000 live births and fetal deaths).



South Phoenix

South Phoenix, Phoenix, Arizona

Figure 16 shows South Phoenix’s PPOR map for the years 1996 through 2000. In the map, the overall F-IMR was divided into four cells suggesting the prevention/intervention direction for the deaths in that group. The group-specific rates, shown in the four cells, contribute (or sum) to the total rate. The highest group-specific F-IMR was in the “maternal health/prematurity” category (3.6 deaths per 1,000 live births and fetal deaths). “Infant health” and “maternal care” followed with rates of 2.4 deaths per 1,000 live births and fetal deaths, while the “newborn care” category showed the lowest rate (2.1 deaths per 1,000 live births and fetal deaths).

**Figure 16. Map of South Phoenix’s Feto-Infant Mortality Rate**

		Age at Death		
		Fetal	Neonatal	Post Neonatal
Birth Weight	500-1499 g.	Maternal Health/Prematurity <b>3.62</b>		
	1500+ g.	Maternal Care <b>2.41</b>	Newborn Care <b>2.11</b>	Infant Health <b>2.41</b>

During the same time period, 1996 to 2000, the reference group (consisting of Maricopa County, non-Hispanic White women who were at least 20 years of age and had some education beyond high school) had a total F-IMR of 5.8 deaths per 1,000 live births and fetal deaths. There were a total of 571 fetal and infant deaths and 98,823 live births and fetal deaths during the period. The map of the reference group is shown as the middle map in Figure 17. Similar to the South Phoenix map, the highest group-specific F-IMR was in the “maternal health/prematurity” category (1.9 deaths per 1,000 live births and fetal deaths).

**Excess Feto-Infant Mortality**

Figure 17 shows the excess feto-infant mortality in the South Phoenix area, as well as the method to obtain the excess. The map on the far left is the South Phoenix F-IMR map that was shown above, while the middle map is the reference group’s F-IMR map. The map on the far right is the excess F-IMR for the South Phoenix area. Subtracting the reference group’s F-IMR (5.8) from South Phoenix’s F-IMR (10.6) yielded an excess F-IMR of 4.8 (feto-infant deaths per 1,000 live births and fetal deaths). The amount of excess mortality suggests the extent to which the F-IMR can be theoretically reduced in South Phoenix. If the F-IMR did not differ across groups, then there would have been almost 5 fewer feto-infant deaths per 1,000 live births and fetal deaths in the area during the period 1996-2000. Note that the individuals in the reference group were not removed from the South Phoenix numbers, providing a conservative estimate of the excess.

**Figure 17. South Phoenix Opportunity Gap (Excess Feto-Infant Mortality Relative to the Reference Group)**

South Phoenix			Reference			Excess		
Total F-IMR = 10.6			5.8			4.8		
3.62			1.85			1.76		
2.41	2.11	2.41	1.04	1.50	1.39	1.37	0.61	1.02
<b>Opportunity Gap</b>								

Each of the group-specific rates in the map was subtracted from the corresponding group rate in the reference map in the same manner that the total population rate was subtracted. The largest excess rate was in the “maternal health/prematurity” category with 1.8 deaths per 1,000 live births and fetal deaths. “Maternal care” showed an excess rate of 1.4, “infant health” an excess rate of 1.0, and “newborn care” an excess rate of 0.6 (deaths per 1,000 live births and fetal deaths).

If the South Phoenix F-IMR was similar to the reference group’s F-IMR, there would have been 111 fewer feto-infant deaths during the five-year period than actually occurred. See Figure 18 for the translation of rates into number of deaths over the period. Of the 111 excess feto-infant deaths, 41 occurred in the “maternal health/prematurity” group, 32 were in the “maternal care” group, 14 were in the “newborn care” group, and 24 were in the “infant health” group. These excess deaths represented 45% of the feto-infant mortality in South Phoenix.

These findings suggest that successful prevention and intervention efforts focused on “maternal health/prematurity” and “maternal care” should yield larger reductions in the overall excess feto-infant mortality rate more than focusing on other points in the health care systems continuum. Although there is room for improvement in all areas, some categories contribute more to the overall rate than others (e.g., “newborn care”).

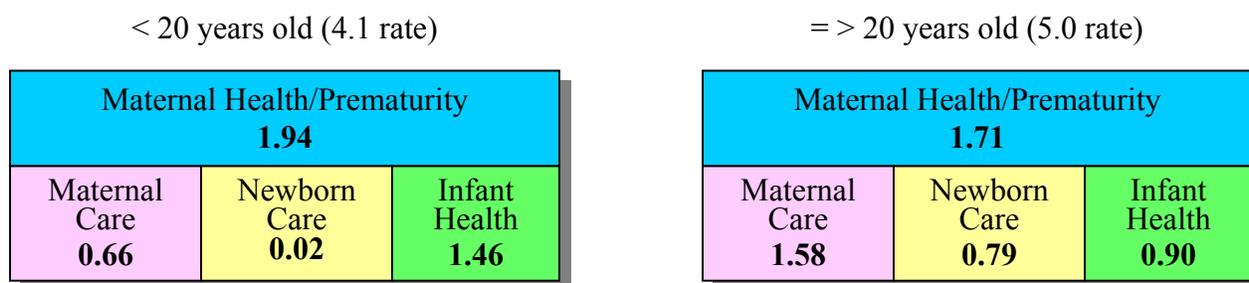
**Figure 18. South Phoenix Potential for Reduction: Excess Rates Translated Back to Numbers**

Birth Weight	Age at Death		
	Fetal	Neonatal	Post Neonatal
500-1499 g.	Maternal Health/Prematurity 41		
1500+ g.	Maternal Care 32	Newborn Care 14	Infant Health 24

### Excess Feto-Infant Mortality for Population Groups

The excess rates were also examined by population groups to determine which group contributed more to the excess feto-infant mortality. Risk factors within each population group can affect infant mortality. This knowledge allows prevention efforts to be further focused on those groups with higher mortality rates.

**Figure 19. South Phoenix Excess Feto-Infant Mortality by Age Group**



Maternal age was categorized into two groups: women under 20 years old and women 20 or more years of age. For women less than the age of 20, there were a total of 52 feto-infant deaths and 5,273 live births and fetal deaths. For women 20 or more years of age, there were a total of 193 feto-infant deaths and 17,949 live births and fetal deaths. The excess F-IMR for women less than 20 years of age was lower than the excess rate for women 20 or more years of age in South Phoenix (4.1 and 5.0 deaths per 1,000 live births and fetal deaths, respectively). The direction of this difference is opposite of the findings in the county. Sixty is the preferred minimum number of feto-infant deaths in each population group and there are slightly fewer than 60 deaths for women under 20 years of age.

Figure 19 shows the excess feto-infant mortality rate map for women less than 20 years of age and women 20 or more years of age. Although “maternal health/prematurity” showed the highest excess rate for both groups (1.9 and 1.7 for younger and older women, respectively), the second highest rate differed. The second highest rate was in the “infant health” category for women who were under 20 years of age but was in the “maternal care” category for women who were 20 years of age or older.

The level of maternal education was categorized into two groups: women with a high school education or less (<=12 years) and women with any education beyond high school (>12 years). There were a total of 165 feto-infant deaths and 13,524 live births and fetal deaths for women with a high school education or less. For women with some education beyond high school, there were a total of 59 feto-infant deaths and 8,761 live births and fetal deaths. Figure 20 shows the maps of excess feto-infant mortality for both education levels. There was a large difference between the total excess F-IMRs in the two education groups; the excess death rate for women

with less education was 6.4 while the rate for women with more education was 1.0 deaths per 1,000 live births and fetal deaths. For those with a high school education or less, the highest group-specific excess rates were “maternal care” and “maternal health/prematurity.” Education is an antecedent factor for other measures such as income levels, access to care, and behavioral patterns and a proxy measure for socioeconomic status (SES). Therefore, increasing the population’s education level would not necessarily decrease all the risk factors for feto-infant mortality but it would help to improve outcomes dependent on incomes, behaviors, and access to care.

**Figure 20. South Phoenix Excess Feto-Infant Mortality by Education Group**



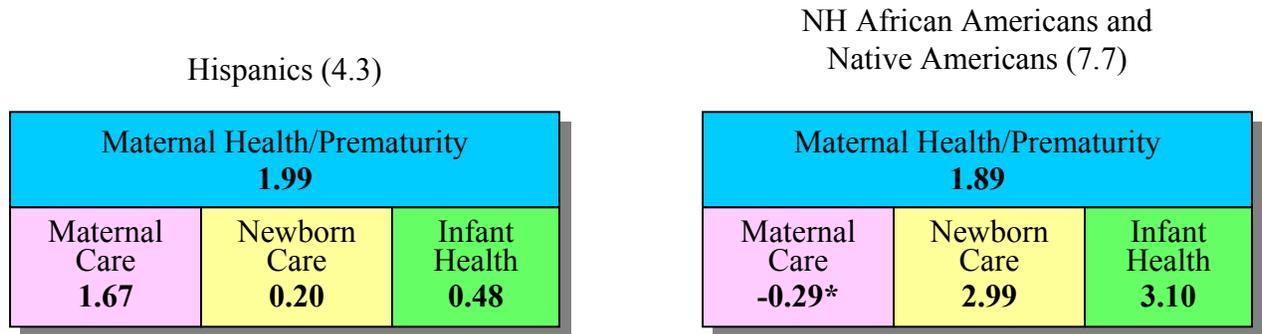
\* Too few deaths for a stable rate

Analyses were conducted for racial/ethnic subgroups. Race/ethnicity in the U.S. society can be a proxy measure for many risk factors such as socioeconomic status, living conditions, cultural and behavioral patterns, and life stressors. During the five year period, there were a total of 179 feto-infant deaths and 17,690 live births and fetal deaths for Hispanics; 28 feto-infant deaths and 2,639 live births and fetal deaths for non-Hispanic (NH) Whites; 26 feto-infant deaths and 1,905 live births and fetal deaths for NH African Americans; and 10 feto-infant deaths and 769 live births and fetal deaths for NH Native Americans. NH African Americans (7.9 per 1,000 live births and fetal deaths) and NH Native Americans (7.2 per 1,000 live births and fetal deaths) had the highest total excess F-IMRs. The number of feto-infant deaths was too small for the NH African American and NH Native American groups to further subdivide the total rate; the two groups were combined for a total excess F-IMR of 7.7 deaths per 1,000 live births and fetal deaths. The total excess F-IMR for NH Whites was 4.8 per 1,000. The number of feto-infant deaths in the NH White group was too small for further partitioning. The total excess F-IMR for Hispanics was 4.3 deaths per 1,000 live births and fetal deaths.

Figure 21 shows the excess feto-infant mortality map for South Phoenix Hispanics and NH African Americans/Native Americans; the two groups with a large enough population to further categorize feto-infant mortality rates. For Hispanics, the highest group-specific excess F-IMR was in the “maternal health/prematurity” category, and the second highest excess rate was in the “maternal care” category. For NH African Americans/Native Americans, the highest group-specific excess F-IMR fell in the “infant health” category, while the second highest rate fell in

the “newborn care” category. Note, however, that the “maternal health/prematurity” categories in the two groups had similar excess rates but this was the highest rate for Hispanics and only the third highest rate for NH African Americans/Native Americans.

**Figure 21. South Phoenix Excess Feto-Infant Mortality by Race/Ethnicity**



\* Too few deaths for a stable rate

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## Section IV. South Phoenix: PRAMS

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The Pregnancy Risk Assessment Monitoring System (PRAMS)<sup>3</sup> is a surveillance system created by the Centers for Disease Control and Prevention (CDC) to monitor maternal experiences and behaviors that occur just prior to, during, and after pregnancy. The PRAMS surveillance augments the routine birth and death certificate surveillance that usually occurs to monitor adverse pregnancy outcomes. The purpose of the surveillance is to understand the relationships between maternal experience/behavior and infant morbidity and mortality. The ultimate goal of PRAMS is to improve the health of mothers and infants by providing information to aid in preventions to decrease such unfavorable outcomes as low birth weight, infant morbidity, and mortality.

PRAMS was first developed by CDC in 1988 and is now implemented in 31 states and New York City. It was initiated because infant mortality rates and low birth weight rates were not declining as quickly as they had in prior years. The PRAMS project provides state-specific data, in addition to comparisons among participating states as the same data collection methods are used. PRAMS provides information to state and federal health officials and policy makers to facilitate targeting intervention strategies and allocating resources towards appropriate maternal and child health programs.

PRAMS is a mixed-mode surveillance system. The primary mode of data collection is a survey that is mailed, up to three times, to mothers that have recently delivered a baby (2-6 months postpartum). If there is no response by mail, the women are contacted and interviewed by telephone (secondary mode). The PRAMS survey consists of a core set of questions developed by CDC that all participating states are required to use and state-specific questions that are selected from a pretested list of standard questions or questions that are developed by individual states. The questions cover a wide-range of topics including, intendedness of the pregnancy, feelings about the most recent pregnancy, barriers and content of prenatal care, maternal use of alcohol and tobacco, psychosocial stressors, pregnancy-related morbidity, infant health care, maternal living conditions, and maternal knowledge of pregnancy-related health issues, such as benefits of folic acid.

### South Phoenix PRAMS Pilot Study

Arizona was not one of the states that received funding to conduct PRAMS. For that reason, MCDPH decided to determine the feasibility of conducting PRAMS countywide and selected South Phoenix for the pilot project. The South Phoenix community was selected as the pilot area because PRAMS is a tool that could help identify and reduce health disparities in the area. The pilot project was funded mainly by the MCDPH. The local March of Dimes chapter and Optimo Advertising collaborated to provide incentive rewards to women who completed the questionnaire: one out of every 100 respondents received a \$300 gift certificate to a grocery store in the mother's neighborhood. Funding to implement PRAMS countywide is not currently available. With the exception of New York City, MCDPH was the first local jurisdiction to conduct PRAMS surveillance.

A sample of 616 women residing in South Phoenix, who delivered a live birth between November of 1999 and March of 2000, were mailed questionnaires up to three times. If the mother did not respond, attempts were made to contact and interview her by telephone. The PRAMS sample was stratified by birth weight (low birth weight and normal birth weight) in order to include enough low birth weight births for comparisons. A total of 266 women responded, yielding a 43% response rate. Four respondents were not included in the analyses so 262 questionnaires were weighted and analyzed using the statistical software SUDAAN<sup>®</sup> 4. See the Methodology section in Appendix A for more information.

## Data Presented

The PRAMS data presented in this document are a subset of the full questionnaire. The South Phoenix Healthy Start Consortium Community Assessment and Evaluation Subcommittee requested the specific information shown. Twelve questions from the survey were selected for presentation:

- AHCCCS (Arizona Health Care Cost Containment System) coverage prior to pregnancy;
- Health insurance coverage, not including AHCCCS, prior to pregnancy;
- Reasons for not using birth control when the woman was not trying to get pregnant;
- Psychosocial stressors in the year prior to delivery;
- Satisfaction with prenatal care;
- Topics discussed during prenatal care visits;
- Services received during pregnancy;
- Depression following delivery;
- Infant's sleep position;
- Average amount of time infant spent in a room with someone smoking;
- Whether the infant was seen by a provider during the first week of life;
- Whether the infant went for care as frequently as the mother wished;
- Barriers to routine well-baby care.

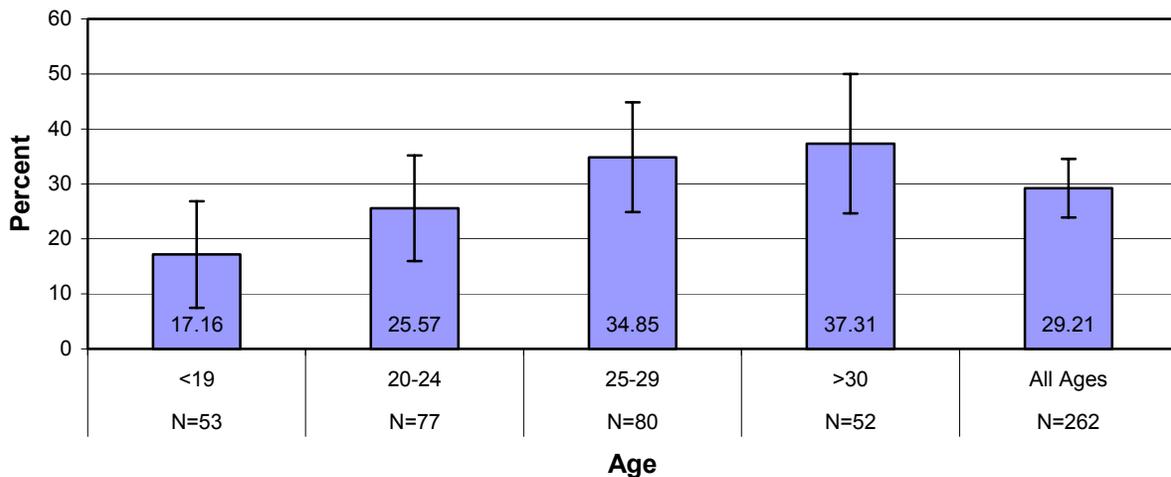
For each item, differences across the demographic groups of maternal age, maternal race/ethnicity, and maternal education were examined. For selected items, differences across prenatal care site and method of payment for delivery were examined.

The graphs presented show weighted data. For each graph, the percent, the confidence interval for that percent, and the number of survey respondents in the group and are shown. Estimates based on less than 32 respondents are not shown. Numbers of respondents in the other or unknown categories were generally too small and, therefore, not shown. The confidence intervals are shown because the width of the interval provides some insight into the stability of the data. Chi-square ( $\chi^2$ ) tests of association between two variables are also provided in the text. An example of graph interpretation is presented in Appendix B. In most cases, only graphs of statistically significant associations are presented and discussed in the results section; however, tables showing the percentages, confidence intervals, and number of respondents in each group for all questions are presented in tables in Appendix C.

## Insurance or AHCCCS Coverage Prior to Pregnancy

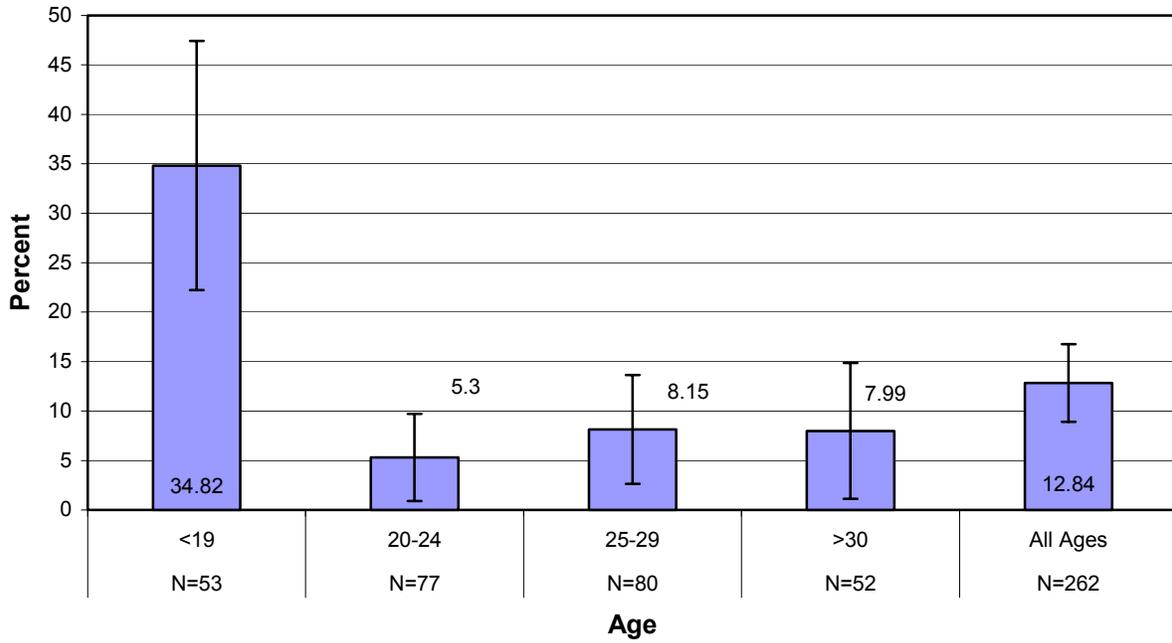
The first question in the PRAMS survey asked mothers “Just before you got pregnant, did you have health insurance? Don’t count AHCCCS” while a second question asked mothers about AHCCCS coverage prior to pregnancy. An estimated 29.2% of new mothers in South Phoenix indicated they had health insurance prior to becoming pregnant. Approximately 12.8% of new mothers reported having AHCCCS coverage prior to pregnancy. Overall, 39.3% of new mothers reported having insurance or AHCCCS coverage prior to pregnancy. Reportedly, several mothers had both AHCCCS and insurance coverage. These percentages can be seen on the right sides of Figures 1 through 3.

**Figure 1. South Phoenix PRAMS: Percent of Women Reporting Being Insured Prior to Pregnancy by Age Group**



As women’s age group increased, insurance coverage increased; 19.3% of mothers aged 19 years or less stated they had insurance while 37.6% of mother’s aged 30 years or more had insurance. The association between age and insurance coverage, however, was not statistically significant ( $\chi^2=8.62, p<.05$ ). While fewer mothers less than 20 years of age reported having insurance coverage, more mothers in this age group (34.8%) had AHCCCS coverage before becoming pregnant than mothers in the older age groups (see Figure 2). For women aged 20-24, 5.3% reported coverage by AHCCCS. Approximately eight percent of the 25-29 year old and the 30 year old and higher age groups stated they were covered by AHCCCS prior to pregnancy. The association between age group and AHCCCS coverage prior to pregnancy was statistically significant ( $\chi^2 = 16.29, p < .05$ ).

**Figure 2. South Phoenix PRAMS: Percent of Women Reporting Being Covered by AHCCCS Prior to Pregnancy by Age Group**



**Figure 3. South Phoenix PRAMS: Percent of Women Reporting Being Covered by Any Type of Health Coverage by Age Group**

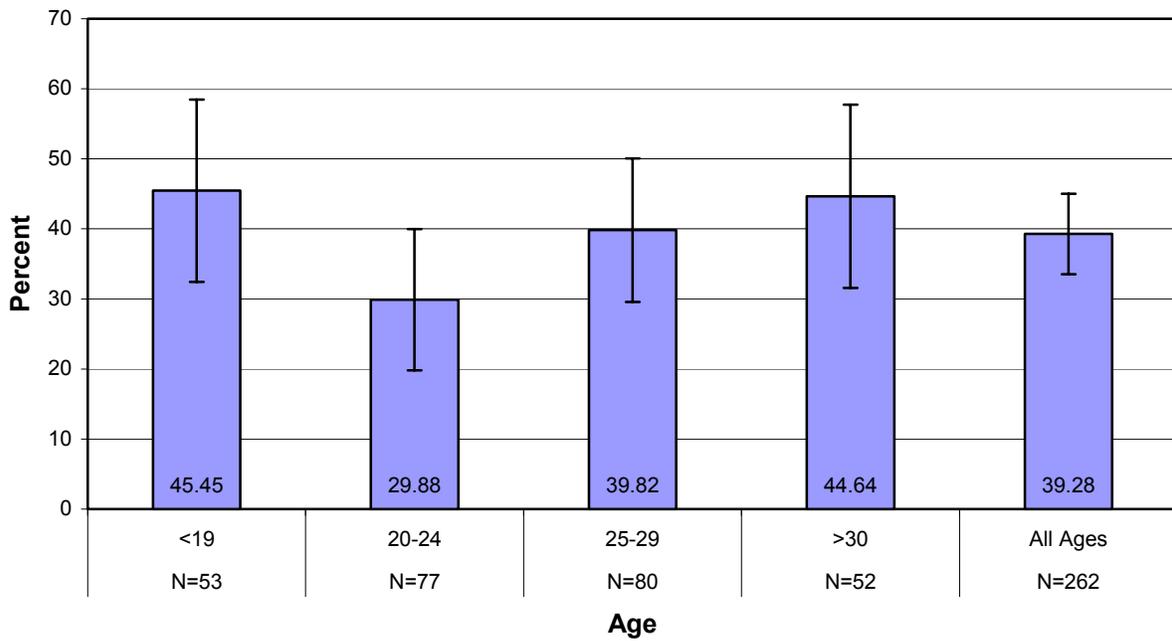
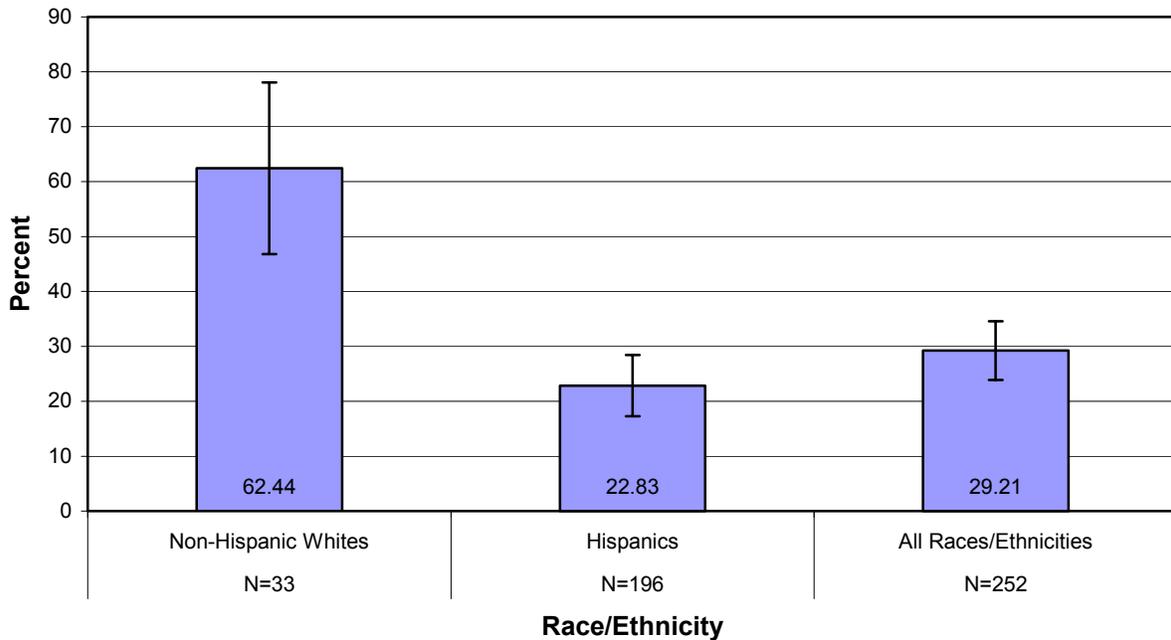


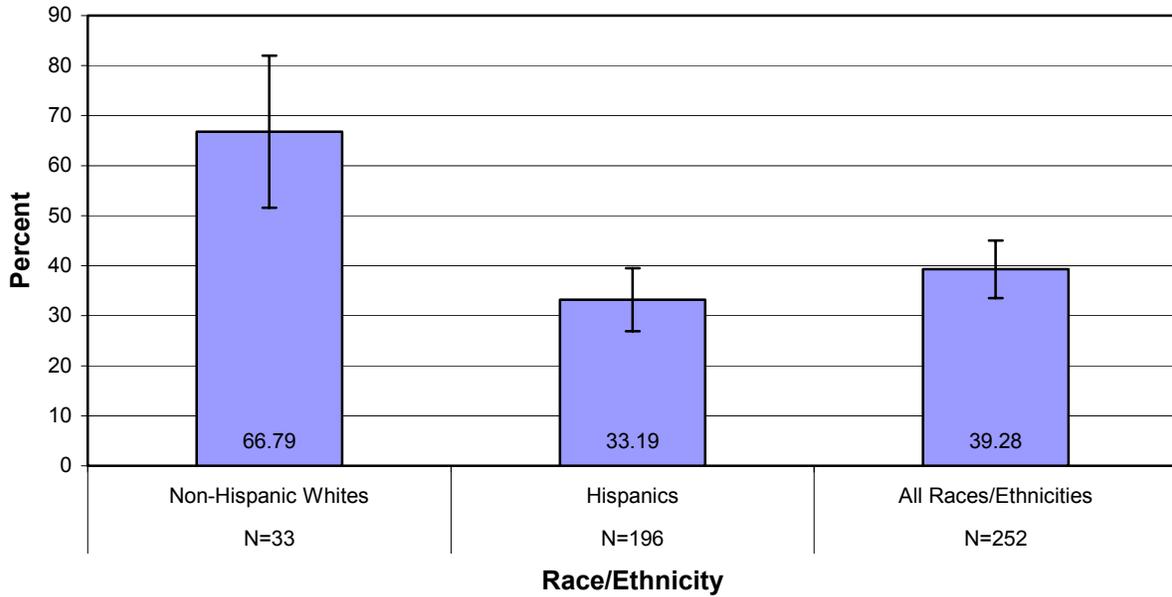
Figure 3 shows any coverage (AHCCCS or insurance) prior to pregnancy by age group. Overall, the new mothers with the least coverage, AHCCCS or insurance, prior to pregnancy were women aged 20-24 (29.9%). The association between any coverage and age group was not significant.

Non-Hispanic (NH) White women (62.4%) were significantly more likely to have insurance coverage prior to pregnancy than Hispanic women (22.8%;  $\chi^2 = 16.83, p < .05$ ). See Figure 4. The opposite was true for AHCCCS coverage; NH White mothers (4.4%) were less likely to have AHCCCS coverage prior to pregnancy than Hispanic mothers (13.2%) but the difference did not reach statistical significance. Significantly more NH White mothers (66.8%) reported to have some type of coverage before pregnancy than Hispanic mothers (33.2%;  $\chi^2 = 14.57, p < .05$ ). See Figure 5.

**Figure 4. South Phoenix PRAMS: Percent of Women Reporting Being Insured Prior to Pregnancy by Race/Ethnicity**

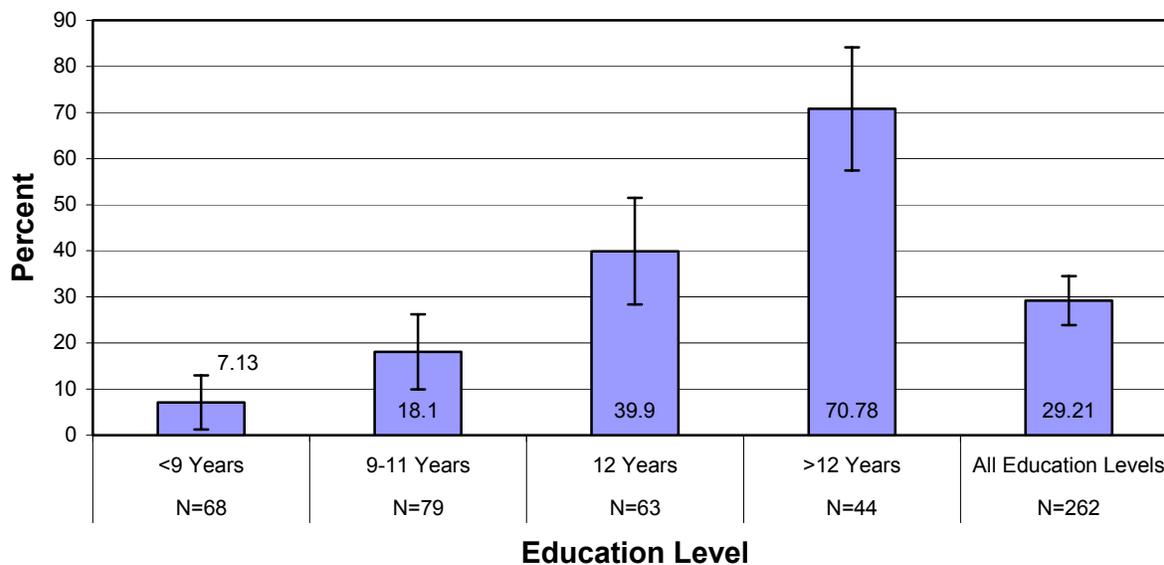


**Figure 5. South Phoenix PRAMS: Percent of Women Reporting Being Covered With Any Type of Health Coverage Prior to Pregnancy by Race/Ethnicity**



As South Phoenix mothers' level of education increased, insurance coverage prior to pregnancy significantly increased ( $\chi^2 = 64.95, p < .05$ ). Insurance coverage before pregnancy ranged from 7.1% for mothers with less than a ninth grade education to 70.8% for mothers with some education beyond high school. Figure 6 shows the percent of women reporting they had insurance coverage prior to pregnancy for each education level group.

**Figure 6. South Phoenix PRAMS: Percent of Women Reporting Being Insured Prior to Pregnancy by Education Level**



**Figure 7. South Phoenix PRAMS: Percent of Women Reporting Being Covered on AHCCCS Before Pregnancy by Education Level**

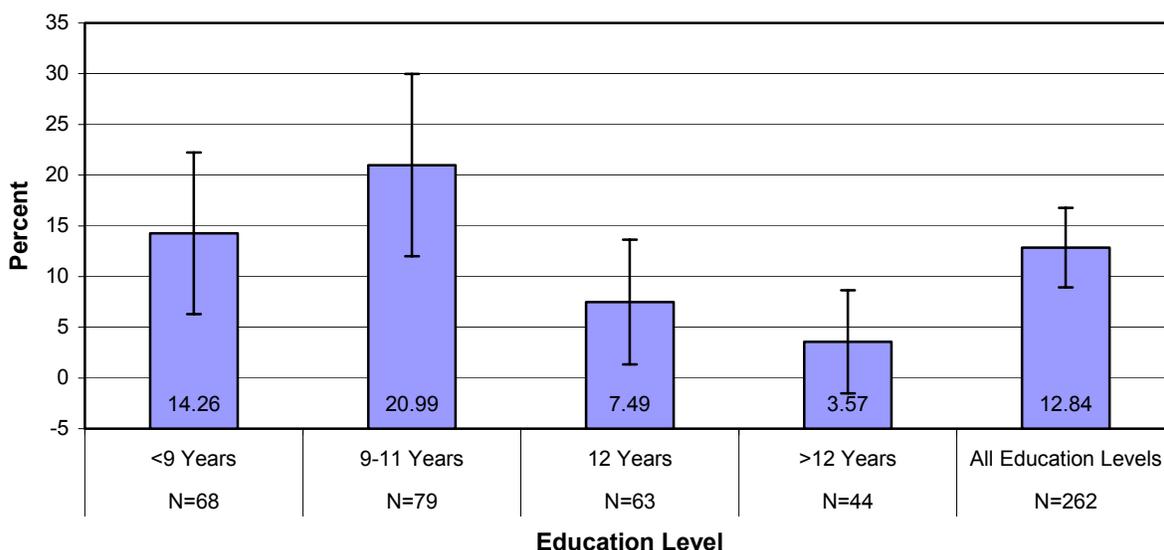
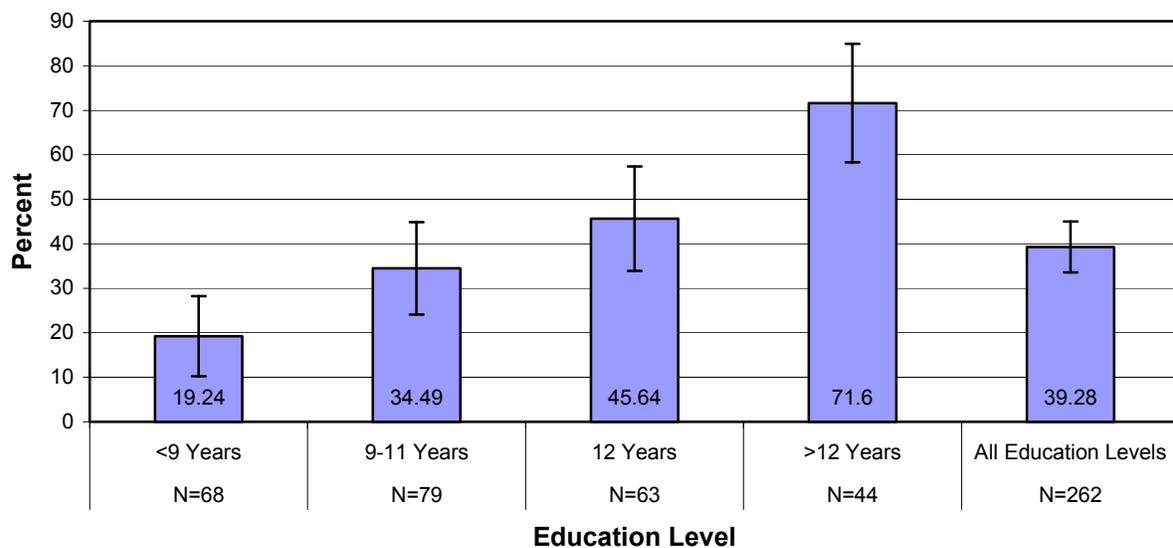


Figure 7 displays the percent of women who reported having AHCCCS coverage prior to pregnancy for each education level. Although the education grade level achieved and AHCCCS coverage prior to pregnancy were significantly associated ( $\chi^2 = 12.99, p < .05$ ), the trend was not linear. A larger percentage of the women with a ninth to eleventh-grade education (21.0%)

indicated they had AHCCCS coverage prior to pregnancy than women with some education beyond high school (3.6%).

As the level of education increased, the percent of women with any coverage (AHCCCS or insurance) significantly increased ( $\chi^2 = 35.89, p < .05$ ). Even in the highest education group, however, 28% of the South Phoenix mothers stated they did not have any coverage when they became pregnant. Importantly, more than 80% of the new mothers with less than a ninth grade education reported they did not have any health coverage prior to pregnancy. See Figure 8.

**Figure 8. South Phoenix PRAMS: Percent of Women Reporting Being Covered by Any Type of Health Coverage Prior to Pregnancy by Education Level**



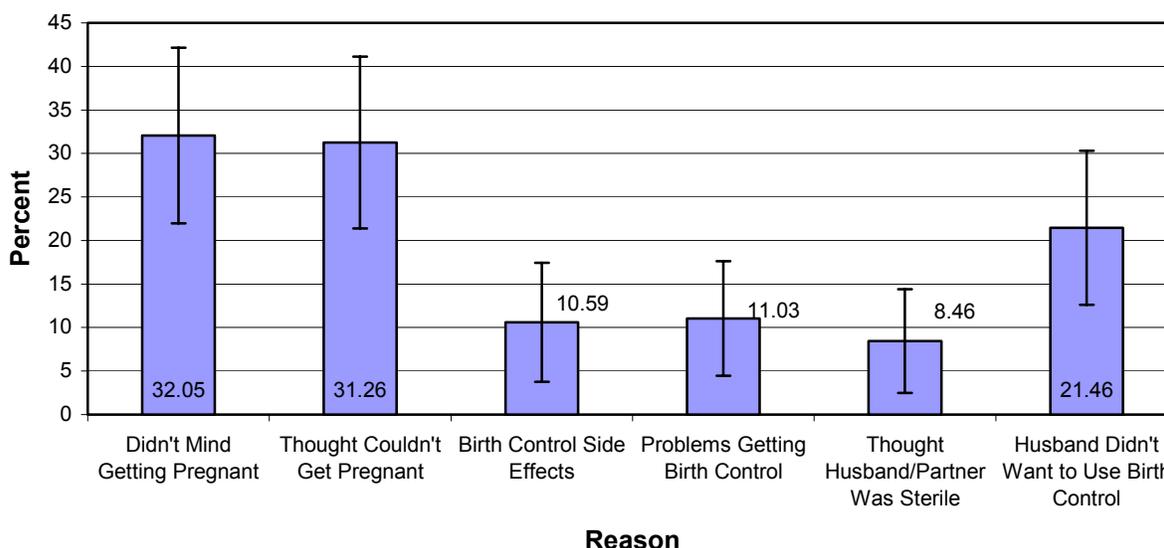
### Reasons for Not Doing Anything to Keep from Getting Pregnant

Mothers who were not trying to get pregnant and were not using any form of birth control responded to a question asking them “What were you or your husband or partner’s reasons for not doing anything to keep from getting pregnant?” Respondents were instructed to check all of the answers that applied. Eighty-three of the 262 respondents (31.7%) indicated they were not trying to get pregnant and were not using any form of birth control. See Figure 9.

Over 30% of the women stated that they did not mind getting pregnant (32.1%). It is worth noting that these women were not “trying” to get pregnant, but did not mind getting pregnant. An understanding of people’s interpretation of “trying to get pregnant” could prove informative. Ready to become pregnant and actively trying may represent two different concepts.

Although 31.3% of respondents stated that they thought they could not get pregnant at that time, only 8.5% of the respondents believed that either they or their husband/partner was sterile. Thus, over 20% of the respondents thought they could not get pregnant for some other reason (e.g., the wrong time during their menstrual cycle) because the women responding to this question were not using birth control.

**Figure 9. South Phoenix PRAMS: Percent of Women Agreeing With Reasons For Not Doing Something to Keep From Getting Pregnant Among Those Not Trying to Get Pregnant and Not Using Birth Control (N=83)**



Their husband or partner not wanting to use birth control was the reason given by 21.5% of the respondents. Over 11% of the women said they had problems getting birth control and 10.6% had birth control side effects. The number of respondents in each category was too small to examine these reasons for different maternal age groups, maternal race/ethnicities, or maternal education levels.

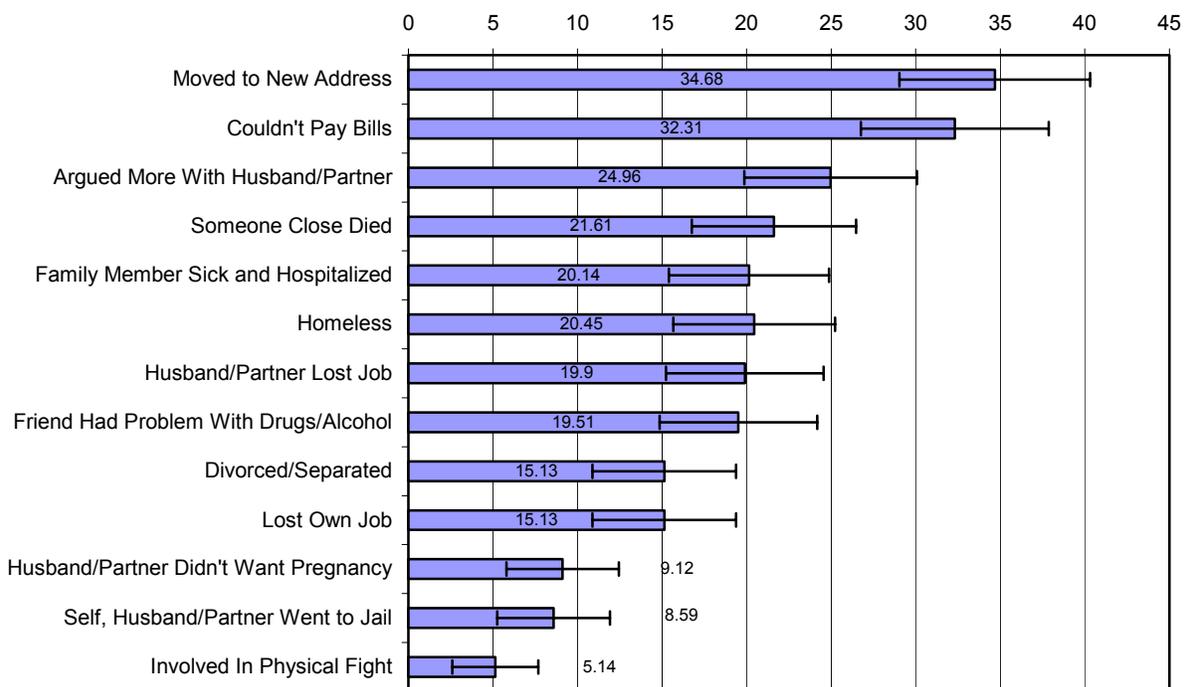
### **Psychosocial stressors that occurred in the 12 months prior to delivery**

Psychosocial stress affects individual well-being and can impact the health of both the mother and child. Figure 10 displays the percent of women who experienced a variety of psychosocial stressors in the 12 months prior to delivering their baby. In the 12 months prior to delivery, almost 35% of South Phoenix mothers reported moving to a new address. Thirty-two percent of the women indicated they had bills that they were unable to pay, 19.9% had a husband or partner lose a job, and 15.1% lost their job when they wanted to continue working.

Many of the women stated they had to deal with a family member being sick and hospitalized (20.1%), someone close to them dying (21.6%), someone close to them having problems with drugs or alcohol (19.5%), or getting divorced or separated in the twelve months prior to

delivering their baby (15.1%). Around 25% of South Phoenix women reported they argued with their husband/partner more than usual during the 12 months prior to delivery and 9.1% of the women reported their husband/partner did not want the pregnancy.

**Figure 10. South Phoenix PRAMS: Percent of Women Experiencing Psychosocial Stressors in the 12 Months Prior to Delivery (N=262)**



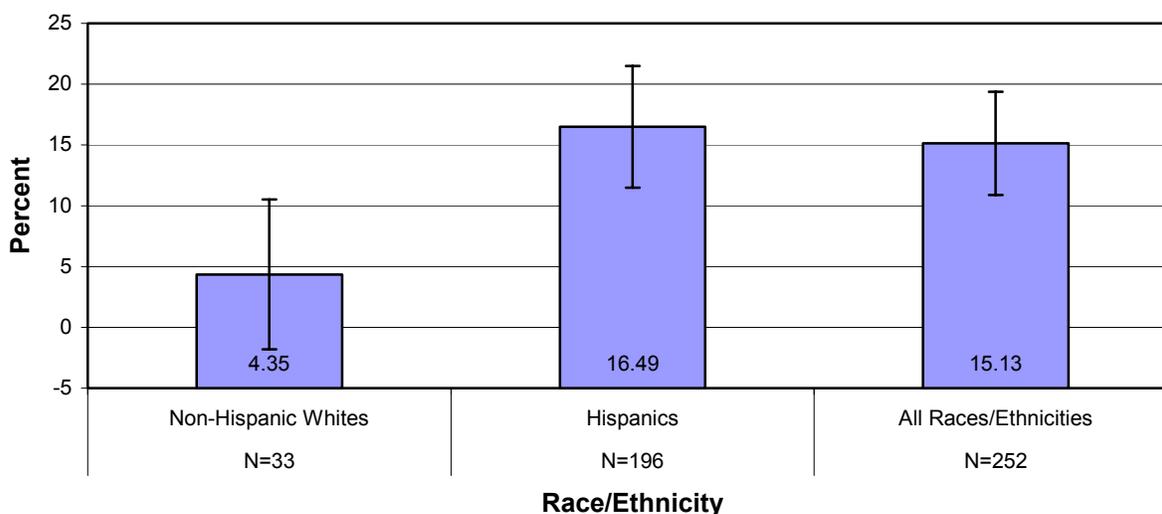
For 8.6% of the South Phoenix women reporting, either they or their husband/partner went to jail during that time period. Over five percent of the women reported being involved in a physical fight in the 12 months before they delivered their baby.

All 20.5% of respondents indicating they were homeless during the 12 months prior to delivery were Hispanic (26.4% of Hispanics). The majority of the PRAMS sample is Hispanic. One interpretation of the homeless question results is that many Hispanic South Phoenix residents were without a home at some point during those 12 months. However, it seems unlikely that MCDPH was able to contact so many people by mail or phone that were homeless so recently. Another possibility is that the meaning or interpretation of the homeless question was different for Hispanic mothers than mothers of other races/ethnicities. This sort of difference could occur if, for example, Hispanic women indicated that they were homeless when they were renting their accommodations, when they lived with relatives, lived in an apartment rather than a home, or were temporarily staying with other people (for example, recent immigrants living in groups until they found more permanent housing).

Psychosocial stressors were also examined by the demographic groups of maternal age, maternal race/ethnicity, and maternal education level. Three associations between stress and demographic

groups were statistically significant. A larger percentage of Hispanic mothers (16.5%) reported being divorced or separated from their husband or partner during the year prior to delivering their baby than NH White mothers (4.4%;  $\chi^2 = 18.72, p < .05$ ). See Figure 11.

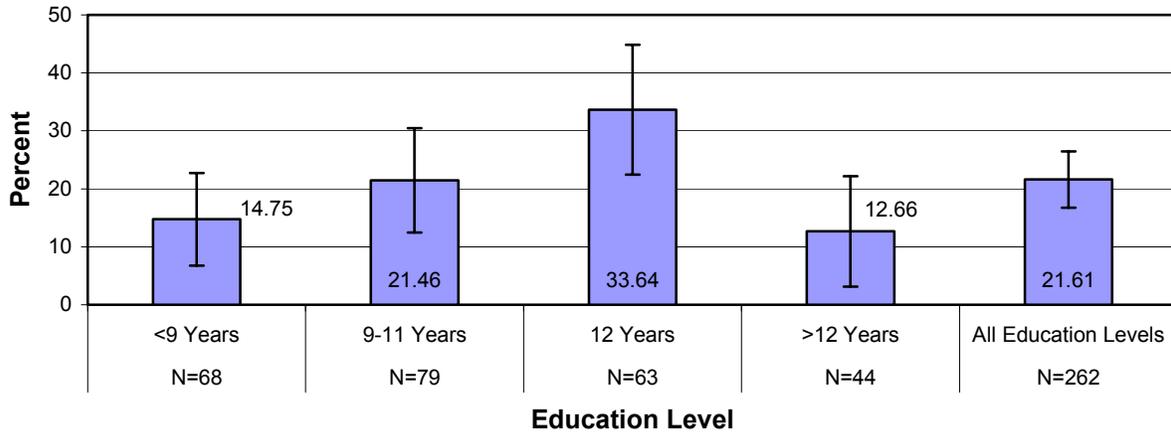
**Figure 11. South Phoenix PRAMS: Percent of Women Reporting They Were Divorced/Separated With Husband/Partner During the 12 Months Prior to Delivery by Race/Ethnicity**



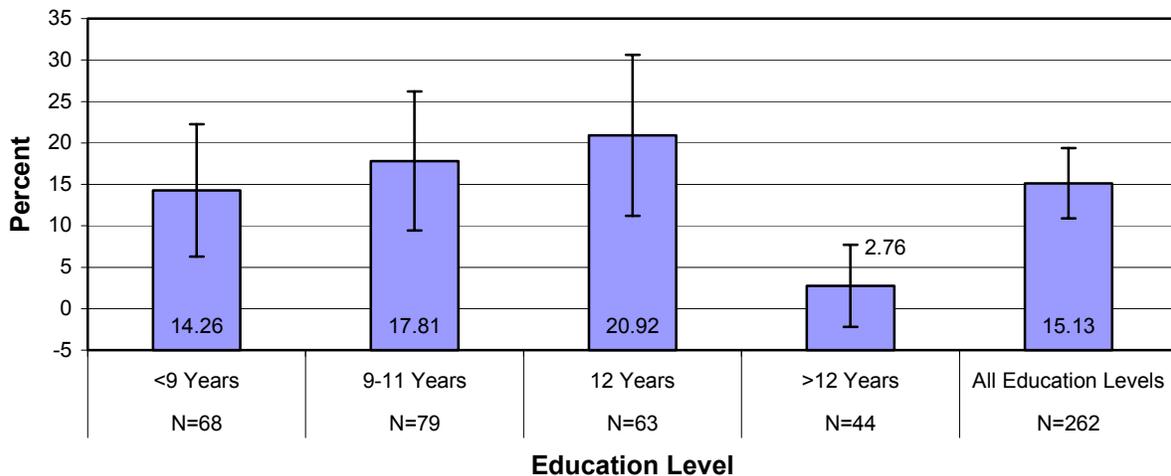
A smaller percentage of women with some education beyond high school (2.8%) stated they lost their job during the year prior to delivering their baby than women with lower levels of education; 14.3% of women with less than a ninth grade education, 17.8% of women with a ninth to eleventh grade education, and 20.9% of women with a high school education or equivalent reported losing their jobs in the year prior to delivery ( $\chi^2 = 28.39, p < .05$ ). See Figure 12 for the relationship between education level and women losing their job.

Fewer women with some education beyond high school (12.7%) had someone close to them die in the 12 months prior to giving birth than women with less education.

**Figure 12. South Phoenix PRAMS: Percent of Women Reporting Someone Close Died in the 12 Months Prior to Delivery by Education Level**



**Figure 13. South Phoenix PRAMS: Percent of Women Reporting They Lost Their Job During the 12 Months Prior to Delivery by Education Level**

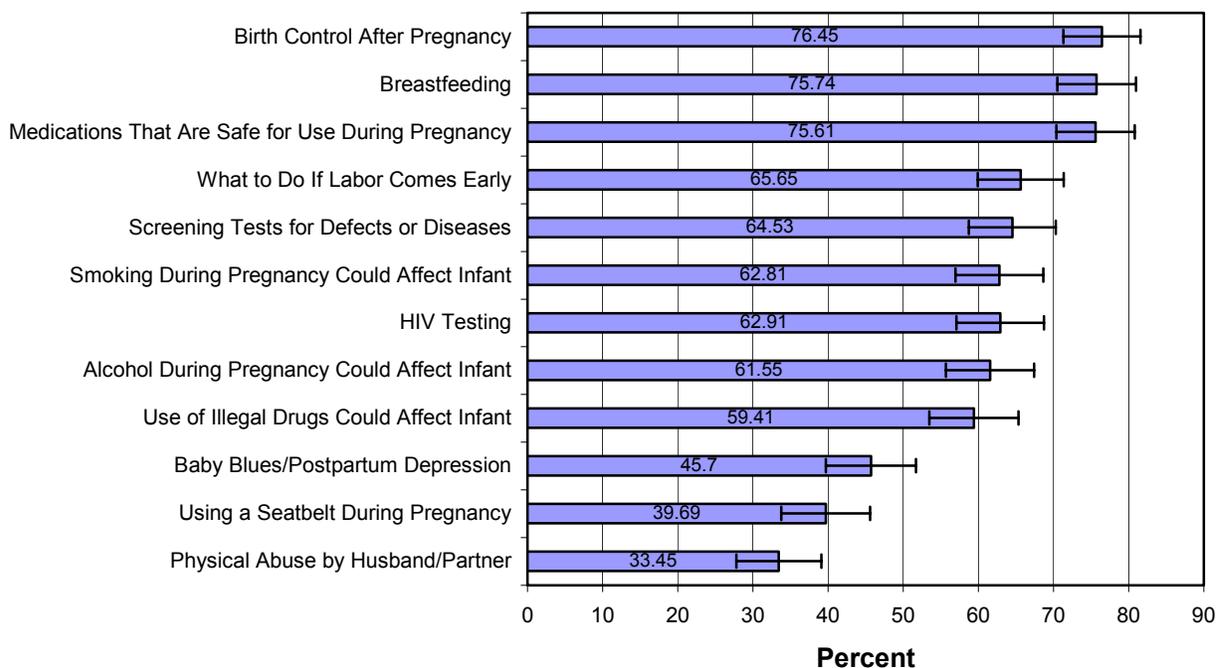


**Topics Discussed by Health Care Worker During Prenatal Visits**

The purpose of prenatal care is to facilitate the birth of a live and healthy infant while protecting the health of the mother. Research suggests that prenatal care improves birth outcomes. As well as medical and risk assessment, prenatal care should include health promotion. Figure 14 shows the percentage of women who recalled that a physician, nurse, or other health care worker discussed (not including literature or videos) various topics with them during their prenatal care visits.

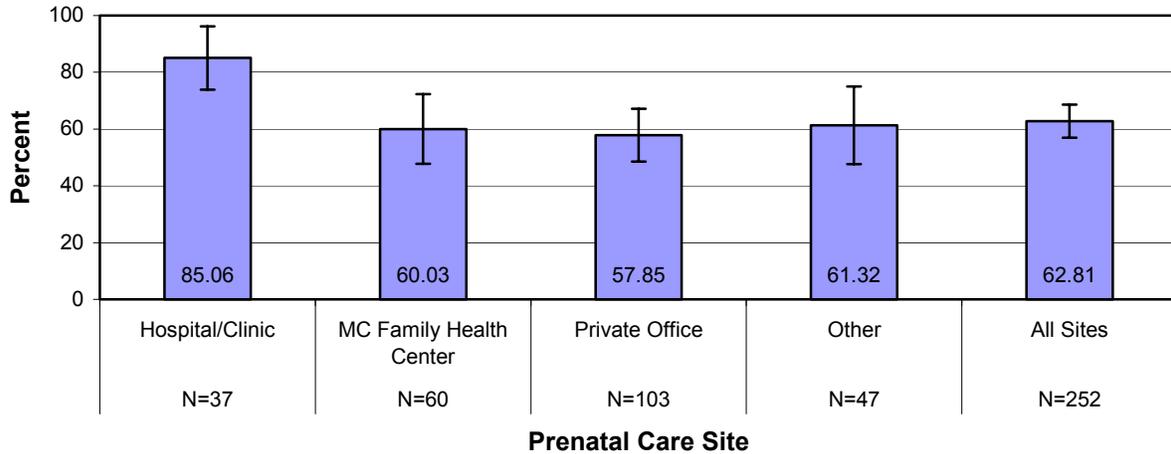
More than 75% of South Phoenix women who indicated they received prenatal care recalled their physician discussing medicine that is safe during pregnancy, breastfeeding, and birth control after pregnancy. At least 60% of the women remembered discussions about premature labor, HIV testing, screening tests for defects or diseases, alcohol use, cigarette use, and illegal drug use. Less than half of the women recalled a discussion about postpartum depression or the baby blues. Only 33.5% of the new mothers remembered a health care worker talking to them about physical abuse by a husband or partner and only 39.7% recalled a discussion about seatbelt usage during pregnancy.

**Figure 14. South Phoenix PRAMS: Percent of Women Reporting Their Health Care Provider Talked About These During Any Prenatal Care Visit (N=252)**



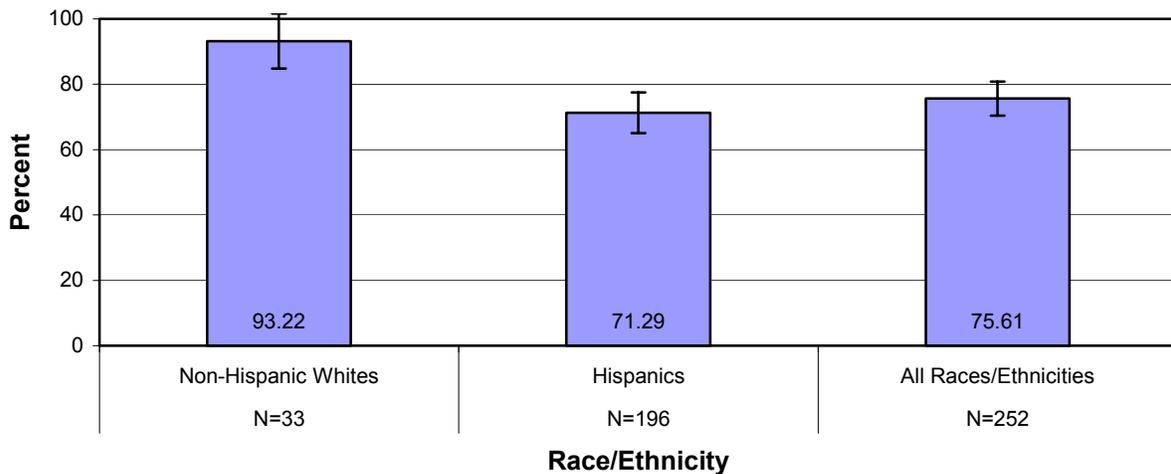
An examination of potential prenatal care discussions for different types of prenatal care sites (hospital clinic, MC Family Health Centers, private office, and other) and the demographic groups of maternal age, maternal race/ethnicity, and maternal education level was conducted. More women who had prenatal care at a hospital clinic (85.1%) recalled their health provider discussing the possible effects of cigarette smoking on their baby than women who received prenatal care at the MC Family Health Centers (60.0%) or a private doctors office (57.9%;  $\chi^2 = 14.13, p < .05$ ). Figure 15 displays the association between prenatal care site and health care provider's discussion of the effects of smoking while pregnant. There were no other statistically significant differences between prenatal care sites in women's recall of potential prenatal care discussions.

**Figure 15. South Phoenix PRAMS: Percent of Women Reporting Their Health Care Provider Spoke With Them About Smoking During Pregnancy by Prenatal Care Site**

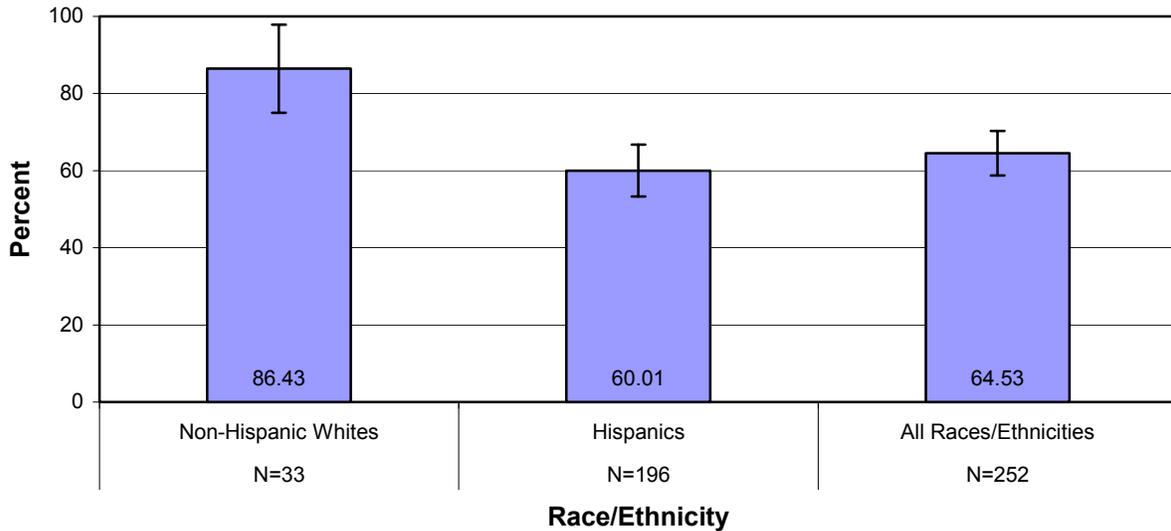


More NH White women than Hispanic women remembered their health care provider discussing the kinds of medications that were safe to consume during pregnancy (93.2% versus 71.3%;  $\chi^2 = 15.17, p < .05$ ; see Figure 16), doing tests that screen for birth defects or diseases that run in the family (86.4% versus 60.0%;  $\chi^2 = 12.73, p < .05$ ; see Figure 17), and getting their blood tested for HIV (82.0% versus 58.1%;  $\chi^2 = 11.28, p < .05$ ; see Figure 18).

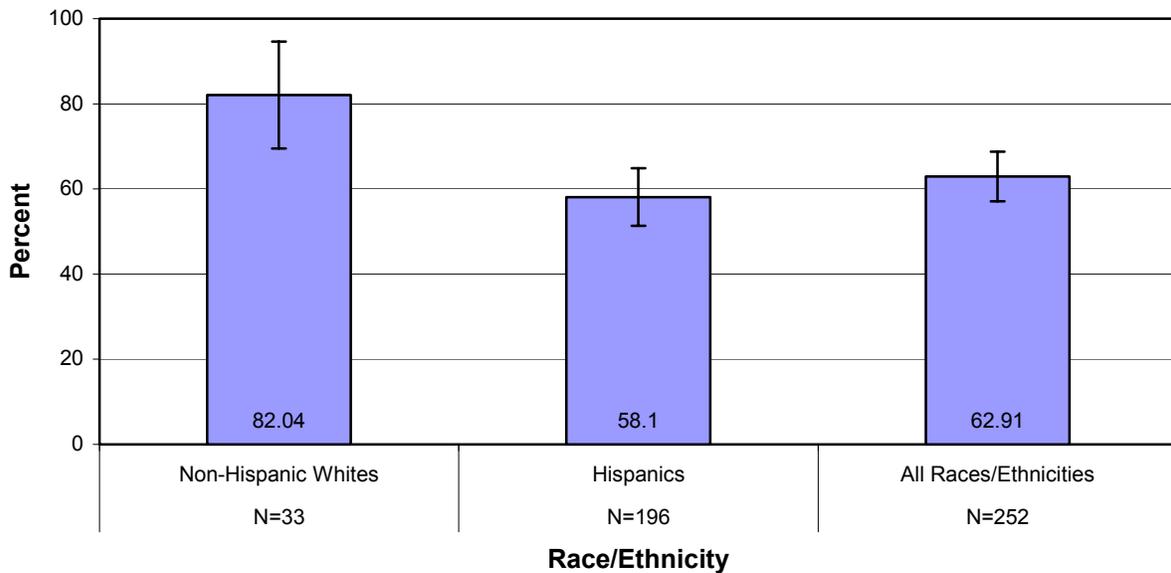
**Figure 16. South Phoenix PRAMS: Percent of Women Reporting Their Health Care Provider Talked With Them About Medications That Are Safe to Take During Pregnancy by Race/Ethnicity**



**Figure 17. South Phoenix PRAMS: Percent of Women Reporting Their Health Care Provider Talked With Them About Tests That Screen for Birth Defects and Diseases by Race/Ethnicity**



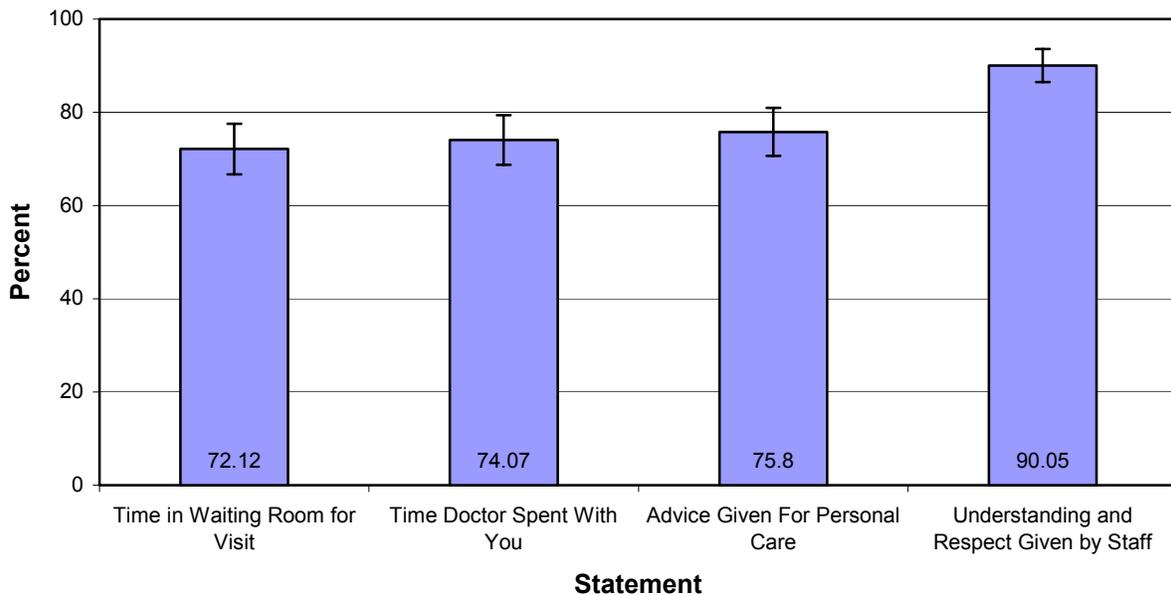
**Figure 18. South Phoenix PRAMS: Percent of Women Stating Their Health Care Provider Spoke With Them About Getting Tested for HIV by Race/Ethnicity**



### Satisfaction with Prenatal Care

One survey question asked new mothers how satisfied they were with various aspects of their prenatal care: Amount of time spent in the waiting room after they arrived for the visit, amount of time spent with the doctor or nurse, advice received about taking care of themselves, and the understanding and respect the staff showed them. The response options for satisfaction were yes and no, therefore, the percent of women satisfied is shown but differing levels of satisfaction cannot be determined. Overall, the majority of women were satisfied with some aspect of their prenatal care. A larger percentage of South Phoenix mothers (90%) stated they were satisfied with the understanding and respect the staff showed them as a person than with other aspects of the prenatal care experience. Seventy-six percent of women indicated they were satisfied with the advice they were given on how to care for themselves. Seventy-four percent of women reported being satisfied with the time the physician or nurse spent with them. Seventy-two percent of South Phoenix mothers stated they were satisfied with the time spent in the waiting room. See Figure 19.

**Figure 19. South Phoenix PRAMS: Percent of Women Reporting Being Satisfied With Aspects of Prenatal Care. (N=252)**

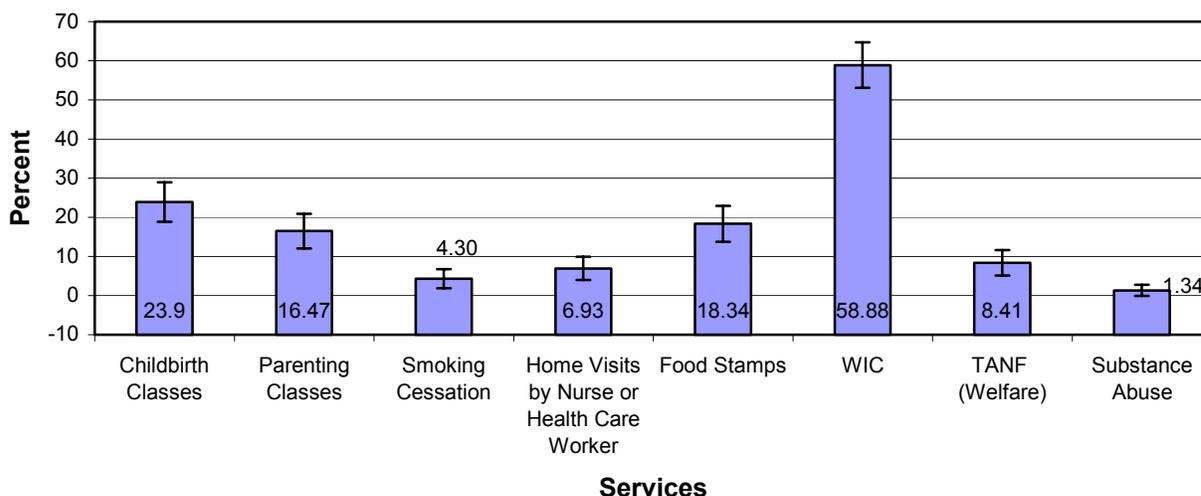


Satisfaction with the four aspects of prenatal care were examined by prenatal care site and the demographic variables of age, race/ethnicity, and level of education. There were no statistically significant associations among the demographic groups or prenatal care site and the satisfaction categories. Bear in mind that the standard errors are large in this small sample of women.

## Services Received While Pregnant

Respondents indicated which services they received while pregnant. Eight services were asked about: Childbirth classes, parenting classes, smoking cessation classes, home visits by a nurse or other health care worker, food stamps, WIC, TANF, and substance abuse services. See Figure 20 for the percent of South Phoenix mothers who received these services.

**Figure 20. South Phoenix PRAMS: Percent of Women Reporting They Received Services as Part of Prenatal Care (N=262)**



WIC, the Women, Infants, and Children Program, provides healthy food (i.e., milk, juice, infant formula, eggs, cereal, peanut butter, cheese, and beans), nutritional education and counseling, breastfeeding support, and referral services to social service agencies for low-income women who are pregnant or have children under the age of five. Almost 59% of the recent mothers in South Phoenix reportedly received WIC assistance during their pregnancy. TANF (Temporary Assistance For Needy Families) is the 1996 U.S. welfare program that requires recipients to work, imposes lifetime limits for receiving cash assistance, and often provides families assistance with childcare and transportation. 8.4% of South Phoenix mothers reported they received TANF cash assistance was received during their most recent pregnancy. Food stamps, assistance to low-income families for nutritional food, were reportedly received by 18.3% of the South Phoenix mothers.

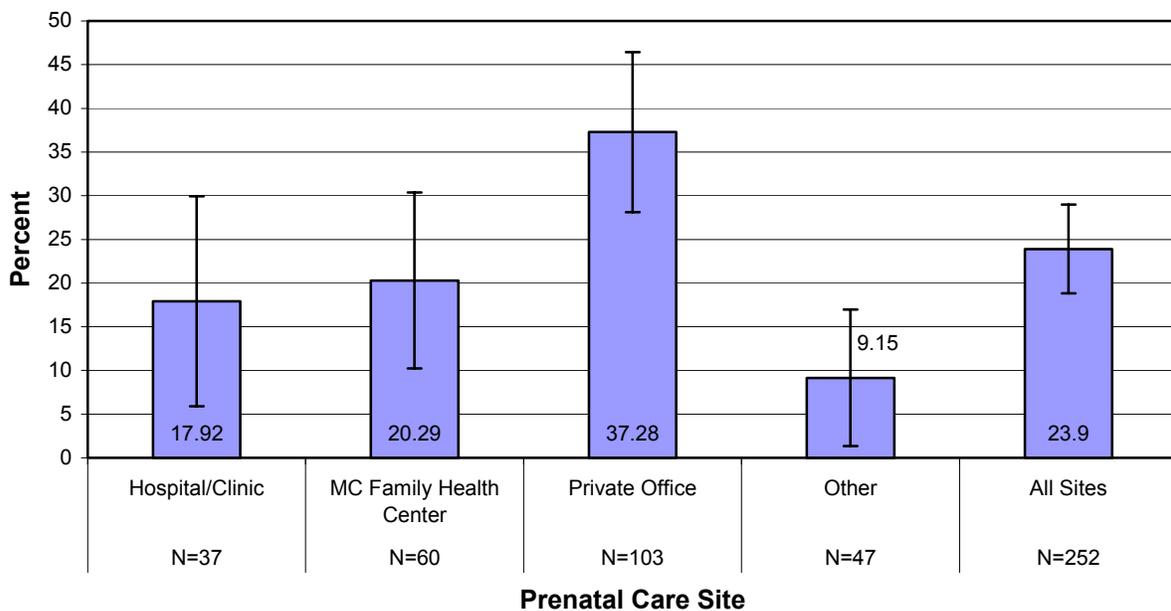
Approximately 7% of the new mothers in South Phoenix indicated they received home visits by a nurse or other health care worker. These visits generally include assessing and monitoring the pregnancy and any pregnancy complications, as well as providing information about health, pregnancy, preparing for the new baby, and caring for an infant.

Almost 10% of mothers maintained that they smoked at least one cigarette per day during the three months prior to pregnancy and 5.3% of these women continued to smoke during the last three months of their pregnancy. Smoking cessation classes were attended by 4.3% of mothers

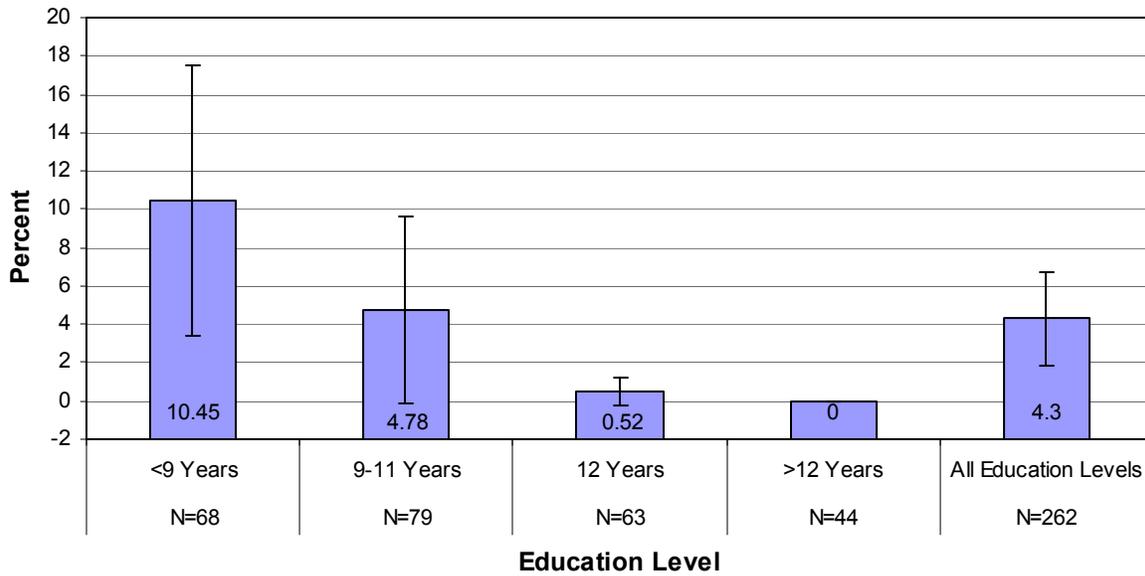
during their pregnancy. Just over one percent (1.3%) of mothers reported they utilized substance abuse services during their most recent pregnancy. Approximately 24% of the South Phoenix mothers attended childbirth classes and 16.5% of the mothers attended parenting classes during their last pregnancy.

Associations among the services received and prenatal care site and demographic measures were examined. Figure 21 shows the percent of women indicating they attended childbirth classes for different types of prenatal care sites. Thirty-seven percent of women who received prenatal care at a private doctor’s office reported attending childbirth classes which was slightly higher than women who had prenatal care at MC Family Health Centers (20.3%) and hospital clinics (17.9%) and significantly higher than those who received prenatal care elsewhere (9.2%;  $\chi^2 = 29.17, p < .05$ ).

**Figure 21. South Phoenix PRAMS: Percent of Women Reporting They Attended Birthing Classes as a Service by Prenatal Care Site**

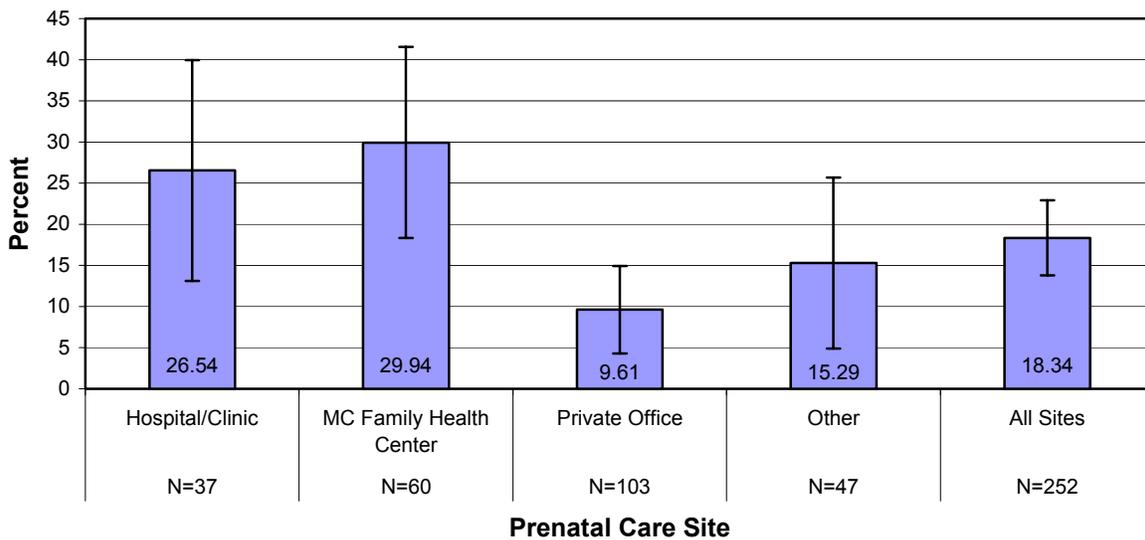


**Figure 22 . South Phoenix PRAMS: Percent of Women Stating They Attended a Smoking Cessation Class as a Service by Education Level**



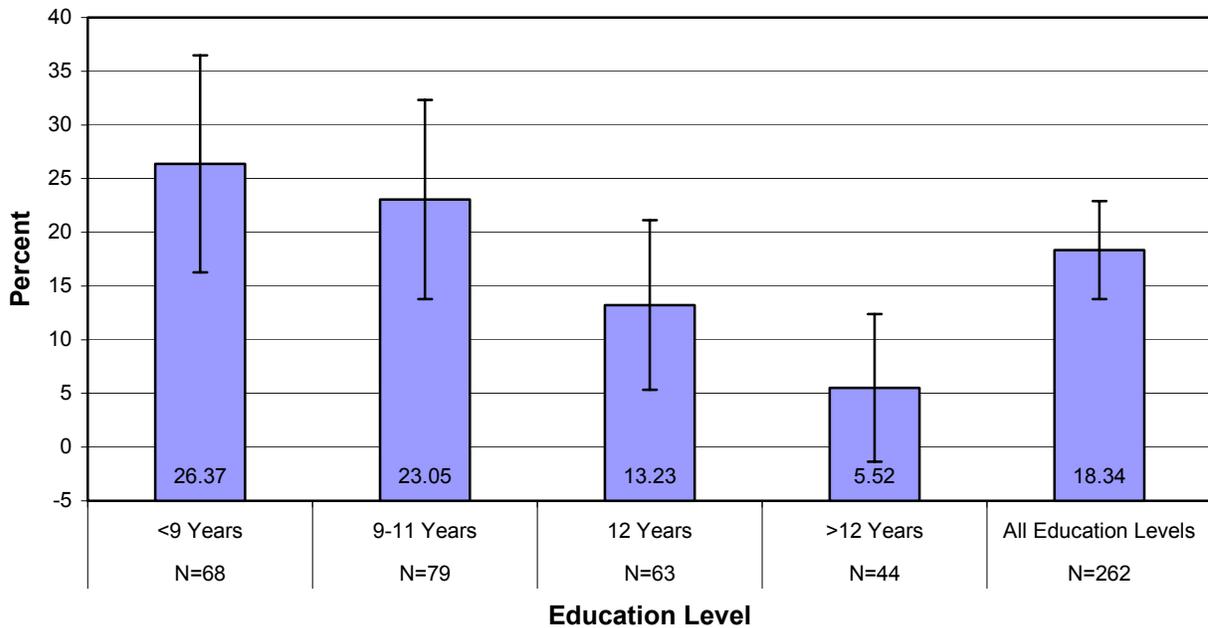
Attendance at smoking cessation classes significantly increased as the mothers' level of education decreased ( $\chi^2 = 20.73, p < .05$ ). More mothers with less than a ninth grade education went to cessation classes than mother with a high school education or more.

**Figure 23. South Phoenix PRAMS: Percent of Women Reporting They Received Food Stamps as a Service by Prenatal Care Site**



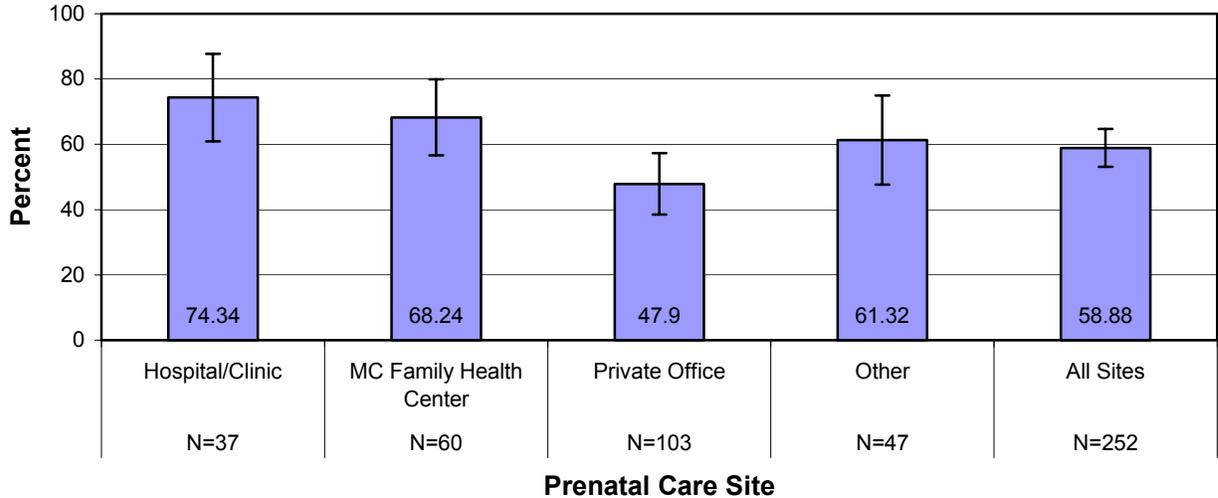
A larger percentage of mothers who reported receiving prenatal care at a hospital clinic (26.8%) or MC Family Health Centers (29.9%) stated they received food stamps during pregnancy than mothers who attended a private doctors office (9.6%;  $\chi^2 = 23.32, p < .05$ ). See Figure 23.

**Figure 24. South Phoenix PRAMS: Percent of Women Stating They Received Food Stamps as a Service by Education Level**



There was also a significant association between receiving food stamps and women’s education level ( $\chi^2 = 22.43, p < .05$ ). As expected (because education tends to increase pay), food stamp use decreased as education increased. Larger percentages of mothers with less than a ninth grade education (26.4%) and mothers with a ninth through eleventh grade education (23.1%) reported they received food stamps than women with some education beyond high school (5.5%). See Figure 24.

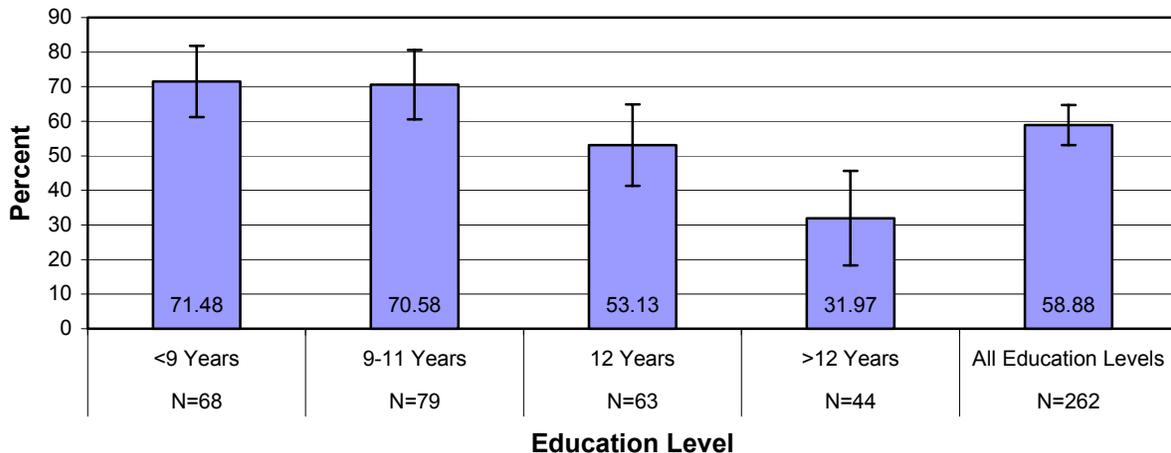
**Figure 25. South Phoenix PRAMS: Percent of Women Reporting They Received Assistance From WIC as a Service by Prenatal Care Site**



Significantly fewer mothers who attended prenatal care at a private doctor's office (47.9%) indicated they received WIC assistance than mothers attending prenatal care at a hospital clinic (74.3%;  $\chi^2 = 21.20, p < .05$ ). See Figure 25.

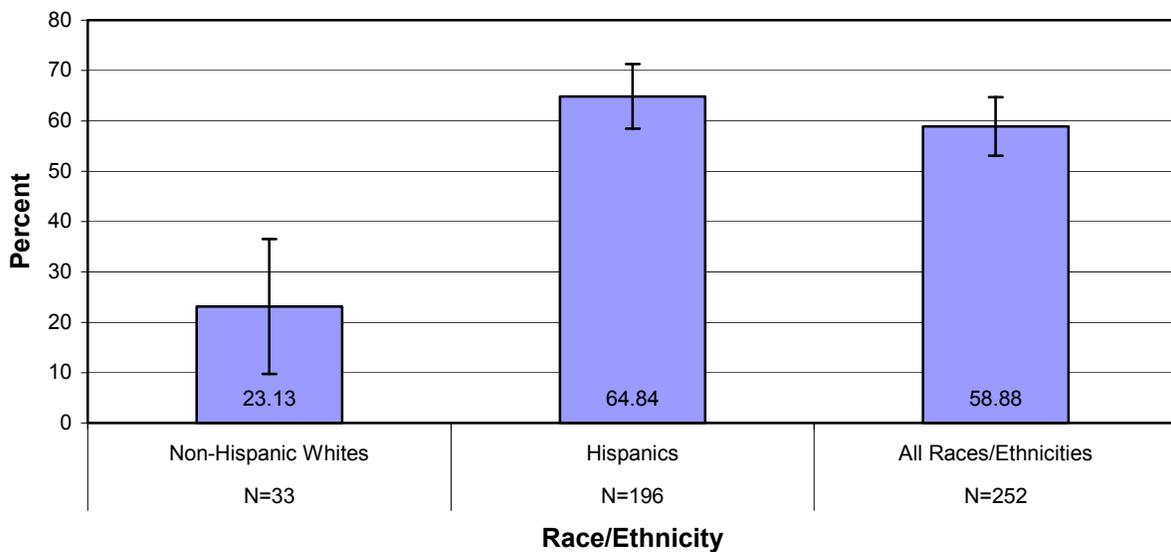
As the South Phoenix mothers' level of education increased, the percentage of mothers reported utilizing WIC services decreased ( $\chi^2 = 38.20, p < .05$ ). Larger percentages of women with a ninth grade education or less (71.5%) and a ninth through eleventh grade education (70.6%) stated they received services from WIC than women who completed some schooling beyond high school (31.9%). Figure 26 shows the relationship between women's education level and WIC services.

**Figure 26. South Phoenix PRAMS: Percent of Women Reporting They Received Assistance From WIC as a Service by Education Level**



Significantly more Hispanic women (64.8%) reported they received WIC services than NH White women (23.1%) in the South Phoenix area ( $\chi^2 = 23.07, p < .05$ ). Figure 27 shows the relationship between race/ethnicity and receiving WIC services.

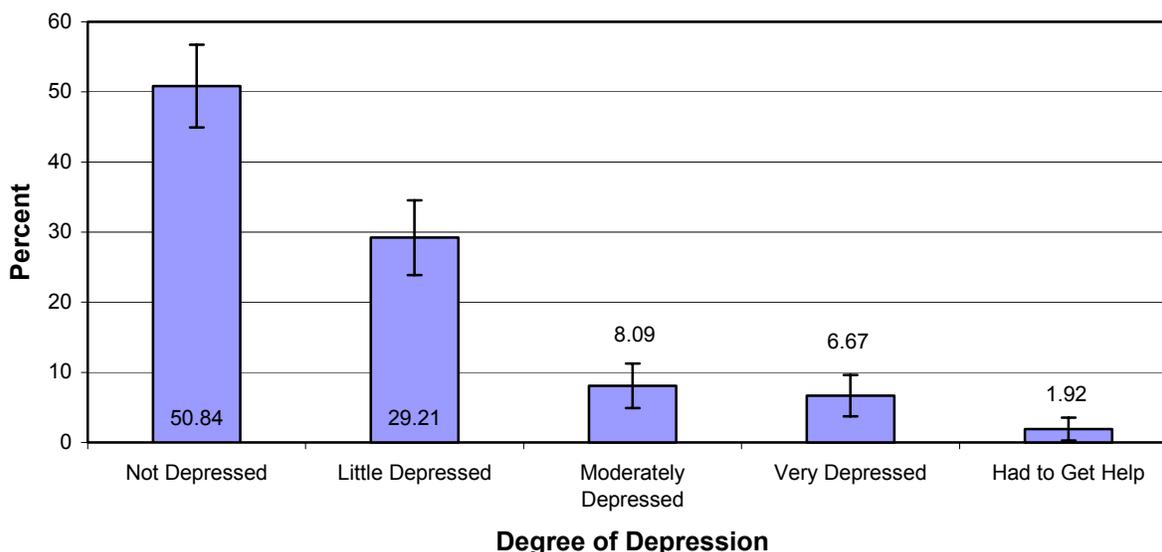
**Figure 27. South Phoenix PRAMS: Percent of Women Reporting They Received Assistance From WIC as a Service by Race/Ethnicity**



## Depression Following Delivery

There are at least two categories of postpartum depression<sup>5,6</sup>. The “baby blues” generally occurs in 70 to 80% of women within a few days following delivery and is short lived; it can last from a few hours to a couple of weeks following delivery. What is termed postpartum depression affects approximately 10% of new mothers; it is a longer lasting, more intense depression that can begin within a few days following delivery or even months later. When the depression keeps the mother from her activities of daily living, professional help (counseling and sometimes medication) is often needed. Both biological (e.g., hormone levels) and psychological (e.g., feeling overwhelmed) factors may contribute to postpartum depression. Women are at an increased risk of postpartum depression when there is a personal or family history of depression.

**Figure 28. South Phoenix PRAMS: Percent of Women Reporting Degree of Depression Following Delivery (N=262)**



Approximately half of the South Phoenix mothers reported no depression in the months following the delivery of their child (50.8%). Twenty-nine percent of the women indicated they were a little depressed, 8.1% were moderately depressed, and 6.7% felt they were very depressed. We could not determine whether the women were suffering from the depression coined “baby blues” which has a shorter duration or the longer lasting, postpartum depression from this data. At least those women who stated that they were very depressed and had to get help (1.9%) may have been suffering from the longer lasting, postpartum depression.

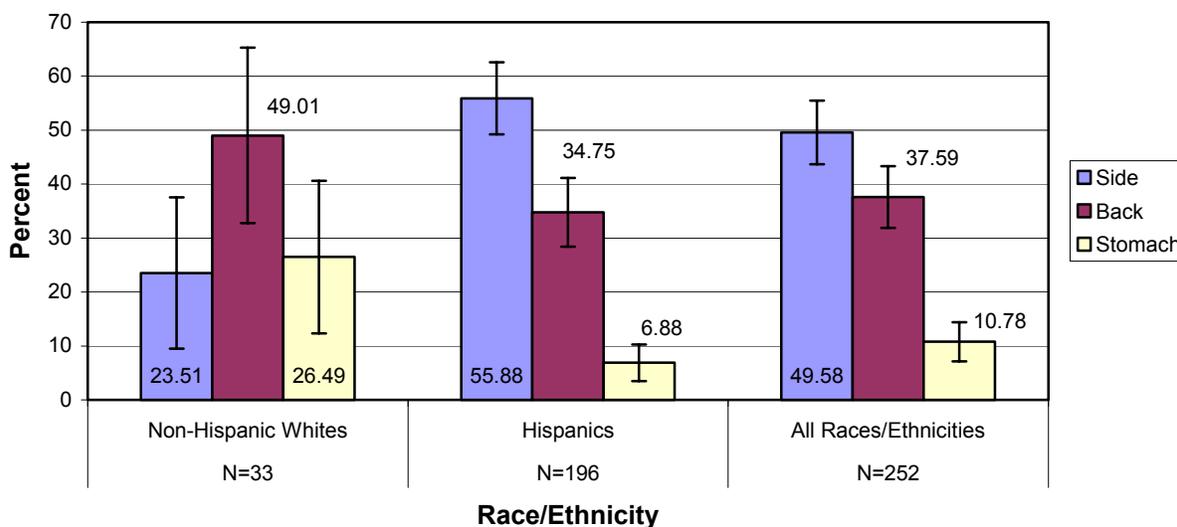
## Infant Health

**Sleep Position.** Sudden Infant Death Syndrome (SIDS)<sup>7,8</sup> is the sudden death of an infant under one year of age that continues to be unexplained after a thorough investigation. Most SIDS deaths occur when the infant is between two and four months old. The risk of SIDS decreases as the infant gets older. Although the exact cause of SIDS is unknown, some evidence suggests that

SIDS may be associated with irregularities in a part of the brain that controls waking and breathing during sleep. While SIDS cannot be completely prevented, there are several controllable factors that place infants at greater risk for SIDS. Infants placed on their stomachs to sleep are at a higher risk of SIDS than infants that are placed on their backs. Soft sleeping surfaces and loose bedding that may obstruct the infant’s breathing might also contribute to SIDS. Some evidence suggests that both maternal smoking during pregnancy and passive smoke exposure after birth put infants at higher risk for SIDS. Prematurity, low birth weight, no or late prenatal care, and young maternal age may also be associated with a higher risk of SIDS.<sup>7</sup>

To lower the risk of SIDS, physicians suggest that mothers lay their babies down to sleep on their backs. More South Phoenix mothers state they lay their babies on their sides to sleep (49.6%) than on their backs (37.6%). Placing infants on their side to sleep decreases the risk of SIDS relative to placing the infant on their stomach; however, the risk of SIDS is even lower when infants are placed on their backs to sleep as side-sleeping infants may roll onto their stomachs. Despite all the education campaigns, 10.8% of South Phoenix mothers indicate they continue to place their infants on their stomach to sleep. See columns labeled “all races” in Figure 29.

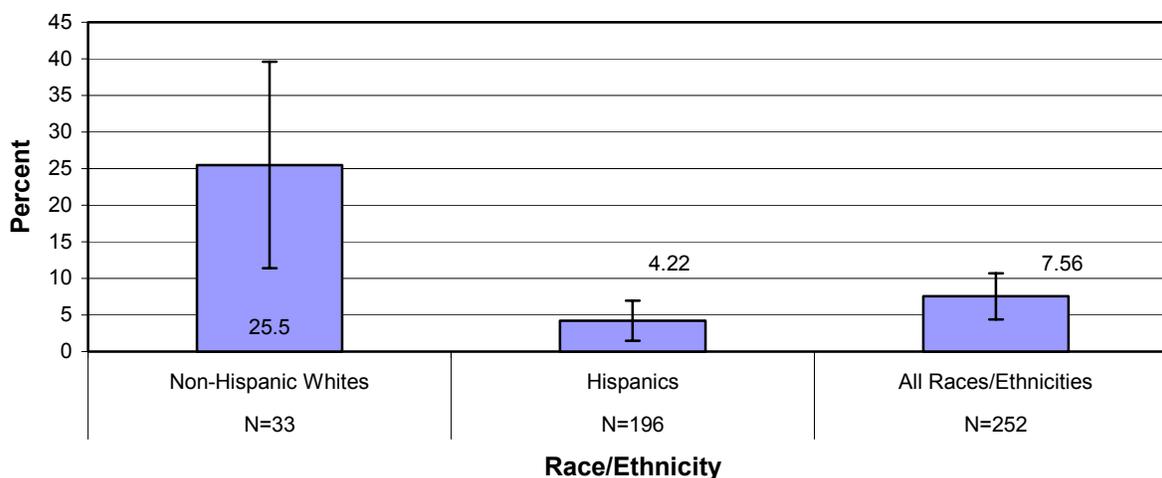
**Figure 29. South Phoenix PRAMS: Percent of Women Reporting The Usual Position Infant is Laid Down by Race/Ethnicity**



There was a significant association between sleep position and the race/ethnicity of the mother ( $\chi^2 = 26.06, p < .05$ ). A larger percentage of NH White mothers (26.5%) indicated placing their infants to sleep on their stomachs than Hispanic mothers (6.9%). Similar percentages of NH White and Hispanic women say they place their infants on their backs to sleep. The predominant sleep placement for babies of Hispanic mothers is on the side (55.9%) while 23.5% of NH White mothers placed their infants on their side to sleep. See Figure 29. Infants sleep position did not significantly vary with maternal age or maternal education level.

**Passive Smoke.** Passive smoke increases the risk of SIDS. There is also some evidence to suggest that passive smoke may be associated with the development of asthma later in life.<sup>8</sup> The PRAMS questionnaire included a question that asked the average number of hours per day the infant was in a room with someone who was smoking. Few women reported that their infant spent any time in the same room with a smoker and those that did indicate that the infant spent less than one hour per day in a room with someone smoking. Therefore, the responses were recoded to whether the infant spent any time, on average, in the same room with someone smoking and whether the infant spent no time in the same room as someone smoking. In South Phoenix, 7.6% of respondents report their infants were, on average, in the same room as someone smoking at least some time during the day. See the right column labeled “all races” in Figure 30.

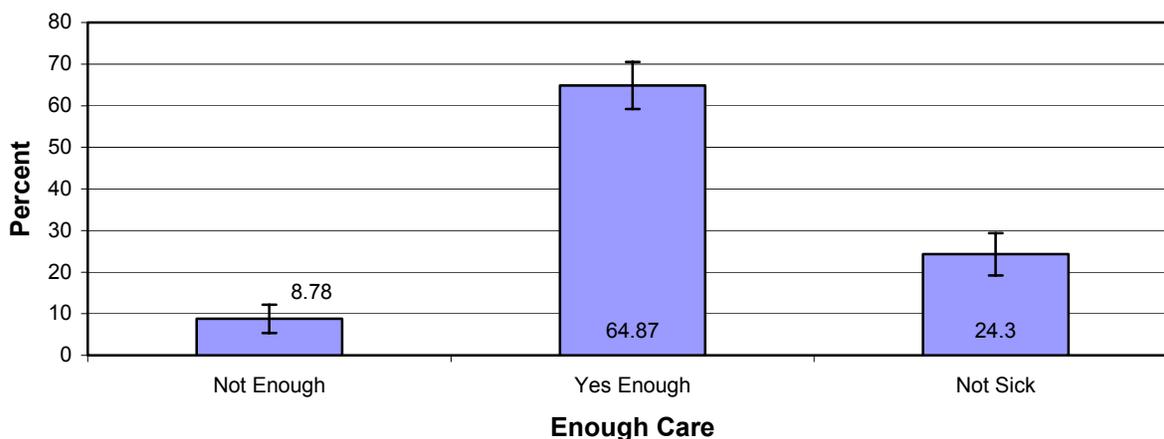
**Figure 30. South Phoenix PRAMS: Percent of Women Reporting Their Baby Was in The Same Room for Any Amount of Time Per Day, On Average, With Someone Smoking by Race/Ethnicity**



The associations between infant smoke exposure and both maternal age and maternal education level were not statistically significant. However, significantly more NH White mothers (25.5%) reported that their babies were in the same room with someone smoking during part of an average day than Hispanic mothers (4.2%;  $\chi^2 = 15.32, p < .05$ ). This relationship between race/ethnicity and smoke exposure is shown in Figure 30.

**Health Care for an Ill Infant.** Approximately 9% of the mothers in South Phoenix stated that their infant did not receive health care as many times as they wanted when the baby was ill. Almost one quarter (24.3%) of the mothers indicated that their baby was not ill between birth and the time of the survey and 64.5% of the mothers said that they were able to get as much care as they wanted when their infant was ill. See Figure 31. The pattern of results did not significantly vary by prenatal care site (hospital clinic, MC Family Health Center, private office, or other), method of payment for delivery (private insurance or AHCCCS), or the demographic groups of maternal age, maternal race/ethnicity, and maternal educational level.

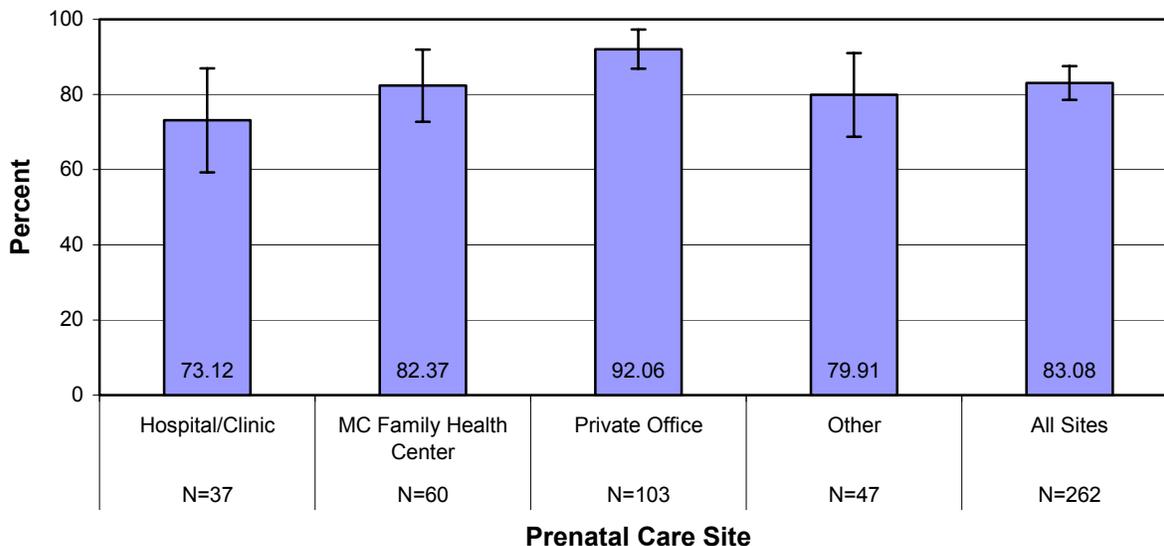
**Figure 31. South Phoenix PRAMS: Percent of Women Reporting Infant Has Gone for Care as Many Times as Wanted When Sick (N=262)**



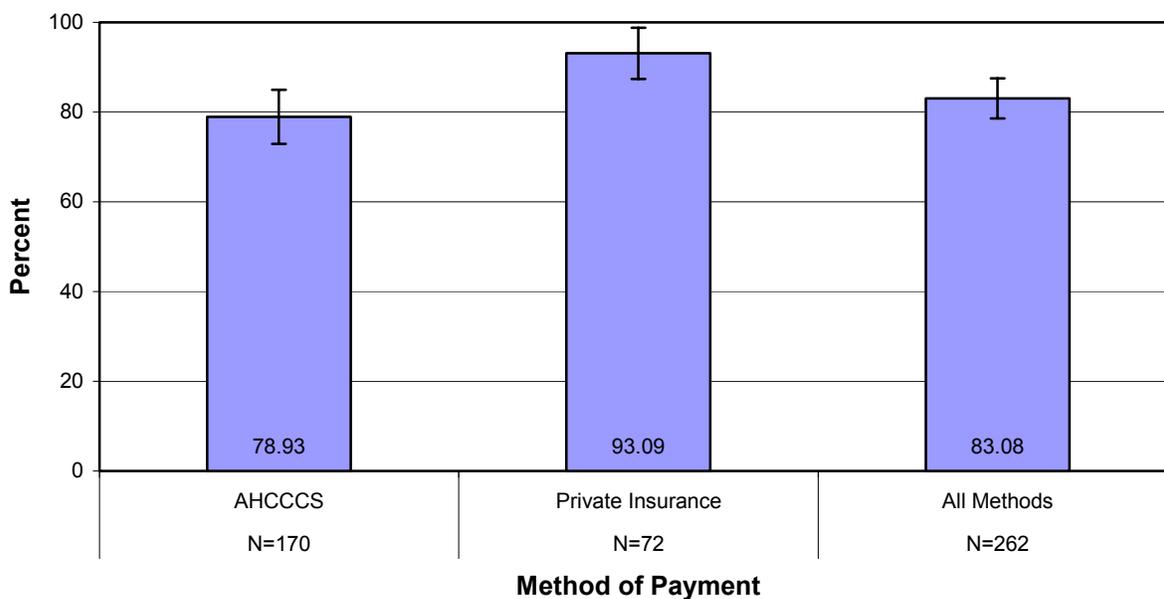
**Well-Baby Care.** More than 94% of South Phoenix mothers indicated that their infant had a well-baby care checkup. Approximately 83% of mothers in South Phoenix stated that their infant saw a health care provider within the first week after the infant left the hospital. Figure 32 shows a statistically significant association between the prenatal care site and infants returning to the doctor within the first week following hospital discharge ( $\chi^2 = 18.42, p < .05$ ). More women who reportedly received prenatal care at a private doctors office (92.1%) stated that their infant saw a health care provider within the first week after the infant left the hospital than women who reported prenatal care at a hospital clinic (73.1%).

A larger percentage of mothers who paid for delivering their baby with private insurance coverage (93.1%) reported that their infant had seen a health care provider in the first week after leaving the hospital than mothers who reported having AHCCCS coverage (78.9%;  $\chi^2 = 13.24, p < .05$ ). The association between the type of health care coverage and the method of payment for delivery is shown in Figure 33. The question of insurance coverage for infant care was not directly asked on the questionnaire. Thus, the closest approximation was the type of coverage the mother had when she delivered her baby. The number of women paying for delivery by other means (e.g., IHS or self-pay) was too small to estimate the percentages.

**Figure 32. South Phoenix PRAMS: Percent of Women Reporting Their Baby Saw the Doctor in the First Week by Prenatal Care Site**

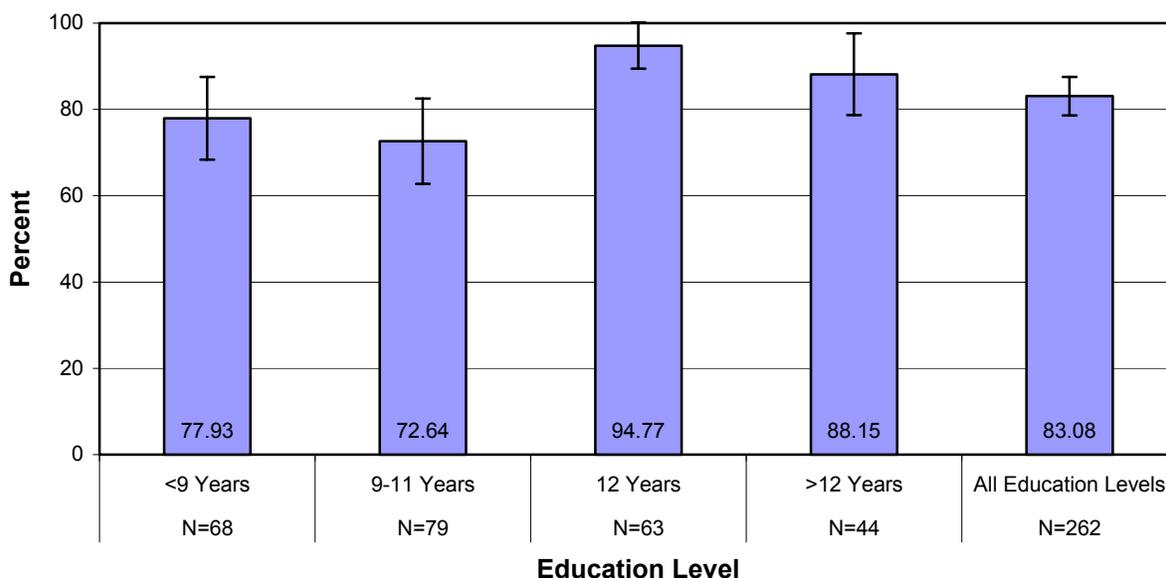


**Figure 33. South Phoenix PRAMS: Percent of Women Reporting Their Infant Was Seen by the Doctor During the First Week After Leaving the Hospital by Method of Payment**



There was a significant association between maternal education level and whether the infant saw a health care provider in the first week ( $\chi^2 = 57.35, p < .05$ ); reportedly, more infants of mothers with a twelfth grade education or equivalent (94.8%) saw the provider than infants of mothers with a ninth through eleventh grade education (72.6%) or mothers with less than a ninth grade education (77.9%). See Figure 34.

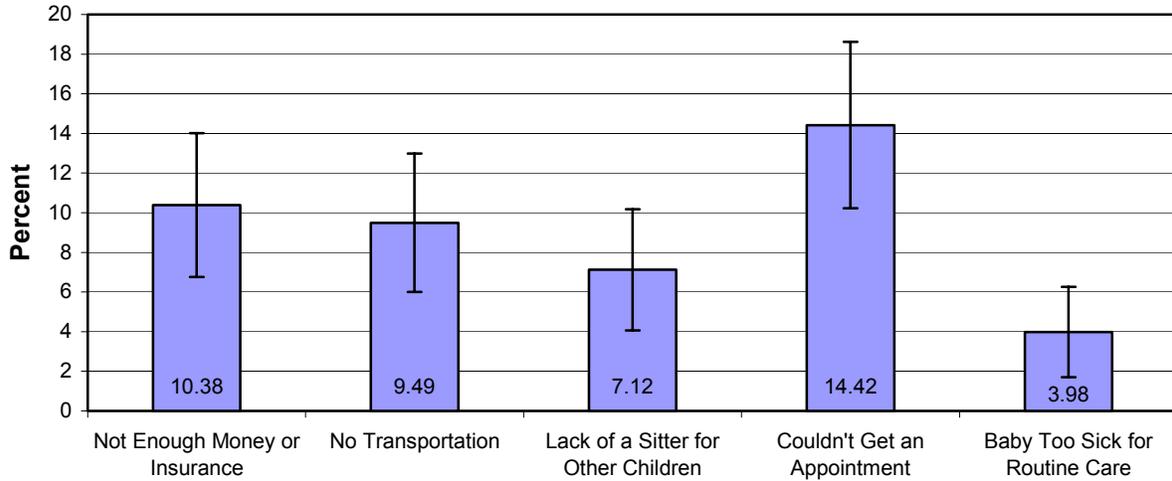
**Figure 34. South Phoenix PRAMS: Percent of Women Reporting Their Baby Saw Doctor in First Week by Education Level**



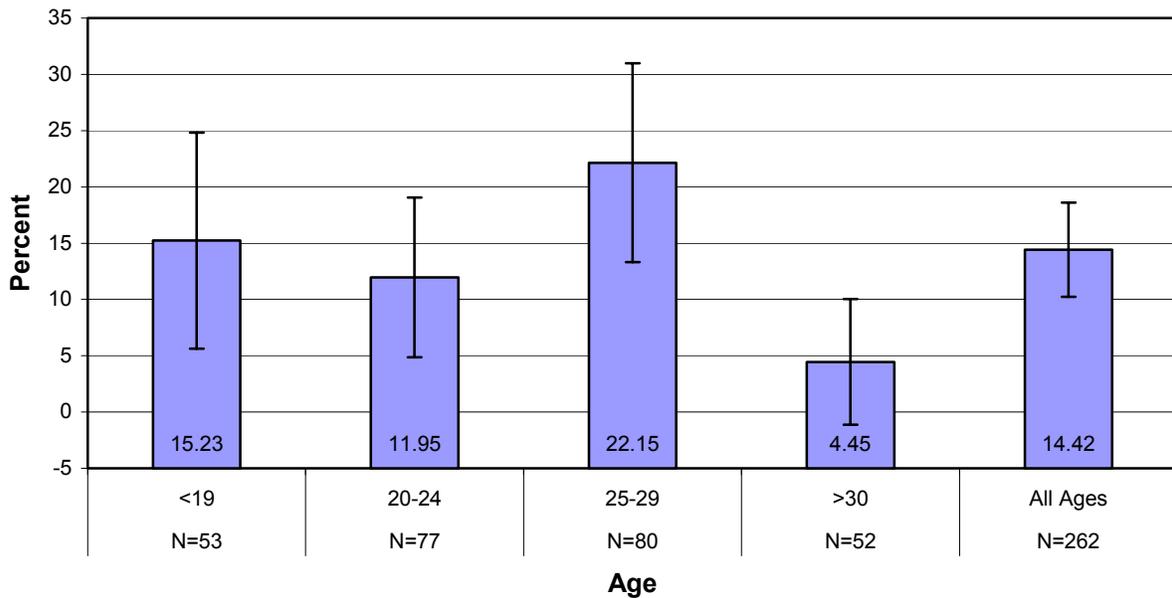
**Barriers to Well-Baby Care.** All of the women answered a question asking them to check all the things that kept them from getting routine well-baby care. More than 14% of the mothers indicated that the inability to get an appointment kept them from routine well-baby care. Not enough money or insurance to pay for the visit was a reason given by 10.4% of the mothers. No transportation to get their infant to the office was a problem for 9.5% of the sample. No one to care for their other children hindered 7.1% of the women. Another 4.0% stated that their infant was too ill for routine well-baby care. The rest of the mothers answered “other” and some filled out an open-ended response. Many of the responses in the other category suggested that there was no obstacle to well-baby care. See Figure 35.

There was a statistically significant association between age group and the inability to get an appointment ( $\chi^2 = 11.51, p < .05$ ). Apparently, fewer women aged 30 or more years (4.5%) indicated difficulty obtaining a well-baby care appointment than women aged 25 to 29 years (22.2%). See Figure 36. Barriers to well-baby care were also examined by the method of payment for delivery and prenatal care site but there were no statistically significant associations.

**Figure 35. South Phoenix PRAMS: Percent of Women Stating Reasons That Kept Them From Routine Well-Baby Care (N=262)**



**Figure 36. South Phoenix PRAMS: Percent of Women Reporting That the Inability to Get an Appointment Kept Them From Obtaining Well-Baby Care by Age Group**



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## Section V. South Phoenix Dental Survey

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Oral health is integral to the health of women and children. Oral diseases are progressive and cumulative, becoming more complex over time and affecting quality of life. Oral diseases affect economic productivity and compromise ability to work on the job, at home, and in school. Untreated oral infections create social and financial burdens for individuals and communities.

Current medical and dental research has revealed strong links between oral health and total health. Research has also shown probable relationships between oral health and birth outcomes. The report, *Oral Health in America: A Report of the Surgeon General*, recommends a more comprehensive and targeted effort toward understanding the associations between oral infections and adverse pregnancy outcomes. According to the report, these links between oral and total health are not fully appreciated by the public and some health professionals.<sup>9</sup>

Maricopa County Department of Public Health began addressing this issue by completing the South Phoenix Pregnant Women's Oral Health Needs Assessment project during the fall of 2001. The Arizona Department of Health Services (ADHS) Office of Oral Health (OOH) provided funding in the form of a mini-grant. The information gained from the needs assessment project answers the question, "In South Phoenix, among women who are pregnant and seeking medical/social services, what are the oral health beliefs, habits, and dental treatment utilization patterns, especially during the current pregnancy?"

A survey was distributed at three of the largest clinics that serve pregnant women in the South Phoenix area. Validated survey items were selected from national oral health surveys to reflect the South Phoenix Healthy Start Consortium's interests and current oral health research needs. The survey included demographic, attitude and belief, access to care, reason for last dental visit, reason for not getting dental care, and type of dental insurance questions. For more information on the methodology, see Appendix A.

### Respondents Demographic Profile

About half (51%) of the respondents reported zip codes indicating residence in South Phoenix. A total of 83.4% of the respondents completed surveys in Spanish and 16.6% completed them in English. Most of the respondents (81.5%) were Hispanic/Latino while the other race/ethnicity groups represented were Black/African American (2.9%) and White (2.4%). Most of the respondents were under 35 years of age: 49.0% were 15 to 24 years, 41.3% were 25 to 34 years. Slightly less than half of the respondents (48.7%) had completed high school or obtained a GED diploma. For more information, see the methodology in Appendix A.

### Knowledge, Attitudes, and Beliefs

Most respondents (94%) agreed that the health of their mouths was important to them. This belief is highly relevant in light of increased research that now points to connections between chronic oral infection and diabetes, cardiovascular and lung diseases. Despite the fact that most

people can expect teeth to last a lifetime when they receive regular dental care, respondents believed that most people will eventually lose all their teeth (32.9%), or did not know for sure if all teeth would be lost (47.6%). See Table 1.

Although current research also recognizes the importance of healthy gums for pregnant women, respondents were not sure or were undecided about the statement concerning the health of their mouth affecting their unborn babies' health. During pregnancy, advanced gum disease puts women at a higher risk for premature labor. Advanced gum disease can also lead to tooth loss. This situation may have contributed to the confusion of respondents who believed a tooth is lost with every pregnancy (9.9%) or who were undecided (40.7%).

**Table 1. South Phoenix Oral Health: Knowledge, Attitudes, and Beliefs**

Statement	Agree	Percent Disagree	Other
The health of my mouth is important to me (N=180)	94.4	1.1	4.4
The health of my mouth during my pregnancy can affect my unborn baby's health (N=174)	50.6	2.9	46.6
Most people will eventually lose all their teeth (N=170)	32.9	19.4	47.6
I will lose a tooth with every pregnancy (N=172)	9.9	49.4	40.7
It is safe for me to get dental care during my pregnancy (N=169)	29.6	7.7	62.7
If I brush my teeth regularly, I do not need to see a dentist (N=172)	20.3	54.7	25.0

Note. Other includes "do not know" and "do not agree or disagree"

About 45% of respondents were either unsure or agreed that regular toothbrushing could take the place of seeing a dentist. Daily toothbrushing and flossing can remove food debris and bacteria that sticks to teeth and causes infection. This, however, does not take the place of regular dental check-ups. In most situations, a thorough dental cleaning should be received during the early months of pregnancy. Although 62.7% of respondents did not know if it was safe to get dental care during pregnancy, almost all regular dental procedures can be performed during a normal and healthy pregnancy.

### **Dental Care During Current Pregnancy**

A total of 93.5% of respondents reported that they had not been to a dentist during their current pregnancies. Among these respondents, 24.2% reported visiting a dentist or a dental clinic within the past year, and 25.3% reported visiting a dentist or a dental clinic within the past 2 years. Importantly, one-half of respondents (50.5%) reported having never been to a dentist, didn't remember when they last visited a dentist, or hadn't seen a dentist for over two years. See Table 2. Respondents who did go to the dentist stated they went during their third trimester. Considering the association between advanced gum disease and adverse birth outcomes, it is clear that oral health is especially important during pregnancy. An article published in the

*Journal of the American Dental Association* in 2001 reports findings from the Pregnancy Risk Assessment Monitoring System. The PRAMS findings indicate that only 34.7% of mothers received dental services during their most recent pregnancy. Some reasons cited for non-utilization of dental services were lack of perceived need, cost, and lack of dental insurance.<sup>10</sup>

**Table 2. South Phoenix Oral Health: Dental Care During Current Pregnancy**

Have you been to the dentist during this pregnancy? (N = 200)	Percent
Yes	6.0
No	93.5
I don't know	0.5

If No, How long has it been since you last visited a dentist or a dental clinic for any reason? (N = 178)	
a. Within the past year	24.2
b. Within the past 2 years	25.3
c. Within the past 5 years	12.9
d. 5 or more years ago	14.6
e. Do not know	10.1
f. Never	12.9

**Table 3. South Phoenix Oral Health: Access to Care During This Pregnancy by Age**

Have you been to the dentist during this pregnancy?	<21 (N = 47)	>=21 (N = 144)
Yes	2.1	7.6
No	97.9	91.7%
I don't know	0.0	0.7%

If No, How long has it been since you last visited a dentist or a dental clinic for any reason? *		(N=42)	(N=135)
a. Within the past year		21.4	25.9
b. Within the past 2 years		16.7	27.4
c. Within the past 5 years		11.9	13.3
d. 5 or more years ago		9.5	17.0
e. Do not know		26.2	4.4
f. Never		14.3	11.9

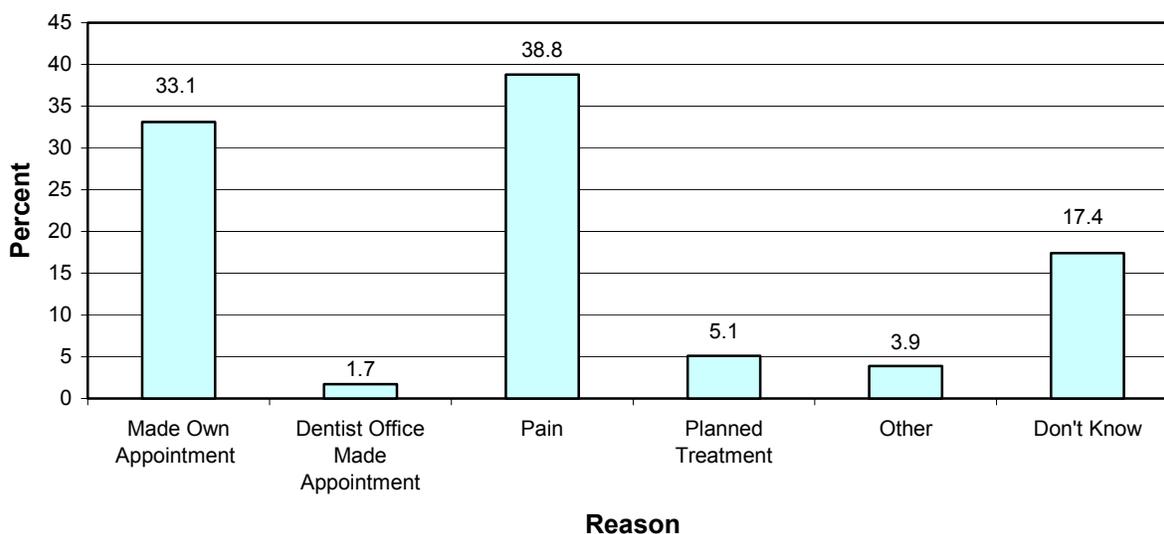
\* Statistically significant association between length of time since last dental visit and age group.

A significant association was found between age and the item that asks “How long has it been since you last visited a dentist or a dental clinic for any reason?” A larger percentage of women 21 years of age and older indicated they had visited a dentist or clinic within the past two years (53.3%) than younger women. The younger women more frequently responded “Do not know” (26.2%) or “Never” (14.3%). See Table 3. One might expect that dental utilization would be greater for respondents less than 21 years of age due to Arizona State Medicaid dental benefits for youth up to 21 years of age. This did not prove to be true. Respondents who were older had visited the dentist more recently.

### Reason for Last Dentist Visit

Figure 1 shows the main reason that respondents last visited the dentist. More than one-third of the respondents (38.8%) reported visiting a dentist because “something was wrong, bothering or hurting.” Slightly less than one-third (33.1%) reported visiting a dentist “for check-up, examination or cleaning.” This suggests that many women are receiving treatment for pain. Some women may only receive treatment for pain and may not be receiving appropriate prevention services: preventive counseling, dental health education, preventive therapies, early disease detection and treatment of oral problems.

**Figure 1. South Phoenix Oral Health: Main Reason for Last Dentist Visit-Overall (N=178)**



There was a significant association between education level and the main reason for visiting a dentist. Among those respondents with less education, a lower percentage (28.1%) reported their last visit being for prevention services like check-ups and cleanings than those with a high school education and beyond (38.2%). A larger percentage of respondents with less education (47.2%) also last visited the dentist because of pain than those respondents with a higher education level (30.3%). See Table 4. These respondents appear to have been unaware that most dental diseases are preventable and are important to overall health.

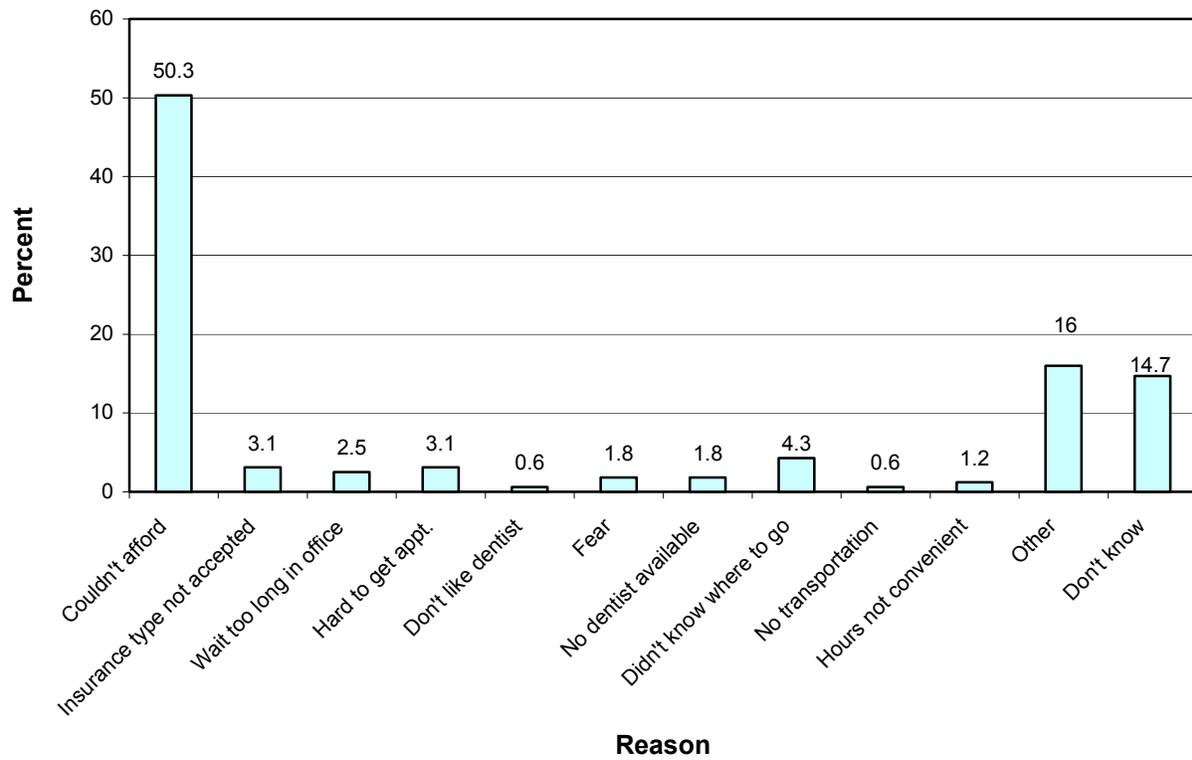
**Table 4. South Phoenix Oral Health: Main Reason for Dental Visit, by Education Level.**

What was the main reason that you last visited a dentist? *	< Grade 12 (N = 89)	=> Grade 12 (N = 89)
a. Went in on own for check-up, examination or cleaning	28.1	38.2
b. Was called in by the dentist for check-up, examination or cleaning	0	3.4
c. Something was wrong, bothering or hurting	47.2	30.3
d. Went for treatment of a condition that dentist discovered at earlier check-up or examination	4.5	5.6
e. Other	1.1	6.7
f. Do not know/do not remember	19.1	15.7

\* Statistically significant association between reason for last dental visit and education level.

## Barriers to Dental Care

The primary reason respondents (50.3%) cited for not getting dental care was cost. Figure 2 displays the reasons respondents gave for not getting dental care. Moderate percentages of pregnant women's responses stated, "Other reasons" (16.0%) and "Do not know/do not remember" (14.7%) as reasons for not obtaining dental care. The other responses were distributed across a variety of reasons. Cost is often cited as the primary barrier to care. For example, *Oral Health in America: A Report of the Surgeon General*, reports that one main barrier to care is lack of resources, either out of pocket or through private or public dental insurance.

**Figure 2. Barriers to Dental Care-Overall (N=163)**

## Dental Insurance

Most of the respondents (71.5%) indicated that they did not have dental insurance. This lack of insurance is not unique to women in South Phoenix. The Behavioral Risk Factor Surveillance System of 1995 showed that more than 45% of women did not have dental insurance. In the United States, Medicaid is the main public funding source of dental insurance. Despite this fact only 15.8% of the South Phoenix residents surveyed stated they had Medicaid dental insurance. See Table 5.

**Table 5. South Phoenix Oral Health: Type of dental insurance.**

What dental insurance do you have?	Percent (N = 165)
a. Private insurance (like Delta, Concordia)	4.2
b. Medicaid (like AHCCCS)	15.8
c. Other government plan	0.6
d. Tobacco Tax	4.8
e. I do not have dental insurance	71.5
f. I do not know	3.0

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## Section VI. Key Findings

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### PPOR Key Findings

- The PPOR approach provides direction for prioritizing and targeting prevention and intervention efforts to reduce fetal and infant mortality at specific points in the health care continuum: maternal health and prematurity, maternal care, newborn care, and infant health.
- The approach compares the fetio-infant mortality in an area to a reference group with low mortality rates (Maricopa County, non-Hispanic White women who are over the age of 20 and have some education beyond high school) providing an estimate of excess or preventable mortality.
- The amount of excess mortality varies by area and socio-demographic groups.

### Maricopa County

- The total fetio-infant mortality rate (F-IMR) from 1996 through 2000 was 8.5 deaths (per 1,000 live births and fetal deaths).
- The excess F-IMR during the period was 2.7 deaths (per 1,000 live births and fetal deaths), suggesting that 32% of the fetal and infant deaths were potentially preventable.
- The highest excess group-specific rate was “maternal care,” while the second highest rate was “maternal health/prematurity.”
- Although the absolute numbers of births and deaths were lower for women under the age of 20, the excess F-IMR for these younger women (5.9) was more than twice the excess rate for those women who were 20 or more years of age (2.2 deaths per 1,000 live births and fetal deaths).
  - For women less than 20 years old, the highest rate was “maternal health/prematurity” followed by “infant health.”
  - For women 20 or more years of age, the highest rate was “maternal care.”
- The excess F-IMR for women with a high school education or less (7.1) was 18 times higher than the excess F-IMR for women with some education beyond high school (0.38 deaths per 1,000 live births and fetal deaths). The highest rate for those women with less education was “maternal care.” Education, a risk factor amenable to modification, consistently across all areas showed the largest impact (above age and race/ethnicity) on fetio-infant mortality rates.
- African Americans had the highest excess F-IMR (8.2), followed by Native Americans (4.3), Hispanics (3.5), and Whites (1.9).
- Each race/ethnicity showed a different pattern of findings across the excess fetio-infant mortality map suggesting that programs might consider targeting these groups differently.
  - African Americans highest rate was in the “maternal health/prematurity” category, followed by the “infant health” category.
  - Native Americans highest rate was in the “infant health” category, followed by the “maternal care” category.
  - For Hispanics, the “maternal health/prematurity” and “maternal care” categories were equally high.

- Whites highest rate was in the “maternal health/prematurity” category, followed by the “maternal care” category.

### **Maryvale**

- The total fetoinfant mortality rate from 1996 through 2000 was similar to the county’s rate, 8.8 deaths per 1,000 live births and fetal deaths.
- The excess fetoinfant mortality rate during the period was 3.0 deaths (per 1,000 live births and fetal deaths), suggesting that 34% of the fetal and infant deaths were potentially preventable.
- The highest excess group-specific rate was “maternal health/prematurity,” while the second highest rate was “maternal care.”
- The excess death rate did not vary by age group (women under the age of 20 versus women 20 years of age and older) and the pattern of results for the two maps was similar.
- The excess F-IMR for women with a high school education or less was 4.6, while there was essentially no excess for women with some education beyond high school. For the lower education group, the highest group-specific rate was in the “maternal health/prematurity” category.
- Although the overall excess F-IMR was almost identical for Hispanic (2.9) and non-Hispanic White (2.8) women, the pattern of mortality across the prevention map differed. Hispanic women’s highest rate was “maternal health/prematurity” and non-Hispanic White women’s highest rate was “maternal care.”

### **South Phoenix**

- The total fetoinfant mortality rate from 1996 through 2000 was 10.6 deaths (per 1,000 live births and fetal deaths), which was higher than the county rate.
- The excess fetoinfant mortality rate during the period was 4.8 deaths (per 1,000 live births and fetal deaths), suggesting that 45% of the fetal and infant deaths were potentially preventable.
- The highest excess group-specific rate was “maternal health/prematurity,” while the second highest rate was “maternal care.”
- The excess death rate was higher for women 20 or more years of age (5.0) than for women under the age of 20 (4.1), however, this finding is opposite from the expected and the sample size was small for the younger women. For both groups, the highest rate was “maternal health/prematurity.”
- The excess F-IMR for women with a high school education or less (6.4) was six times higher than the excess rate for women with some education beyond high school (1.0). For the lower education group, the highest excess group-specific rates were in the “maternal health/prematurity” and “maternal care” categories.
- NH African Americans and Native Americans were analyzed as a single group because the numbers were small and the patterns were similar. This group had an excess F-IMR of 7.7, which was higher than the excess F-IMR for Hispanics (4.3).
  - The African/Native American women’s highest excess group-specific rate was in “infant health.”
  - Hispanic women’s highest excess rate was in “maternal health/prematurity.”

## South Phoenix Prams Key Findings

- Maternal experiences and behaviors that are not available on birth and death certificates, the usual manner of determining the health of the population, affect birth outcomes and health care utilization.
- The PRAMS survey provides information about maternal needs, experiences, and behaviors that occur during the period just prior to conception through infancy.

### Prior to Pregnancy

- Approximately 61% of the women who reported they recently delivered a baby in South Phoenix did not have insurance or AHCCCS coverage prior to becoming pregnant. Coverage increased with more education: 80.8% of the women with less than a ninth grade education reported they did not have coverage, whereas 28.4% of the women with some education beyond high school indicated they did not have coverage. Although concern usually centers on women receiving health care when they are pregnant, the body of evidence that preconception health care is important to birth outcomes is growing. Evidence from the PPOR analyses suggests that one of the largest contributors to excess fetal and infant mortality is maternal or preconception health.
- About 32% of the South Phoenix mothers stated they were not trying to get pregnant and were not using any form of birth control when they conceived their most recent baby; however, 32% of these mothers that were not trying to get pregnant, did not mind getting pregnant.
  - 31.3% stated that they did not think they could get pregnant at that time but only 8.5% believed themselves or their partner were sterile, suggesting that 23% of mothers thought they could not get pregnant for some other reason (e.g., the wrong time in their menstrual cycle);
  - 42% of the women identified barriers to birth control as a reason for not doing anything to keep from getting pregnant. These barriers included husbands or partners not wanting to use birth control (21%), trouble obtaining birth control (11%), and birth control side effects (10%).
- The most commonly reported maternal psychosocial stressors that occurred in the 12 months prior to delivering their infant included moving to a new address (35%), the inability to pay bills (32%), and arguing more frequently with husband/partner (25%). A little over one-fifth of the women had someone close to them die, had a family member that was sick and hospitalized, had a husband/partner who lost a job, or had someone close to them dealing with alcohol or drug problems. About 15% of the women had to deal with getting divorced/separated or losing their job. Approximately 9% said that either they or their husband/partner went to jail and 5% were involved in a physical fight during the 12-month period.

### Prenatal Care Experience

- Overall, the majority of women were satisfied with their prenatal care experience. Most mothers (90%) indicated they were satisfied with the understanding and respect the staff showed them as a person. Fewer women stated they were satisfied with the advice they were

given on how to care for themselves (76%), the amount of time the physician or nurse spent with them (74%), and the time spent in the waiting room (72%).

- The percentage of women who recalled that a physician, nurse, or other health care worker discussed (not including literature or videos) various topics with them during their prenatal care visits varied by the topic:
  - More than 75% of South Phoenix women who received prenatal care recalled their physician discussing medicine that is safe during pregnancy, breastfeeding, and birth control after pregnancy.
  - More than 60% remembered discussions about premature labor, HIV testing, screening tests for defects or diseases, alcohol use, and cigarette use. Almost 60% recalled a discussion about the effects of illegal drug use on the baby.
  - Less than half (46%) of the women recalled a discussion about postpartum depression or the baby blues.
  - Only 40% recalled a discussion about seatbelt usage during pregnancy and only 33% remembered talking to a health care worker about physical abuse by a husband/partner.

### **Additional Services Received During Pregnancy**

- Income sensitive services the South Phoenix mothers reported receiving during pregnancy included WIC (59%; provides healthy food, nutritional education and counseling, breastfeeding support, and referral services), TANF cash assistance (8.4%), and food stamps (18%; assistance for nutritional food).
- Approximately 7% of the new mothers in South Phoenix reported receiving home visits by a nurse or other health care worker for high-risk pregnancies. These visits generally include assessing and monitoring the pregnancy and any pregnancy complications, as well as providing information about health, pregnancy, preparing for the new baby, and caring for an infant.
- Almost one-quarter of the South Phoenix mothers reported attending childbirth classes and over 16% of the mothers reported attending parenting classes during their most recent pregnancy. Smoking cessation classes were reported by 4% of mothers and substance abuse services by less than 2% of mothers during their most recent pregnancy.

### **Infant Health**

- Despite all the previous education campaigns, 11% of South Phoenix mothers still typically placed their infants on their stomach to sleep. Another 50% of mothers reported generally laying their babies on their sides to sleep. Although placing infants on their side to sleep decreases the risk of SIDS relative to stomach placement, the risk of SIDS is even lower when infants are placed on their backs. Approximately 38% of mothers stated that they typically laid their babies down on their backs to sleep.
- Approximately 9% of the mothers in South Phoenix stated that they were unable to receive health care as many times as they wanted when their infant was ill.
- Approximately 83% of mothers in South Phoenix stated that their infant saw a health care provider within the first week after the infant left the hospital. A larger percentage of mothers who paid for delivering their baby with private insurance coverage (93%) reported that their infant had seen a health care provider within the first week after leaving the hospital than mothers who had AHCCCS coverage (79%).

- Barriers to well-baby care included the inability to get an appointment (14%), not enough money or insurance to pay for the visit (10%), no transportation (10%), and no one to care for their other children (7%).

## **South Phoenix Oral Health Needs Assessment**

- Oral health is an essential component of total health and there is some evidence suggesting that oral health may affect birth outcomes.
- The oral health survey permitted a preliminary look into the oral health knowledge, attitudes, beliefs, and behavioral practices of South Phoenix pregnant women who were already seeking medical services for their pregnancy.

### **Key Findings**

- Most of the survey respondents (72%) did not have dental insurance and half of respondents (50%) could not afford dental care.
- Only 55% of the respondents believed that they still needed dental checkups when they regularly brushed their teeth.
- During the current pregnancy, 94% of respondents had not been to the dentist.
- When respondents did visit a dentist it was because something was wrong, bothering or hurting (39%) or they went in on their own for a check-up, examination, or cleaning (33%).
- Most of the respondents (94%) agreed that the health of their mouth was important.
- Substantial percentages of respondents did not know or were undecided about whether
  - The health of their mouth during pregnancy could affect their unborn baby's health (47%),
  - A tooth would be lost with every pregnancy (41%),
  - It was safe to get dental care during pregnancy (63%).
- One-third of the respondents (33%) thought that most people would eventually lose all of their teeth.

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## Appendix A: Methodology

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### PERINATAL PERIODS OF RISK (PPOR)

#### Data Sources

The data consisted of Maricopa County natality and mortality vital registration records from 1996 through 2001. A period of five years was necessary because the small population size of the South Phoenix and Maryvale neighborhoods may have displayed unstable rates over a shorter time period. No more than five years were included because both the epidemiology of infant health and medical practice may change over time affecting mortality rates.

The most up-to-date data available were retrieved from the Arizona Department of Health Services (ADHS) vital record databases during October of 2002. Birth and fetal death data from 1996 through 2000 and infant death data from 1996 through 2001 were retrieved. In addition, MCDPH fetal death databases from 1996 through 1999 were also a source of data.

Death certificates for infants were linked with their corresponding birth certificates in order to obtain additional information about the infant, the delivery, the pregnancy, and the mother, that was not available in the death documents. MCDPH linked one year of birth data to two years of death data (birth cohort) because infant death includes deaths up to one year of age. For example, births in 2000 were linked to infant deaths from 2000 and 2001. The 2002 mortality records were not complete at the time of data preparation; thus, 2001 births were not included in the analyses. The percent of infant death certificates linked to infant birth certificates across the period was 98.34%.

Prior to the year 2000, all of the necessary information for PPOR analyses was not entered into either the ADHS fetal death database or the MCDPH fetal death database (e.g., MCDPH entered maternal residence zip code but not maternal race, while the opposite was true for ADHS). As a result, the ADHS fetal database from 1996 through 1999 was linked (merged) with the county fetal database. The merged county and state fetal database was then concatenated to the state fetal database for 2000 that included all of the information contained on the fetal death certificate. The final fetal database was then concatenated with the linked infant birth and death file. (Unlike death certificates that must be merged with birth certificates, fetal death certificates contain information about the mother.)

#### Deaths Not Analyzed

The PPOR methodology excludes infant and fetal deaths with a birth weight of less than 500 grams and fetal deaths with a gestation of less than 24 weeks. In addition, multiparous births were not included in the analyses because the factors affecting those deaths are not necessarily the same factors affecting singleton deaths. Several months (August through December) of fetal death data were unavailable for 1999. Therefore, birth data for the months of August through December of 1999 were also removed from the analyses. Additionally, fetal death certificates were not recorded for all miscarriages because not all women visit their health care provider

following a miscarriage. Therefore, these deaths remain unrecorded and unanalyzed. The final numbers of births, fetal deaths, and infant deaths and for each area during the years 1996 through 2000 are shown in Table 1.

**Table 1. PPOR: Numbers of Births, Infant Deaths, and Fetal Deaths for Maricopa County, Maryvale, South Phoenix, and the Comparison Group by Year.**

<b>Maricopa County</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999*</b>	<b>2000</b>	<b>Total</b>
Births	46448	47008	48995	28964	54158	225573
Fetal Deaths	115	150	158	99	164	686
Infant Deaths	289	261	260	164	265	1239
Births & Fetal Deaths	46563	47158	49153	29063	54322	226259
Feto-Infant Deaths	404	411	418	263	429	1925
<b>South Phoenix</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999*</b>	<b>2000</b>	<b>Total</b>
Births	5068	4936	4993	2860	5281	23138
Fetal Deaths	17	22	18	14	16	87
Infant Deaths	38	45	26	20	29	158
Births & Fetal Deaths	5085	4958	5011	2874	5297	23225
Feto-Infant Deaths	55	67	44	34	45	245
<b>Maryvale</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999*</b>	<b>2000</b>	<b>Total</b>
Births	4136	4231	4366	2593	5025	20351
Fetal Deaths	14	12	17	5	18	66
Infant Deaths	33	21	23	16	20	113
Births & Fetal Deaths	4150	4243	4383	2598	5043	20417
Feto-Infant Deaths	47	33	40	21	38	179
<b>Comparison Group <sup>+</sup></b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999*</b>	<b>2000</b>	<b>Total</b>
Births	21085	21043	21597	12643	22311	98679
Fetal Deaths	20	23	33	20	48	144
Infant Deaths	104	85	93	50	95	427
Births & Fetal Deaths	21105	21066	21630	12663	22359	98823
Feto-Infant Deaths	124	108	126	70	143	571

\* The 1999 data does not include the months of August through December.

+ The comparison group is composed of Maricopa County, non-Hispanic White women who were 20 or more years of age and had some education beyond high school.

### Analyses

There are two phases of PPOR analyses; Phase I is presented in this document. Phase II should be completed during the fall of 2003. Phase I of the data analyses followed previously established standardized procedures for PPOR. Statistical analyses began by calculating the overall fetal and infant mortality (feto-infant mortality) rate, consisting of the number of fetal and infant deaths per 1,000 live births and fetal deaths. Based on the age at death and birth weight of the child, the feto-infant mortality was then “mapped” to, or divided into, four areas of

perinatal health contributors: Maternal health and prematurity, maternal care, newborn care, and infant health.

Excess mortality was determined by comparing the mortality rates in the area to a standard reference group with low fetoinfant mortality rates. The internal reference group was composed of Maricopa County non-Hispanic White women who were 20 or more years of age and had some education beyond high school. The amount of excess mortality in each category suggested the extent to which the fetoinfant mortality rate could have been reduced. The excess fetoinfant mortality map was then compared across standard demographic groups that frequently show disparities (i.e., maternal age, maternal race/ethnicity, and maternal education level). More information is presented in the PPOR introduction section.

### Demographic Groups

The demographic groups of maternal age, maternal educational level, and maternal race/ethnicity, readily available on birth certificates, can affect fetoinfant mortality rates. Maternal age was the mother's age at the time she delivered a baby or miscarried. Following PPOR methodology suggestions, age was categorized into two groups: women under 20 years old and women 20 or more years of age. Maternal education was the highest level of education the mother completed by the time she delivered a baby or miscarried. Education was dichotomized into two groups: women with a high school education or less and women with some education beyond high school.

The U.S. Census and birth certificates currently record race and ethnicity separately, such that Hispanics can be of any race and non-Hispanics can be of any race. "Hispanic" refers to persons who trace their origin or descent to Mexico, Puerto Rico, Cuba, Central America, South America, or other Spanish cultures and can be of any race. In this document, race and ethnicity were collapsed into a single indicator, including White non-Hispanic (NH), Hispanic/Latino (of all races), Black/African American NH, and Native American NH. In Maricopa County, this classification is consistent with the area's cultural groupings. Persons are classified by race and ethnicity according to how they identify themselves to hospitals, or how their relatives identify them to the funeral director upon their death.

## **PRAMS IN SOUTH PHOENIX**

The Pregnancy Risk Assessment Monitoring System (PRAMS) is a surveillance system created by the Centers for Disease Control and Prevention (CDC) to monitor maternal experiences and behaviors that occur just before, during, and after pregnancy. MCDPH decided to determine the feasibility of conducting PRAMS countywide and selected South Phoenix for the pilot project. The pilot project was funded mainly by the MCDPH. The local March of Dimes chapter and Optimo Advertising collaborated to provide the incentive to complete the questionnaire; one out of every 100 respondents received a \$300 gift certificate to a grocery store in the mother's neighborhood.

The South Phoenix community was selected as the pilot area because it demonstrated several important qualities. First, this community had successfully developed collaborations among neighborhood organizations, agencies, and individuals that made it possible to implement and

sustain community interventions to potentially impact reproductive outcomes in the area. Second, a collaborative group, The South Phoenix Healthy Start Consortium, requested an analysis of the health status of mothers and infants in the area and PRAMS is a tool to identify health disparities. Finally, as a pilot project for the whole county, the South Phoenix population provided unique challenges for follow-up: mainly low percentage of accessible telephones and postal addresses plus a large population of monolingual Spanish speaking mothers.

### Sample and Design

The South Phoenix area was defined by census tracts (census tracts 111202-111204, 112504-116704). The borders of the South Phoenix area included South Mountain Park on the south, McDowell Road on the north, 48<sup>th</sup> Street on the east, and 83<sup>rd</sup> Avenue on the west.

All Maricopa County births that occurred between December, 1 1999 and March 15, 2000 were selected from the ADHS birth certificate database. The births were then geocoded to determine the initial sampling frame before exclusions. There were 1,609 births in the initial South Phoenix sampling frame. Ineligible for sampling were Maricopa County residents who gave birth in another county, births in Maricopa County to residents of another county, births that resulted in known infant deaths, and multi-gestational births greater than triplets. In the case of twins or triplets, only one child was eligible for sampling. After excluding ineligible births, the frame was composed of 1,566 live births of which 114 were low birth weight and 1,452 were healthy birth weight

The design was a stratified systematic random sample. The sample was stratified by birth weight (low birth weight and normal birth weight) to increase the power of birth weight comparisons. One out of three women delivering a healthy birth weight infant and every woman who delivered a low birth weight infant was selected for the sample. For the healthy birth weight stratum, the births were ordered by date. A random date was picked as the starting point, then every third birth was systematically chosen. A sample of 610 South Phoenix residents who delivered a live birth was selected from the sampling frame.

A total of 266 women responded, yielding a 44% response rate. The low birth weight response rate was 48% and the healthy birth weight response rate was 42%. Four respondents were not included in the analyses so 262 questionnaires were analyzed. Two of the respondents had infants who passed away. An additional questionnaire was filled out and returned by an aunt because the mother had moved out of the county. One mother's answers referred to several miscarriages over the past two years and it was impossible to determine when she was discussing the most recent live birth. Of the total respondents analyzed, 55 delivered low birth weight babies and 207 delivered healthy birth weight babies.

### Materials and Procedure

The questionnaire was developed and tested for validity, accuracy, and reliability through tests of cognitive reasoning by the CDC. Both the core questionnaire and some state specific questions were utilized. Eight versions of the questionnaire were created. In addition to the full questionnaire, two modified versions of the questionnaire were created for special circumstances: a) a version was designed for women with deceased infants that did not include the infant health

questions and b) a version was designed for minors that did not include the domestic violence questions. Crossing the live versus deceased infant with the adult versus minor versions created four versions of the questionnaire and all questionnaires were created in both English and Spanish.

Each sampled mother, who had given birth between two and six months before, was initially mailed a letter that described the project and informed her that she would be receiving a questionnaire from the county health department. Four days later, Spanish and English versions of the questionnaire, along with a pencil, laminated calendar, letter, and information sheet were mailed to the mother. If the mother did not respond, the “tickler” (a card reminding the mother to complete and return the survey) was mailed. Following no response, the questionnaire packet was sent two additional times. If the mother still did not respond 45 days after the initial mailing, attempts were made to contact and interview her by telephone.

### Analyses

The usual goal of sampling part of the population (i.e., the PRAMS sample) is to understand the full population (i.e., women in South Phoenix who delivered a baby between December of 1999 and March 15 of 2000) without having to expend the resources necessary to interview everyone. The PRAMS sample was stratified by birth weight in order to include enough low birth weight births for accurate estimates and comparisons. To generalize the stratified sample to the population, the estimates need to be weighted. Analyses were conducted using PROC CROSSTAB in the statistical software SUDAAN®. This software’s formulas adjust the standard errors for the sampling methodology, based on the Taylor Series linearization technique. Although weights were used to adjust the stratified sample to the population, the validity of these adjustments decreases as response rates decrease. Confidence intervals were calculated using the formula of percentage  $\pm (1.96 * \text{standard error})$ .

Estimates based on less than 32 survey respondents are not presented because these estimates could be biased. For each item, differences across the demographic groups of maternal age, maternal race/ethnicity, and maternal education were examined. For selected items, differences across prenatal care site and method of payment for delivery were examined. The number of respondents in the other or unknown categories was generally too small to estimate the population; therefore, these categories are not presented or discussed. These categories were included in the analyses, however. For each cross-classification of two variables (e.g., insurance coverage by maternal education), a Chi-Square ( $\chi^2$ ) statistic was computed. Statistically significant cross-classification Chi-Square statistics are presented in text, with two exceptions: a) the source of the statistical significance was a comparison that included the other/unknown category that had less than 32 respondents, and 2) the source of the statistical significance was a comparison that included a zero percentage. Although zero percent may be a valid value in a population, the sample sizes for demographic groups are small enough that making the suggestion of a statistically significant difference involving a zero percent is tenuous. Table 2 shows the number of participants in the sample and the sampling frame for maternal age groups, maternal race/ethnicities, and maternal education levels.

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**Table 2. South Phoenix PRAMS: Sample Size and Weighted Sample Size**

	Sample N	Population N
<b>Age Group</b>		
<=19 Years	53	322.35
20-24 Years	77	421.51
25-29 Years	80	506.80
>30 Years	52	315.34
<b>Race/Ethnicity</b>		
Non-Hispanic White	34	208.84
Hispanic	203	1211.45
<b>Education Level</b>		
<9 Years	68	422.63
9-11 Years	79	440.48
12 Years	63	402.38
>12 Years	44	254.28
<b>All Group Totals</b>	<b>262</b>	<b>1,566</b>

Data Presentation

The PRAMS data presented in this document were a subset of the full questionnaire. The South Phoenix Healthy Start Consortium Community Assessment and Evaluation Subcommittee requested the specific items presented in this document. The items included health insurance or AHCCCS (Arizona Health Care Cost Containment System) coverage prior to pregnancy, reasons for not using birth control when the woman was not trying to get pregnant, psychosocial stressors in the year prior to delivery, depression following delivery, topics discussed during prenatal care visits, satisfaction with prenatal care, services received during pregnancy, average amount of time infant spent in a room with someone smoking, infant's sleep position, whether the infant was seen by a provider during the first week of life, whether the infant went for care as frequently as the mother wished, and barriers to routine well-baby care.

For each item, differences across the demographic groups of maternal age, maternal race/ethnicity, and maternal education were examined. For selected items, differences across prenatal care site and method of payment for delivery were examined. There were only enough non-Hispanic (NH) White and Hispanic respondents for estimation. Even collapsing the NH African American, NH Native American, NH Asian/Pacific Islander, other, and unknown race/ethnicity categories did not produce a large enough sample size. Race/ethnicity needs to be a stratification variable in future Maricopa County PRAMS studies. Disparities in birth outcomes necessitate analyses that examine race/ethnicity and the numbers are generally too small to draw valid conclusions without stratifying on race in small area analyses.

For each graph and table presented, the weighted percent of respondents affirming, the confidence interval for that percent, and the unweighted number of survey respondents in the group are depicted. The number of respondents cannot be determined from the total sample size and the percent because the analysis weights adjust these values for the sampling methodology.

## SOUTH PHOENIX ORAL HEALTH NEEDS ASSESSMENT

### Sample

A convenience sample of 205 pregnant women completed the South Phoenix Oral Health Needs Assessment during 2002. The number of women declining participation was not counted. More than half (51%) of the respondents reported zip codes indicating residence in South Phoenix. Table 3 shows the number and percent of survey respondents by the clinic they attended and the demographic groups of race/ethnicity, age, and education level.

**Table 3. Number and Percent of Survey Respondents at Each Clinic and in Demographic Groups**

<b>Clinic</b>	<b>N</b>	<b>%</b>
MIHS Comprehensive Health Center	117	57.1
MIHS South Central Family Health Center	27	13.2
Mountain Park Health Center	61	29.7
<b>Race/Ethnicity</b>	<b>N</b>	<b>%</b>
Hispanic	167	81.5
Non-Hispanic African American	6	2.9
Non-Hispanic White	5	2.4
Other	3	1.5
Don't Know	3	1.5
Not Sure	21	10.2
<b>Age Group</b>	<b>N</b>	<b>%</b>
15-24 Years	96	49.0
25-34 Years	81	41.3
35-44 Years	17	8.7
> 35 Years	2	1.0
<b>Highest Level of Education Completed</b>	<b>N</b>	<b>%</b>
Kindergarten or Less	3	1.5
Grade 1-8	53	25.9
Grade 9-11	45	22.0
Grade 12/GED	54	26.3
College 1-3	29	14.1
College 4 or Greater	13	6.3

### Survey Development

The ADHS Office of Oral Health provided mini-grant funding to MCDPH to assess the oral health needs in the South Phoenix area. On March 20, 2002, the South Phoenix Healthy Start Community Consortium met and selected the topics the members most wanted to study. Validated survey items were selected from national oral health surveys to reflect the consortium's selected topics and current oral health research needs. The final survey included demographic, attitude and belief, access to care, reason for last dental visit, reason for not getting dental care, and type of dental insurance questions. The survey was first developed in English,

and then a Spanish version was created through the method of “back translation.” There was a pilot study in which 31 MCDPH employees completed the survey and made recommendations for improvement. The improvements were incorporated into the survey prior to the full study.

#### Procedure

The survey was distributed at three of the largest clinics that serve pregnant women in the South Phoenix area: 1) The Women’s Clinic and Antepartum Clinic at the Maricopa Integrated Health System (MIHS) Comprehensive Health Center (CHC), 2525 E. Roosevelt, Phoenix, Arizona 85006, 2) Women’s Clinic at the MIHS South Central Family Health Center, 33 W. Tamarisk, Phoenix, Arizona 85007, 3) Women’s Health Care Clinic at Mountain Park Health Center, 635 Baseline Road, Phoenix, Arizona 85042. All three clinics are within the South Phoenix boundaries as established by the Healthy Start Consortium.

The survey and letters of consent were distributed at each clinic during the months of May and June 2002. They were handed out to pregnant women who came to the clinics for service and were also available at the registration counters. Incentives (a travel toothbrush, tube of toothpaste, and tooth brushing instruction sheet) were offered to each survey participant at the time of survey completion. Clinic staff received the completed survey tools. Only surveys with signed letters of consent were delivered to the data analyst.

#### Data Presentation

The attitude and belief items response options were “agree,” “do not agree or disagree,” “disagree,” and “I don’t know.” In the tables presented, the “do not agree or disagree” and the “I don’t know” responses were combined into a single category to increase the sample size in the cells. Although these two categories may represent different things psychologically, the additional information is not as relevant for this presentation. Most of the statements indirectly assess oral health knowledge as much as beliefs; there is a correct answer for many of the statements (e.g., most people will eventually lose all their teeth). The tables and graphs presented show the number of survey respondents and the percentage.

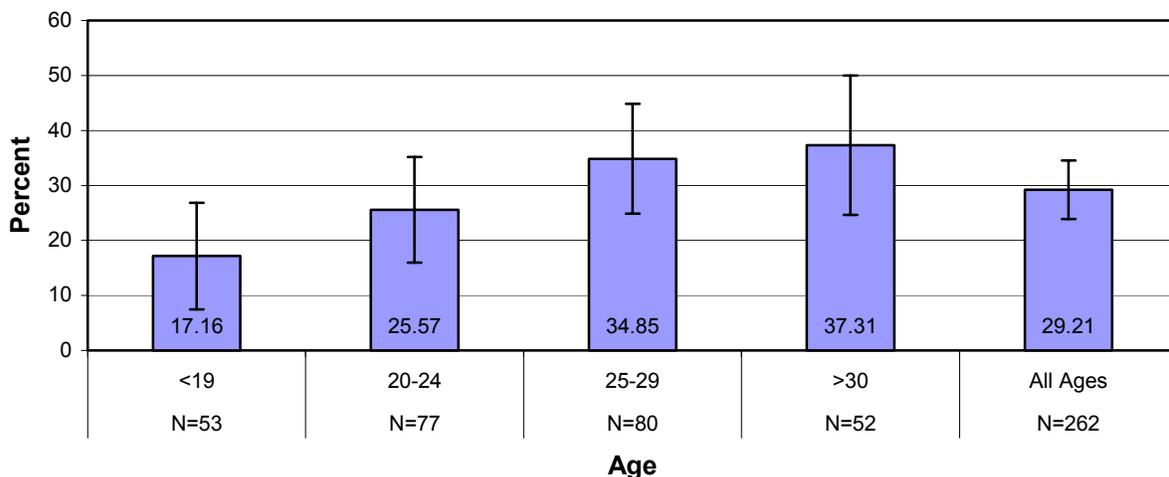
## Appendix B: Example of PRAMS Graph Interpretation

Figure 1, for example, shows the percent of women who had insurance coverage prior to pregnancy by age group. The number of survey respondents in each age group is shown below each age group label at the bottom of the graph. For women of all ages, 29% had insurance coverage; the bar on the far right of the graph shows this percent. The percents shown are weighted percentages. The weights adjust the data to generalize the stratified sampling frame to the population of South Phoenix births during the time period.

The confidence interval for all ages ranged from 24% to 35%; the line overlapping the bar on the chart shows this. Although we estimate that 29% of South Phoenix mothers had insurance prior to pregnancy, we are 95% sure that the percentage of South Phoenix mothers with insurance prior to pregnancy falls between 24% and 35%. Note that the width (range) from 24% to 35% is quite large. This width gives us an idea of the variability in the data. A narrow confidence interval suggests that the data are fairly stable. As the size of the sample increases, the width of the confidence interval usually decreases. The PRAMS pilot sample is small so the confidence intervals tend to be large.

Across the X-axis, the percentage of women in each maternal age group that had insurance coverage is shown. The percentage of women with insurance coverage increases as age increases. Note that the confidence intervals overlap; this suggests that the different age groups are probably not statistically different from one another. Chi-square ( $\chi^2$ ) tests of association are presented in the text to show whether there is a statistically significant association between two variables like age group and insurance coverage.

**Example. South Phoenix PRAMS: Percent of Women Reporting Being Insured Prior to Pregnancy by Age Group**



## Appendix C: South Phoenix PRAMS Data Tables

--Percent, CI, and Number of Respondents for Each Item by Demographic Group--

**Table 1. Percent of Women With Health Coverage Prior to Pregnancy by Age Group**

	<19 N=53	20-24 N=77	25-29 N=80	>30 N=52	All Ages N=262
Private Insurance	17.16 (26.84, 7.48)	25.57 (35.19, 15.95)	34.85 (44.85, 24.85)	37.31 (49.97, 24.65)	29.21 (34.54, 23.88)
AHCCCS	34.82 (47.42, 22.22)	5.3 (9.71, 0.89)	8.15 (13.66, 2.64)	7.99 (14.85, 1.13)	12.84 (16.76, 8.92)
All Coverage	45.45 (58.48, 32.42)	29.88 (39.95, 19.81)	39.82 (50.07, 29.57)	44.64 (57.71, 31.57)	39.28 (45.02, 33.54)

**Table 2. Percent of Women with Health Coverage Prior to Pregnancy by Race/Ethnicity**

	Non-Hispanic Whites N=34	Hispanic N=203	All Races/Ethnicities N=262
Private Insurance	62.44 (78.06, 46.82)	22.83 (28.40, 17.26)	29.21 (34.54, 23.88)
AHCCCS	4.35 (10.50, -1.80)	13.19 (17.72, 8.66)	12.84 (16.76, 8.92)
All Coverages	66.79 (82.00, 51.58)	33.19 (39.48, 26.90)	39.28 (45.02, 33.54)

**Table 3. Percent of Women With Health Coverage Prior to Pregnancy by Education Level**

	<9 Years N=68	9-11 Years N=79	12 Years N=63	>12 Years N=44	All Education Levels N=262
Private Insurance	7.13 (12.99, 1.27)	18.1 (26.23, 9.97)	39.9 (51.46, 28.34)	70.78 (84.13, 57.43)	29.21 (34.54, 23.88)
AHCCCS	14.26 (22.24, 6.28)	20.99 (29.97, 12.01)	7.49 (13.64, 1.34)	3.57 (8.65, -1.51)	12.84 (16.76, 8.92)
All Coverage	19.24 (28.28, 10.20)	34.49 (44.88, 24.10)	45.64 (57.40, 33.88)	71.6 (84.93, 58.27)	39.28 (45.02, 33.54)

**Table 4. Percent of Women Stating Different Reasons Why They Did Nothing to Keep From Getting Pregnant**

	All Age Groups N=83
Didn't Mind Getting Pregnant	32.05 (42.14, 21.96)
Thought Couldn't Get Pregnant	31.26 (41.12, 21.40)
Birth Control Side Effects	10.59 (17.43, 3.75)
Problems Getting Birth Control	11.03 (17.62, 4.44)
Thought Husband/Partner Was Sterile	8.46 (14.42, 2.50)
Husband Didn't Want to Use Birth Control	21.46 (30.30, 12.62)

**Table 5. Percent of Women Reporting Their Doctor Discussed Various Topics During Prenatal Care by Age Group**

	<19 N=48	20-24 N=76	25-29 N=78	>30 N=50	All Age Groups N=252
Smoking During Pregnancy Could Affect Infant	76 (87.94, 64.06)	62.65 (73.57, 51.73)	61.11 (71.50, 50.72)	53.02 (66.49, 39.55)	62.81 (68.65, 56.97)
Breastfeeding	88 (97.13, 78.87)	70.92 (81.27, 60.57)	78.03 (86.83, 69.23)	66.72 (79.56, 53.88)	75.74 (80.95, 70.53)
Drinking Alcohol During Pregnancy Could Affect Infant	76 (87.94, 64.06)	59.77 (70.86, 48.68)	59.71 (70.16, 49.26)	53.02 (66.49, 39.55)	61.55 (67.43, 55.67)
Using a Seatbelt During Pregnancy	49.15 (62.87, 35.43)	37.35 (48.27, 26.43)	36.9 (47.13, 26.67)	38.36 (51.43, 25.29)	39.69 (45.59, 33.79)
Birth Control After Pregnancy	84.18 (94.10, 74.26)	65.35 (76.15, 54.55)	81.42 (89.53, 73.31)	76.03 (87.67, 64.39)	76.45 (81.57, 71.33)
Medications That Are Safe During Pregnancy	85.6 (95.46, 75.74)	70.23 (80.72, 59.74)	75.78 (84.80, 66.76)	73.02 (85.05, 60.99)	75.61 (80.82, 70.40)
Use of Illegal Drugs Affect Infant	72.89 (85.22, 60.56)	59.77 (70.86, 48.68)	55.06 (65.62, 44.50)	53.02 (66.49, 39.55)	59.41 (65.33, 53.49)
Screening That Tests For Defects or Diseases	65.68 (78.81, 52.55)	53.19 (64.42, 41.96)	69.57 (79.37, 59.77)	70.69 (83.04, 58.34)	64.53 (70.31, 58.75)
What to Do If Labor Starts Early	70.49 (83.13, 57.85)	60.96 (71.98, 49.94)	66.91 (76.85, 56.97)	65.34 (78.20, 52.48)	65.65 (71.37, 59.93)
HIV Testing	67.38 (80.30, 54.46)	59.46 (70.49, 48.43)	62.68 (72.91, 52.45)	63.7 (76.73, 50.67)	62.91 (68.73, 57.09)
Physical Abuse by Husband/Partner	34.04 (47.00, 21.08)	30.88 (41.11, 20.65)	31.26 (41.08, 21.44)	40 (53.21, 26.79)	33.45 (39.09, 27.81)
Baby Blues/Postpartum Depression	56.36 (69.96, 42.76)	38.85 (49.79, 27.91)	46.76 (57.36, 36.16)	43.02 (56.35, 29.69)	45.7 (51.70, 39.70)

**Table 6. Percent of Women Reporting Their Doctor Discussed Various Topics During Prenatal Care by Race/Ethnicity**

	Non-Hispanic Whites N=33	Hispanics N=196	All Races/Ethnicities N=252
Smoking During Pregnancy Could Affect Infant	66.08 (81.78, 50.38)	60.19 (66.89, 53.49)	62.81 (68.65, 56.97)
Breastfeeding	75.25 (89.44, 61.06)	73.7 (79.78, 67.62)	75.74 (80.95, 70.53)
Drinking Alcohol During Pregnancy Could Affect Infant	69.47 (84.76, 54.18)	57.96 (64.72, 51.20)	61.55 (67.43, 55.67)
Using a Seatbelt During Pregnancy	33.54 (48.91, 18.17)	38.9 (45.56, 32.24)	39.69 (45.59, 33.79)
Birth Control After Pregnancy	79.65 (93.08, 66.22)	74.97 (80.91, 69.03)	76.45 (81.57, 71.33)
Medications That Are Safe During Pregnancy	93.22 (101.63, 84.81)	71.29 (77.52, 65.06)	75.61 (80.82, 70.40)
Use of Illegal Drugs Could Affect Infant	49.11 (65.50, 32.72)	58.99 (65.73, 52.25)	59.41 (65.33, 53.49)
Screening Tests for Defects or Diseases	86.43 (97.88, 74.98)	60.01 (66.71, 53.31)	64.53 (70.31, 58.75)
What to Do If Labor Starts Early	79.65 (93.08, 66.22)	62.24 (68.88, 55.60)	65.65 (71.37, 59.93)
HIV Testing	82.04 (94.60, 69.48)	58.1 (64.84, 51.36)	62.91 (68.73, 57.09)
Physical Abuse by Husband/Partner	21.36 (34.83, 7.89)	34.8 (41.27, 28.33)	33.45 (39.09, 27.81)
Baby Blues/Postpartum Depression	35.93 (51.65, 20.21)	46.64 (53.46, 39.82)	45.7 (51.70, 39.70)

**Table 7. Percent of Women Reporting Their Doctor Discussed Various Topics During Prenatal Care Visit by Education Level**

	<9 Years N=66	9-11 Years N=75	12 Years N=60	>12 Years N=43	All Education Level N=252
Smoking During Pregnancy Could Affect Infant	56.77 (68.31, 45.23)	66.08 (76.84, 55.32)	66.35 (77.86, 54.84)	60.56 (74.89, 46.23)	62.81 (68.65, 56.97)
Breastfeeding	69.8 (80.54, 59.06)	69.44 (79.93, 58.95)	83.44 (92.57, 74.31)	79.71 (91.65, 67.77)	75.74 (80.95, 70.53)
Drinking Alcohol During Pregnancy Could Affect Infant	58.99 (70.48, 47.50)	61.04 (72.11, 49.97)	66.35 (77.86, 54.84)	57.77 (72.25, 43.29)	61.55 (67.43, 55.67)
Using a Seatbelt During Pregnancy	43.23 (54.77, 31.69)	44.81 (56.00, 33.62)	38.96 (50.76, 27.16)	21.93 (33.94, 9.92)	39.69 (45.59, 33.79)
Birth Control After Pregnancy	73.43 (83.60, 63.26)	73.99 (83.91, 64.07)	79.77 (89.63, 69.91)	78.89 (90.87, 66.91)	76.45 (81.57, 71.33)
Medications That Are Safe During Pregnancy	62.43 (73.74, 51.12)	78.34 (87.73, 68.95)	77.93 (88.10, 67.76)	87.23 (96.83, 77.63)	75.61 (80.82, 70.40)
Use of Illegal Drugs Could Affect Infant	61.41 (72.72, 50.10)	61.04 (72.11, 49.97)	57.15 (69.18, 45.12)	54.99 (69.57, 40.41)	59.41 (65.33, 53.49)
Screening Tests for Defects or Diseases	57.28 (68.82, 45.74)	59.55 (70.62, 48.48)	70.03 (81.20, 58.86)	76.11 (88.65, 63.57)	64.53 (70.31, 58.75)
What to Do If Labor Starts Early	58.99 (70.48, 47.50)	64.59 (75.37, 53.81)	67.1 (78.47, 55.73)	73.32 (86.35, 60.29)	65.65 (71.37, 59.93)
HIV Testing	55.75 (67.29, 44.21)	62.91 (73.81, 52.01)	68.19 (79.54, 56.84)	66.12 (79.94, 52.30)	62.91 (68.73, 57.09)
Physical Abuse by Husband/Partner	39.09 (50.42, 27.76)	38.08 (49.00, 27.16)	28.47 (39.25, 17.69)	23.89 (36.43, 11.35)	33.45 (39.09, 27.81)
Baby Blues/Postpartum Depression	42.72 (54.26, 31.18)	48.47 (59.70, 37.24)	52.38 (64.49, 40.27)	35.84 (49.93, 21.75)	45.7 (51.70, 39.70)

**Table 8. Percent of Women Reporting Their Doctor Discussed Various Topics During Prenatal Care by Prenatal Care Site**

	Hospital/Clinic N=37	MC Family Health Center N=60	Private Office N=103	Other N=47	All Sites N=252
Smoking During Pregnancy Could Affect Infant	85.06 (96.23, 73.89)	60.03 (72.32, 47.74)	57.85 (67.18, 48.52)	61.32 (74.98, 47.66)	62.81 (68.65, 56.97)
Breastfeeding	77.33 (90.13, 64.53)	69.45 (81.07, 57.83)	78.12 (86.02, 70.22)	78.87 (90.49, 67.25)	75.74 (67.25, 70.53)
Drinking Alcohol During Pregnancy Could Affect Infant	72.23 (86.11, 58.35)	63.29 (75.44, 51.14)	58.98 (68.27, 49.69)	58.77 (72.59 44.95)	61.55 (67.43, 55.67)
Using a Seatbelt During Pregnancy	47.79 (63.23, 32.35)	41.79 (54.10, 29.48)	33.63 (42.47, 24.79)	45.78 (57.72, 29.84)	39.69 (45.59, 33.79)
Birth Control After Pregnancy	71.35 (85.25, 57.45)	85.87 (94.47, 77.27)	74.05 (82.36, 65.74)	76.61 (88.31 64.91)	76.45 (81.57, 71.33)
Medications That Are Safe During Pregnancy	73.46 (86.84, 60.03)	65.95 (77.95, 53.95)	82.66 (89.89, 75.43)	78.11 (89.75, 66.47)	75.61 (80.82, 70.40)
Use of Illegal Drugs Could Affect Infant	77.33 (90.13, 64.53)	60.63 (72.92, 48.34)	54.44 (63.83, 45.05)	56.22 (70.16 42.28)	59.41 (65.33, 53.49)
Screening Tests for Defects or Diseases	68.36 (82.67, 54.05)	55.32 (67.77, 42.87)	71.45 (80.00, 62.90)	60.28 (74.08 46.48)	64.53 (70.31, 58.75)
What to Do If Labor Starts Early	59.4 (74.57, 44.23)	70.9 (82.31, 59.49)	71.91 (80.36, 63.46)	51.13 (65.14 37.12)	65.65 (71.37, 59.93)
HIV Testing	61.51 (76.46, 46.56)	53.5 (65.95 41.05)	69.18 (77.92, 60.44)	67.17 (80.38 53.96)	62.91 (68.73, 57.09)
Physical Abuse by Husband/Partner	35.85 (50.77, 20.93)	44.22 (56.55 31.89)	25.82 (34.03, 17.61)	36.88 (50.36 23.40)	33.45 (39.09, 27.81)
Baby Blues/Postpartum Depression	35.85 (50.77, 20.93)	36.85 (48.75 24.95)	52.56 (61.95, 43.17)	50.38 (64.39 36.37)	45.7 (51.70, 39.70)

**Table 9. South Phoenix PRAMS: Percent of Women Satisfied With Aspects of Prenatal Care by Age Group**

	<19 N=48	20-24 N=76	25-29 N=78	>30 N=50	All Age Groups N=252
The Amount of Time Waiting After Arriving for Visit	75.29 (87.25, 63.33)	70.12 (80.33, 59.91)	67.75 (77.69, 57.81)	79.05 (90.26, 67.84)	72.12 (77.53, 66.71)
Amount of Time Doctor or Nurse Spent With Them During Visit	78.4 (89.91, 66.89)	67.73 (78.26, 57.21)	74.22 (83.57, 64.87)	78.36 (89.59, 67.13)	74.07 (79.38, 68.76)
The Advice Given About Maintaining Personal Health	80.8 (91.83, 69.77)	67.23 (77.77, 56.69)	78.44 (87.22, 69.66)	78.36 (89.59, 67.13)	75.8 (80.97, 70.63)
The Understanding and Respect Shown by Staff	95.2 (101.22, 89.18)	85.15 (92.89, 77.41)	91.13 (97.15, 85.11)	90 (98.09, 81.91)	90.05 (93.60, 86.50)

**Table 10. South Phoenix PRAMS: Percent of Women Satisfied With Aspects of Prenatal Care by Race/Ethnicity**

	Non-Hispanic Whites N=33	Hispanics N=196	All Races/Ethnicities N=252
The Amount of Time Waiting After Arriving for Doctor Visit	82.04 (94.60, 69.48)	70.58 (76.83, 64.33)	72.12 (77.53, 66.71)
The Amount of Time Doctor or Nurse Spent With Them During Visit	86.43 (97.88, 74.98)	71.72 (77.91, 65.53)	74.07 (79.38, 68.76)
The Advice Given About Maintaining Personal Health	83.04 (95.56, 70.52)	72.74 (78.86, 66.62)	75.8 (80.97, 70.63)
The Understanding and Respect Shown by the Staff	96.61 (102.67, 90.55)	88.9 (93.19, 84.61)	90.05 (93.60, 86.50)

**Table 11. South Phoenix PRAMS: Percent of Women Satisfied With Aspects of Prenatal Care by Education Level**

	<9 Years N=66	9-11 Years N=75	12 Years N=60	>12 Years N=43	All Education Levels N=252
The Amount of Time Waiting After Arriving for Doctor Visit	67.58 (78.50, 56.66)	76.85 (86.28, 67.42)	72.41 (83.37, 61.45)	66.94 (80.74, 53.14)	72.12 (77.53, 66.71)
The Amount of Time Doctor Or Nurse Spent With Them During Visit	71.52 (82.08, 60.96)	72.61 (82.88, 62.34)	75 (85.49, 64.51)	75.28 (87.86, 62.70)	74.07 (79.38, 68.76)
The Advice Given About Maintaining Personal Health	72.73 (83.10, 62.36)	81.02 (90.09, 71.95)	72.62 (83.38, 61.86)	78.89 (90.87, 66.91)	75.8 (80.97, 70.63)
The Understanding and Respect Shown by The Staff	92.63 (98.69, 86.57)	90.6 (97.19, 84.01)	85.49 (93.82, 77.16)	90.01 (98.50, 81.52)	90.05 (93.60, 86.50)

**Table 12. South Phoenix PRAMS: Percent of Women Satisfied With Aspects of Prenatal Care by Prenatal Care Site**

	Hospital/Clinic N=37	MC Family Health Center N=60	Private Office N=103	Other N=47	All Sites N=252
The Amount of Time Waiting After Arriving for Doctor Visit	68.36 (82.67, 54.05)	60.03 (72.32, 47.74)	79.39 (87.01, 71.77)	78.11 (89.75, 66.47)	72.12 (77.53, 66.71)
The Amount of Time Doctor or Nurse Spent With Them During Visit	79.09 (91.81, 66.37)	63.29 (75.44, 51.14)	77.12 (85.04, 69.20)	78.11 (89.75, 66.47)	74.07 (79.38, 68.76)
The Advice Given About Maintaining Personal Health	76.1 (89.43, 62.77)	72.95 (84.08, 61.82)	78.25 (86.03, 70.47)	78.11 (89.75, 66.47)	75.8 (80.97, 70.63)
The Understanding and Respect Shown by The Staff	87.17 (97.40, 76.94)	89.13 (97.03, 81.23)	91.06 (96.33, 85.79)	95.19 (100.11, 90.27)	90.05 (93.60, 86.50)

**Table 13. South Phoenix PRAMS: Percent of Women Receiving Services as Part of Prenatal Care by Age Group**

	<19 N=53	20-24 N=77	25-29 N=80	>30 N=52	All Age Groups N=262
Childbirth Classes	23.94 (35.29, 12.59)	24.58 (34.18, 14.98)	21.17 (29.81, 12.53)	27.35 (39.25, 15.45)	23.9 (28.98, 18.82)
Parenting Classes	20.23 (30.83, 9.63)	16.94 (25.31, 8.57)	12.87 (19.95, 5.79)	17.8 (28.11, 7.49)	16.47 (20.88, 12.06)
Smoking Cessation	2.82 (6.84, -1.20)	2.16 (5.24, -0.92)	4.15 (8.42, -0.12)	8.9 (16.60, 1.20)	4.3 (6.71, 1.89)
Home Visits by Nurse or Health Care Worker	9.35 (16.94, 1.76)	8.81 (15.30, 2.32)	3.18 (6.73, -0.37)	7.99 (14.85, 1.13)	6.93 (9.91, 3.95)
Food Stamps	19.58 (30.16, 9.00)	22.43 (31.76, 13.10)	12.3 (19.06, 5.54)	21.33 (32.15, 10.51)	18.34 (22.91, 13.77)
WIC	71.32 (83.06, 59.58)	55.64 (66.73, 44.55)	61.56 (71.75, 51.37)	46.21 (59.34, 33.08)	58.88 (64.68, 53.08)
TANF (Welfare)	10.88 (19.21, 2.55)	11.46 (18.54, 4.38)	5.38 (9.75, 1.01)	6.67 (13.43, -0.09)	8.41 (11.66, 5.16)
Substance Abuse	0 (0.00, 0.00)	1.66 (4.66, -1.34)	1.38 (3.89, -1.13)	2.22 (6.22, -1.78)	1.34 (2.73, -0.05)

**Table 14. South Phoenix PRAMS: Percent of Women Receiving Services as Part of Prenatal Care by Race/Ethnicity**

	Non-Hispanic Whites N=34	Hispanics N=203	All Races/Ethnicities N=262
Childbirth Classes	37.94 (53.80, 22.08)	21.7 (27.29, 16.11)	23.9 (28.98, 18.82)
Parenting Classes	13.44 (24.77, 2.11)	17.24 (22.34, 12.14)	16.47 (20.88, 12.06)
Smoking Cessation	0 (0.00, 0.00)	5.55 (8.65, 2.45)	4.3 (6.71, 1.89)
Home Visits by Nurse or Health Care Worker	10.08 (20.10, 0.06)	4.74 (7.50, 1.98)	6.93 (9.91, 3.95)
Food Stamps	9.69 (18.33, 1.05)	20.13 (25.56, 14.70)	18.34 (22.91, 13.77)
WIC	23.13 (36.56, 9.70)	64.84 (71.25, 58.43)	58.88 (64.68, 53.08)
TANF (Welfare)	8.7 (17.25, 0.15)	7.05 (10.46, 3.64)	8.41 (11.66, 5.16)
Substance Abuse	0 (0.00, 0.00)	1.74 (3.54, -0.06)	1.34 (2.73, -0.01)

**Table 15. South Phoenix PRAMS: Percent of Women Receiving Services as Part of Prenatal Care by Education Level**

	<9 Years N=68	9-11 Years N=79	12 Years N=63	>12 Years N=44	All Education Levels N=262
Childbirth Classes	20.9 (30.23, 11.57)	22.11 (31.34, 12.88)	23.18 (33.20, 13.16)	31.97 (45.65, 18.29)	23.9 (28.98, 18.82)
Parenting Classes	20.41 (29.74, 11.08)	21.64 (30.85, 12.43)	9.75 (16.57, 2.93)	14.61 (25.02, 4.20)	16.47 (20.88, 12.06)
Smoking Cessation	10.45 (17.49, 3.41)	4.78 (9.66, -0.10)	0.52 (1.25, -0.21)	0 (0.00, 0.00)	4.3 (6.71, 1.89)
Home Visits by Nurse or Health Care Worker	8.79 (15.28, 2.30)	9.37 (15.64, 3.10)	7.49 (13.64, 1.34)	0 (0.00, 0.00)	6.93 (9.91, 3.95)
Food Stamps	26.37 (36.46, 16.28)	23.05 (32.30, 13.80)	13.23 (21.13, 5.33)	5.52 (12.40, -1.36)	18.34 (22.91, 13.77)
WIC	71.48 (81.79, 61.17)	70.58 (80.63, 60.53)	53.13 (64.91, 41.35)	31.97 (45.65, 18.29)	58.88 (64.68, 53.08)
TANF (Welfare)	7.13 (12.99, 1.27)	11.44 (18.26, 4.62)	7.49 (13.64, 1.34)	5.52 (12.40, -1.36)	8.41 (11.66, 5.16)
Substance Abuse	3.32 (7.51, -0.87)	1.59 (4.47, -1.29)	0 (0.00, 0.00)	0 (0.00, 0.00)	1.34 (2.73, -0.05)

**Table 16. South Phoenix PRAMS: Percent of Women Receiving Services as Part of Prenatal Care by Prenatal Care Site**

	Hospital/Clinic N=37	MC Family Health Center N=60	Private Office N=103	Other N=47	All Sites N=252
Childbirth Classes	17.92 (29.93, 5.91)	20.29 (30.36, 10.22)	37.28 (46.43, 28.13)	9.15 (16.97, 1.33)	23.9 (28.98, 18.82)
Parenting Classes	17.92 (29.93, 5.91)	22.95 (33.44, 12.46)	15.41 (22.27, 8.55)	12.74 (22.36, 3.12)	16.47 (20.88, 12.06)
Smoking Cessation	8.96 (17.92, 0.00)	9.42 (16.63, 2.21)	2.27 (5.15, -0.61)	0 (0.00, 0.00)	4.3 (6.71, 1.89)
Home Visits by Nurse or Health Care Worker	5.97 (13.42, -1.48)	8.82 (15.99, 1.65)	4.07 (7.64, 0.50)	9.15 (16.97, 1.33)	6.93 (9.91, 3.95)
Food Stamps	26.54 (39.97, 13.11)	29.94 (41.54, 18.34)	9.61 (14.92, 4.30)	15.29 (25.68, 4.90)	18.34 (22.91, 13.77)
WIC	74.34 (87.73, 60.95)	68.24 (79.88, 56.60)	47.9 (57.29, 38.51)	61.32 (74.98, 47.66)	58.88 (64.68, 53.08)
TANF (Welfare)	15.82 (27.03, 4.61)	7.98 (14.37, 1.59)	7.14 (12.02, 2.26)	5.85 (12.30, -0.60)	8.41 (11.66, 5.16)
Substance Abuse	2.99 (8.34, -2.36)	2.05 (5.73, -1.63)	1.13 (3.19, -0.93)	0 (0.00, 0.00)	1.34 (2.73, -0.05)

**Table 17. South Phoenix PRAMS: Percent of Women Experiencing Psychosocial Stressors During the 12 Months Prior to Giving Birth by Age Group**

	<19 N=53	20-24 N=77	25-29 N=80	>30 N=52	All Age Groups N=262
Family Member Was Sick and Hospitalized	26.76 (38.44, 15.08)	26.25 (36.09, 16.41)	16.04 (23.74, 8.34)	11.78 (20.33, 3.23)	20.14 (24.88, 15.40)
Divorced or Separated	22.4 (33.42, 11.38)	15.28 (23.28, 7.28)	15.63 (23.31, 7.95)	6.67 (13.43, -0.09)	15.13 (19.38, 10.88)
Moved to a New Address	45.45 (58.48, 32.42)	30.56 (40.81, 20.31)	35.83 (45.92, 25.74)	27.35 (39.25, 15.45)	34.68 (40.32, 29.04)
Homeless	11.52 (19.89, 3.15)	21.26 (30.32, 12.20)	21.17 (29.81, 12.53)	27.35 (39.25, 15.45)	20.45 (25.23, 15.67)
Husband/Partner Lost Job	23.05 (34.08, 12.02)	21.07 (29.87, 12.27)	21.58 (30.24, 12.92)	12.44 (21.02, 3.86)	19.9 (24.56, 15.24)
Lost Own Job	23.94 (35.29, 12.59)	6.96 (12.23, 1.69)	20.2 (28.65, 11.75)	8.9 (16.60, 1.20)	15.13 (19.38, 10.88)
Argued More With Husband/Partner	28.04 (39.76, 16.32)	18.42 (26.85, 9.99)	32.65 (42.55, 22.75)	18.2 (28.10, 8.30)	24.96 (30.06, 19.86)
Husband Partner Didn't Want Pregnancy	9.99 (17.63, 2.35)	11.95 (19.05, 4.85)	8.71 (14.63, 2.79)	5.11 (10.77, -0.55)	9.12 (12.45, 5.79)
Couldn't Pay Bills	29.57 (41.55, 17.59)	29.39 (39.46, 19.32)	39.16 (49.47, 28.85)	28.01 (39.93, 16.09)	32.31 (37.86, 26.76)
Involved in Physical Fight	6.53 (13.15, -0.09)	3.63 (6.92, 0.34)	8.71 (14.63, 2.79)	0 (0.00, 0.00)	5.14 (7.69, 2.59)
Self, Husband/Partner Went to Jail	13.06 (22.06, 4.06)	11.46 (18.54, 4.38)	4.56 (8.87, 0.25)	6.67 (13.43, -0.09)	8.59 (11.92, 5.26)
Friend Had a Drinking/Drug Problem	18.69 (28.86, 8.52)	19.78 (28.80, 10.76)	19.22 (27.45, 10.99)	20.42 (30.85, 9.99)	19.51 (24.17, 14.85)
Someone Close Died	26.76 (38.44, 15.08)	26.25 (36.09, 16.41)	20.2 (28.65, 11.75)	12.44 (21.02, 3.86)	21.61 (26.47, 16.75)

**Table 18. South Phoenix PRAMS: Percent of Women Experiencing Psychosocial Stressors During the 12 Months Prior to Giving Birth by Race/Ethnicity**

	Non-Hispanic Whites N=34	Hispanics N=203	All Races/Ethnicities N=262
Family Member Was Sick and Hospitalized	28.85 (43.55, 14.15)	16.83 (21.85, 11.81)	20.14 (24.88, 15.40)
Divorced or Separated	4.35 (10.50, -1.80)	16.49 (21.51, 11.47)	15.13 (19.38, 10.88)
Moved to a New Address	45.65 (61.86, 29.44)	33.73 (40.10, 27.36)	34.68 (40.32, 29.04)
Homeless	0 (0.00, 0.00)	26.44 (32.38, 20.50)	20.45 (25.23, 15.67)
Husband/Partner Lost Job	27.86 (42.52, 13.20)	18.84 (24.01, 13.67)	19.9 (24.56, 15.24)
Lost Own Job	11.07 (21.16, 0.98)	15.33 (20.19, 10.47)	15.13 (19.38, 10.88)
Argued More With Husband/Partner	21.15 (34.48, 7.82)	23.82 (29.48, 18.16)	24.96 (30.06, 19.86)
Husband Partner Didn't Want Pregnancy	7.71 (16.14, -0.72)	9.3 (13.10, 5.50)	9.12 (12.45, 5.79)
Couldn't Pay Bills	38.93 (54.81, 23.05)	29.1 (35.22, 22.98)	32.31 (37.86, 26.76)
Involved in Physical Fight	3.36 (9.36, -2.64)	4.16 (6.73, 1.59)	5.14 (7.69, 2.59)
Self, Husband/Partner Went to Jail	4.35 (10.50, -1.80)	7.87 (11.54, 4.20)	8.59 (11.92, 5.26)
Friend Had a Drinking/Drug Problem	32.21 (47.40, 17.02)	14.69 (19.41, 9.97)	19.51 (24.17, 14.85)
Someone Close Died	25.5 (39.59, 11.41)	19.9 (25.27, 14.53)	21.61 (26.47, 16.75)

**Table 19. South Phoenix PRAMS: Percent of Women Experiencing Psychosocial Stressors During the 12 Months Prior to Giving Birth by Education Level.**

	<9 Years N=68	9-11 Years N=79	12 Years N=63	>12 Years N=44	All Education Levels N=262
Family Member Was Sick and Hospitalized	11.62 (19.11, 4.13)	25.59 (35.10, 16.08)	20.92 (30.64, 11.20)	19 (30.25, 7.75)	20.14 (24.88, 15.40)
Divorced or Separated	17.09 (25.79, 8.39)	15.09 (22.79, 7.39)	17.43 (26.50, 8.36)	5.52 (12.40, -1.36)	15.13 (19.38, 10.88)
Moved to a New Address	33.69 (44.61, 22.77)	34.96 (45.35, 24.57)	34.87 (46.20, 23.54)	36.36 (50.35, 22.37)	34.68 (40.32, 29.04)
Homeless	29.69 (40.18, 19.20)	23.05 (32.30, 13.80)	16.2 (24.92, 7.48)	8.28 (16.57, -0.01)	20.45 (25.23, 15.67)
Husband/Partner Lost Job	27.05 (37.32, 16.78)	17.45 (25.25, 9.65)	14.46 (22.79, 6.13)	23.7 (36.15, 11.25)	19.9 (24.56, 15.24)
Lost Own Job	14.26 (22.24, 6.28)	17.81 (26.20, 9.42)	20.92 (30.64, 11.20)	2.76 (7.70, -2.18)	15.13 (19.38, 10.88)
Argued More With Husband/Partner	26.37 (36.46, 16.28)	24.94 (34.23, 15.65)	28.41 (39.11, 17.71)	19 (30.25, 7.75)	24.96 (30.06, 19.86)
Husband Partner Didn't Want Pregnancy	8.6 (14.56, 2.64)	9.84 (16.15, 3.53)	12.2 (20.04, 4.36)	5.52 (12.40, -1.36)	9.12 (12.45, 5.79)
Couldn't Pay Bills	32.52 (43.30, 21.74)	21.46 (30.46, 12.46)	39.9 (51.46, 28.34)	35.55 (49.52, 21.58)	32.31 (37.86, 26.76)
Involved in Physical Fight	5.47 (10.61, 0.33)	5.07 (9.28, 0.86)	5.23 (10.58, -0.12)	2.76 (7.70, -2.18)	5.14 (7.69, 2.59)
Self, Husband/Partner Went to Jail	6.64 (12.46, 0.82)	12.56 (19.81, 5.31)	8.72 (15.48, 1.96)	5.52 (12.40, -1.36)	8.59 (11.92, 5.26)
Friend Had a Drinking/Drug Problem	18.75 (27.77, 9.73)	19.22 (27.67, 10.77)	23.18 (33.20, 13.16)	16.24 (26.73, 5.75)	19.51 (24.17, 14.85)
Someone Close Died	14.75 (22.75, 6.75)	21.46 (30.46, 12.46)	33.64 (44.85, 22.43)	12.66 (22.19, 3.13)	21.61 (26.47, 16.75)

**Table 20. South Phoenix PRAMS: Percent of Infants Usually Placed on Their Side, Back, and Stomach to Sleep by Age Group**

	<19 N=53	20-24 N=77	25-29 N=80	>30 N=52	All Age Groups N=262
Side	48.27 (61.32, 35.22)	53.67 (64.78, 42.56)	46.9 (57.39, 36.41)	49.75 (62.94, 36.56)	49.58 (55.48, 43.68)
Back	28.68 (40.42, 16.94)	39.37 (50.29, 28.45)	40.8 (51.11, 30.49)	39.13 (52.07, 26.19)	37.59 (43.31, 31.87)
Stomach	20.23 (30.83, 9.63)	5.3 (9.71, 0.89)	10.51 (16.88, 4.14)	8.9 (16.60, 1.20)	10.78 (14.43, 7.13)

**Table 21. South Phoenix PRAMS: Percent of Infants Usually Placed on Their Side, Back, and Stomach to Sleep by Race/Ethnicity**

	Non-Hispanic Whites N=34	Hispanics N=203	All Races/Ethnicities N=262
Side	23.51 (37.54, 9.48)	55.88 (62.54, 49.22)	49.58 (55.48, 43.68)
Back	49.01 (65.28, 32.74)	34.75 (41.12, 28.38)	37.59 (43.31, 31.87)
Stomach	26.49 (40.62, 12.36)	6.88 (10.27, 3.49)	10.78 (14.43, 7.13)

**Table 22. South Phoenix PRAMS: Percent of Infants Usually Placed on Their Side, Back, and Stomach to Sleep by Education Level**

	<9 Years N=68	9-11 Years N=79	12 Years N=63	>12 Years N=44	All Education Levels N=262
Side	52.73 (64.18, 41.28)	56.61 (67.47, 45.75)	45.64 (57.40, 33.88)	35.55 (49.52, 21.58)	49.58 (55.48, 43.68)
Back	33.5 (44.30, 22.70)	35.14 (45.63, 24.65)	40.41 (51.97, 28.85)	45.45 (59.93, 30.97)	37.59 (43.31, 31.87)
Stomach	8.79 (15.28, 2.30)	6.19 (11.19, 1.19)	13.95 (22.24, 5.66)	18.18 (29.39, 6.97)	10.78 (14.43, 7.13)

**Table 23. South Phoenix PRAMS: Percent of Women Reporting Their Baby Was in the Same Room for Any Amount of Time Per Day, On Average, With Someone Smoking by Age Group**

	<19 N=53	20-24 N=77	25-29 N=80	>30 N=52	All Age Groups N=262
Exposed to Smoking	10.88 (19.21, 2.55)	5.98 (11.15, 0.81)	7.33 (12.78, 1.88)	6.67 (13.43, -0.09)	7.56 (10.72, 4.40)

**Table 24. South Phoenix PRAMS: Percent of Women Reporting Their Baby Was in the Same Room for Any Amount of Time Per Day, On Average, With Someone Smoking by Race/Ethnicity**

	Non-Hispanic Whites N=34	Hispanics N=203	All Races/Ethnicities N=262
Exposed to Smoking	25.5 (39.59, 11.41)	4.22 (6.96, 1.48)	7.56 (10.72, 4.40)

**Table 25. South Phoenix PRAMS: Percent of Women Reporting Their Baby Was in the Same Room for Any Amount of Time Per Day, On Average, With Someone Smoking by Education Level**

	<9 Years N=68	9-11 Years N=79	12 Years N=63	>12 Years N=44	All Education Levels N=262
Exposed to Smoking	4.98 (10.08, -0.12)	3.66 (7.74, -0.42)	12.72 (20.58, 4.86)	9.09 (17.46, 0.72)	7.56 (10.72, 4.40)

**Table 26. South Phoenix PRAMS: Percent of Women Reporting Baby Has Gone for Care as Many Times as Wanted When Sick by Age Group**

	<19 N=53	20-24 N=77	25-29 N=80	>30 N=52	All Age Groups N=262
Not Enough	13.7 (22.74, 4.66)	7.15 (13.01, 1.29)	11.07 (17.77, 4.37)	2.22 (6.22, -1.78)	8.78 (12.17, 5.39)
Yes Enough	69.78 (81.78, 57.78)	65.43 (76.11, 54.75)	63.2 (73.37, 53.03)	61.78 (74.60, 48.96)	64.87 (70.51, 59.23)
Not Sick	13.7 (22.74, 4.66)	27.42 (37.46, 17.38)	23.94 (32.98, 14.90)	31.55 (43.76, 19.34)	24.3 (29.38, 19.22)

**Table 27. South Phoenix PRAMS: Percent of Women Reporting Baby Has Gone for Care as Many Times as Wanted When Sick by Race/Ethnicity**

	Non-Hispanic Whites N=34	Hispanics N=203	All Races/Ethnicities N=262
Not Enough	6.72 (15.05, -1.61)	9.03 (12.93, 5.13)	8.78 (12.17, 5.39)
Yes Enough	65.8 (81.03, 50.57)	64.13 (70.60, 57.66)	64.87 (70.51, 59.23)
Not Sick	26.49 (40.62, 12.36)	24.36 (30.16, 18.56)	24.3 (29.38, 19.22)

**Table 28. South Phoenix PRAMS: Percent of Women Reporting Baby Has Gone for Care as Many Times as Wanted When Sick by Education Level**

	<9 Years N=68	9-11 Years N=79	12 Years N=63	>12 Years N=44	All Education Levels N=262
Not Enough	10.45 (17.49, 3.41)	10.03 (16.77, 3.29)	6.97 (13.09, 0.85)	5.52 (12.40, -1.36)	8.78 (12.17, 5.39)
Yes Enough	67.48 (78.26, 56.70)	64.86 (75.35, 54.37)	63.59 (74.96, 52.22)	58.93 (73.30, 44.56)	64.87 (70.51, 59.23)
Not Sick	18.75 (27.77, 9.73)	21.46 (30.46, 12.46)	29.44 (40.18, 18.70)	34.73 (48.70, 20.76)	24.3 (29.38, 19.22)

**Table 29. South Phoenix PRAMS: Percent of Women Reporting Baby Has Gone for Care as Many Times as Wanted When Sick by Prenatal Care**

	MC Family Health				All Sites
	Hospital/Clinic N=37	Center N=60	Private Office N=103	Other N=47	N=262
Not Enough	11.95 (22.12, 1.78)	8.21 (15.34, 1.08)	8.27 (13.50, 3.04)	5.1 (11.47, -1.27)	8.78 (12.17, 5.39)
Yes Enough	69.25 (83.54, 54.96)	60.03 (72.32, 47.74)	66.92 (75.82, 58.02)	62.07 (75.73, 48.41)	64.87 (70.52, 59.23)
Not Sick	15.82 (27.03, 4.61)	29.1 (40.51, 17.69)	23.68 (31.74, 15.62)	30.28 (43.20, 17.36)	24.3 (29.38, 19.22)

**Table 30. South Phoenix PRAMS: Percent of Women Reporting Their Baby Saw Doctor in First Week by Age Group**

	<19 N=53	20-24 N=77	25-29 N=80	>30 N=52	All Age Groups N=262
Doctor Visit First Week After Leaving Hospital	81.95 (92.08, 71.82)	80.71 (89.71, 71.71)	86.73 (93.81, 79.65)	81.55 (91.90, 71.20)	83.08 (87.55, 78.61)

**Table 31. South Phoenix PRAMS: Percent of Women Reporting Their Baby Saw Doctor in First Week by Race/Ethnicity**

	Non-Hispanic Whites N=34	Hispanics N=203	All Races/Ethnicities N=262
Doctor Visit First Week After Leaving Hospital	88.93 (99.02, 78.84)	82.35 (87.50, 77.20)	83.08 (87.55, 78.61)

**Table 32. South Phoenix PRAMS: Percent of Women Reporting Their Baby Saw Doctor in First Week by Education Level**

	<9 Years N=68	9-11 Years N=79	12 Years N=63	>12 Years N=44	All Education Levels N=262
Doctor Visit First Week After Leaving Hospital	77.93 (87.51, 68.35)	72.64 (82.52, 62.76)	94.77 (100.12, 89.42)	88.15 (97.62, 78.68)	83.08 (87.55, 78.61)

**Table 33. South Phoenix PRAMS: Percent of Women Reporting Their Baby Saw Doctor in First Week by Method of Payment**

	AHCCCS N=170	Private Insurance N=72	All Methods N=262
Doctor Visit First Week After Leaving Hospital	78.93 (84.97, 72.89)	93.09 (98.77, 87.41)	83.08 (87.55, 78.61)

**Table 34. South Phoenix PRAMS: Percent of Women Reporting Their Baby Saw Doctor in First Week by Prenatal Care Site**

	Hospital/Clinic N=37	MC Family Health Center N=60	Private Office N=103	Other N=47	All Sites N=262
Doctor Visit First Week After Leaving Hospital	73.12 (86.96, 59.28)	82.37 (91.99, 72.75)	92.06 (97.27, 86.85)	79.91 (91.04, 68.78)	83.08 (87.55, 78.61)

**Table 35. South Phoenix PRAMS: Percent of Women Stating Reasons That Kept Them From Routine Well-Baby Care by Age Group**

	<19 N=53	20-24 N=77	25-29 N=80	>30 N=52	All Age Groups N=262
Not Enough Money	7.17	13.8	8.71	11.78	10.38
No Insurance	(13.83, 0.51)	(21.72, 5.88)	(14.63, 2.79)	(20.33, 3.23)	(14.01, 6.75)
No Transportation	17.41	6.47	10.1	4.45	9.49
	(27.52, 7.30)	(11.68, 1.26)	(16.43, 3.77)	(10.04, -1.14)	(12.98, 6.00)
No Child Care for Other Children	4.35	7.64	8.71	6.67	7.12
	(9.82, -1.12)	(13.54, 1.74)	(14.63, 2.79)	(13.43, -0.09)	(10.18, 4.06)
Couldn't Make Appointment	15.23	11.95	22.15	4.45	14.42
	(24.83, 5.63)	(19.05, 4.85)	(30.99, 13.31)	(10.04, -1.14)	(18.61, 10.23)
Baby Too Sick for Routine Care	2.18	2.16	7.33	2.88	3.98
	(6.10, -1.74)	(5.24, -0.92)	(12.78, 1.88)	(6.98, -1.22)	(6.25, 1.71)

**Table 36. South Phoenix PRAMS: Percent of Women Stating Reasons That Kept Them From Routine Well-Baby Care by Race/Ethnicity**

	Non-Hispanic Whites N=34	Hispanics N=203	All Races/Ethnicities N=262
Not Enough Money	10.08	9.95	10.38
No Insurance	(20.10, 0.06)	(13.97, 5.93)	(14.01, 6.75)
No Transportation	3.36	9.37	9.49
	(9.36, -2.64)	(13.29, 5.45)	(12.98, 6.00)
No Child Care for Other Children	3.36	6.88	7.12
	(9.36, -2.64)	(10.27, 3.49)	(10.18, 4.06)
Couldn't Make Appointment	6.72	16.15	14.42
	(15.05, -1.61)	(21.15, 11.15)	(18.61, 10.23)
Baby Too Sick for Routine Care	0	4.57	3.98
	(0.00, 0.00)	(7.33, 1.81)	(6.25, 1.71)

**Table 37. South Phoenix PRAMS: Percent of Women Stating Reasons That Kept Them From Routine Well-Baby Care by Education Level**

	<9 Years N=68	9-11 Years N=79	12 Years N=63	>12 Years N=44	All Education Levels N=262
Not Enough Money No Insurance	17.58 (26.30, 8.86)	4.13 (8.27, -0.01)	12.2 (20.04, 4.36)	5.52 (12.40, -1.36)	10.38 (14.01, 6.75)
No Transportation	14.26 (22.24, 6.28)	10.03 (16.77, 3.29)	10.46 (17.79, 3.13)	0 (0.00, 0.00)	9.49 (12.98, 6.00)
No Child Care for Other Children	14.26 (22.24, 6.28)	6.84 (12.47, 1.21)	3.49 (7.90, -0.92)	2.76 (7.70, -2.18)	7.12 (10.18, 4.06)
Couldn't Make Appointment	22.56 (32.16, 12.96)	10.03 (16.77, 3.29)	12.2 (20.04, 4.36)	9.09 (17.46, 0.72)	14.42 (18.61, 10.23)
Baby Too Sick for Routine Care	4.3 (8.59, 0.01)	3.66 (7.74, -0.42)	1.74 (4.88, -1.40)	5.52 (12.40, -1.36)	3.98 (6.25, 1.71)

**Table 38. South Phoenix PRAMS: Percent of Women Stating Reasons That Kept Them From Routine Well-Baby Care by Prenatal Care Site**

	Hospital/Clinic N=37	MC Family Health Center N=60	Private Office N=103	Other N=47	All Sites N=262
Not Enough Money No Insurance	8.96 (17.92, 0.00)	5.92 (11.27, 0.57)	13.6 (20.21, 6.99)	2.55 (7.12, -2.02)	10.38 (14.01, 6.75)
No Transportation	11.95 (22.12, 1.78)	7.98 (14.37, 1.59)	8.27 (13.50, 3.04)	10.19 (18.93, 1.45)	9.49 (12.98, 6.00)
No Child Care for Other Children	17.92 (29.93, 5.91)	3.87 (7.83, -0.09)	4.53 (8.55, 0.51)	10.19 (18.93, 1.45)	7.12 (10.18, 4.06)
Couldn't Make Appointment	17.92 (29.93, 5.91)	12.92 (21.47, 4.37)	13.14 (19.53, 6.75)	21.13 (32.75, 9.51)	14.42 (18.61, 10.23)
Baby Too Sick for Routine Care	11.95 (22.12, 1.78)	1.82 (3.31, 0.33)	4.53 (8.55, 0.51)	0 (0.00, 0.00)	3.98 (6.25, 1.71)

**Table 39. South Phoenix PRAMS: Percent of Women Stating Reasons That Kept Them From Routine Well-Baby Care by Method of Payment**

	AHCCCS N=170	Private Insurance N=72	All Methods N=262
Not Enough Money	9.6	11.27	10.38
No Insurance	(13.93, 5.27)	(18.54, 4.00)	(14.01, 6.75)
No Transportation	11.88	6.44	9.49
	(16.64, 7.12)	(12.08, 0.80)	(12.98, 6.00)
No Child Care for Other Children	6.14	6.44	7.12
	(9.63, 2.65)	(12.08, 0.80)	(10.18, 4.06)
Couldn't Make Appointment	16.51	10.13	14.42
	(22.02, 11.00)	(16.95, 3.31)	(18.61, 10.23)
Baby Too Sick for Routine Care	4.76	3.22	3.98
	(7.82, 1.70)	(7.30, -0.86)	(6.25, 1.71)

**Table 40. South Phoenix PRAMS: Percent of Women Reporting Degree of Depression Following Delivery by Age Group**

	<19 N=53	20-24 N=77	25-29 N=80	>30 N=52	All Age Groups N=262
Not Depressed	55.44	51.7	41.77	59.56	50.84
	(68.42, 42.46)	(62.81, 40.59)	(52.14, 31.40)	(72.52, 46.60)	(56.74, 44.94)
Little Depressed	30.86	24.89	35.26	23.56	29.21
	(42.87, 18.85)	(34.28, 15.50)	(45.28, 25.24)	(34.79, 12.33)	(34.54, 23.88)
Moderately Depressed	6.53	9.12	11.48	2.88	8.09
	(13.15, -0.09)	(15.12, 3.12)	(18.20, 4.76)	(6.98, -1.22)	(11.27, 4.91)
Very Depressed	7.17	8.81	6.92	2.88	6.67
	(13.83, 0.51)	(15.30, 2.32)	(12.35, 1.49)	(6.98, -1.22)	(9.63, 3.71)
Had to Get Help	0	2.16	0	6.67	1.92
	(0.00, 0.00)	(5.24, -0.92)	(0.00, 0.00)	(13.43, -0.09)	(3.55, 0.29)

**Table 41. South Phoenix PRAMS: Percent of Women Reporting Degree of Depression Following Delivery by Race/Ethnicity**

	Non-Hispanic Whites N=34	Hispanics N=203	All Races/Ethnicities N=262
Not Depressed	37.94 (53.80, 22.08)	53.45 (60.13, 46.77)	50.84 (56.74, 44.94)
Little Depressed	33.21 (48.42, 18.00)	29.37 (35.45, 23.29)	29.21 (34.54, 23.88)
Moderately Depressed	21.15 (34.48, 7.82)	4.91 (7.69, 2.13)	8.09 (11.27, 4.91)
Very Depressed	3.36 (9.36, -2.64)	6.88 (10.27, 3.49)	6.67 (9.63, 3.71)
Had to Get Help	0 (0.00, 0.00)	1.91 (3.73, 0.09)	1.92 (3.55, 0.29)

**Table 42. South Phoenix PRAMS: Percent of Women Reporting Degree of Depression Following Delivery by Education Level**

	<9 Years N=68	9-11 Years N=79	12 Years N=63	>12 Years N=44	All Education Levels N=262
Not Depressed	64.35 (75.29, 53.41)	48.82 (59.78, 37.86)	42.16 (53.80, 30.52)	43.82 (58.30, 29.34)	50.84 (56.74, 44.94)
Little Depressed	21.88 (31.25, 12.51)	31.31 (41.40, 21.22)	34.67 (45.90, 23.44)	33.61 (47.33, 19.89)	29.21 (34.54, 23.88)
Moderately Depressed	1.66 (4.66, -1.34)	7.31 (12.97, 1.65)	12.72 (20.58, 4.86)	13.48 (23.06, 3.90)	8.09 (11.27, 4.91)
Very Depressed	3.81 (8.06, -0.44)	7.31 (12.97, 1.65)	8.72 (15.48, 1.96)	2.76 (7.70, -2.18)	6.67 (9.63, 3.71)
Had to Get Help	1.66 (4.66, -1.34)	2.06 (5.00, -0.88)	0 (0.00, 0.00)	5.52 (12.40, -1.36)	1.92 (3.55, 0.29)

**Table 43. South Phoenix PRAMS: Percent of Women Reporting Degree of Depression Following Delivery by Prenatal Care Site**

	Hospital/Clinic N=37	MC Family Health Center N=60	Private Office N=103	Other N=47	All Sites N=262
Not Depressed	65.38 (80.04, 50.72)	66.42 (78.10, 54.74)	41.69 (50.98, 32.40)	44.53 (58.47, 30.59)	50.84 (56.74, 44.94)
Little Depressed	25.66 (39.05, 12.27)	19.45 (29.15, 9.75)	35.43 (44.37, 26.49)	25.19 (37.34, 13.04)	29.21 (34.54, 23.88)
Moderately Depressed	0 (0.00, 0.00)	3.27 (7.15, -0.61)	12.34 (18.49, 6.19)	11.7 (20.56, 2.84)	8.09 (11.27, 4.91)
Very Depressed	5.97 (13.42, -1.48)	2.66 (6.44, -1.12)	7.94 (13.15, 2.73)	10.94 (19.74, 2.14)	6.67 (9.63, 3.71)
Had to Get Help	2.99 (8.34, -2.36)	0 (0.00, 0.00)	2.6 (5.52, -0.32)	2.55 (7.12, -2.02)	1.92 (3.55, 0.29)

**Table 44. South Phoenix PRAMS: Percent of Women Reporting Degree of Depression Following Delivery by Method of Payment**

	AHCCCS N=170	Private Insurance N=72	All Methods N=262
Not Depressed	55.12 (62.39, 47.85)	44.22 (55.37, 33.07)	50.84 (56.74, 44.94)
Little Depressed	29.13 (35.75, 22.51)	29.74 (39.97, 19.51)	29.21 (34.54, 23.88)
Moderately Depressed	4.56 (7.60, 1.52)	14.78 (22.56, 7.00)	8.09 (11.27, 4.91)
Very Depressed	5.25 (8.52, 1.98)	8.05 (14.30, 1.80)	6.67 (9.63, 3.71)
Had to Get Help	1.59 (3.37, -0.19)	3.22 (7.30, -0.86)	1.92 (3.55, 0.29)

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## Glossary of Terms

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### Abbreviations Defined

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ADHS.....	Arizona Department of Health Services
AHCCCS.....	Arizona Health Care Cost Containment System (Medicaid)
AZ.....	Arizona
BDPR.....	Bio-Defense Preparedness and Response
CDC.....	Centers for Disease Control and Prevention
CHC.....	Comprehensive Health Center
EPI/BDPR.....	Division of Epidemiology and Bio-Defense Preparedness & Response
F-IMR.....	Feto-Infant Mortality Rate
HRSA.....	Health Resources and Services Administration
IMR.....	Infant Mortality Rate
KABB.....	Knowledge, attitudes, beliefs, and behaviors
LBW.....	Low Birth Weight (< 2500 grams)
LCL.....	Lower Confidence Limit
MC.....	Maricopa County
MCDPH.....	Maricopa County Department of Public Health
MCH.....	Maternal and Child Health
MCHB.....	Maternal and Child Health Bureau
MCFH.....	Division of Maternal, Child, & Family Health
MIHS.....	Maricopa Integrated Health Systems
NCHS.....	National Center for Health Statistics
NH.....	Non-Hispanic
NMR.....	Neonatal Mortality Rate
OOH.....	Office of Oral Health
PNC.....	Prenatal Care
PNMR.....	Post-Neonatal Mortality Rate
PPOR.....	Perinatal Periods of Risk
PRAMS.....	Pregnancy Risk Assessment Monitoring System
SES.....	Socioeconomic Status
SIDS.....	Sudden Infant Death Syndrome
TANF.....	Temporary Assistance for Needy Families
UCL.....	Upper Confidence Limit
U.S.....	United States
VLBW.....	Very Low Birth Weight (< 1500 grams)
WHO.....	World Health Organization
WIC.....	Women, Infants, and Children Program

### Selected Definitions as Used in the Document

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Fetal Death	Deaths that occur between 24 weeks gestation and birth
Infant Death	Deaths that occur between birth and one year of age
Feto-infant mortality rate	The number of fetal and infant deaths per 1,000 births and fetal deaths.
Gestation	Amount of time during pregnancy since conception
Chi-square ( $\chi^2$ )	A statistical test to determine whether two attributes are related
Confidence Interval	A range of values calculated from a sample that likely contain the true population value
Neonatal mortality	Infant death that occurs between birth and 28 days of life
Post-neonatal mortality	Infant death that occurs between 28 day and one year of life
Perinatal	The period around the time of birth
Grams to pounds conversion	Grams $\times$ 0.002205=lbs; lbs/.002205=grams Example: 1000g $\times$ 0.002205=2.205lbs



### Nativity (Birth) Data Requested

Time period(s) (1988 to present) (years and/or months): \_\_\_\_\_

Area(s) (must be census tracts, Health Status Areas, cities, or zip codes (available after 1999)): \_\_\_\_\_

All Births:                       Single Births Only:                       Multiple Births Only:

Data Available (check only those needed):

Mother's age:       Adolescent age group:       Race/ethnicity:       Education:

Marital Status:       Child's sex:       Birth weight:       No. of Prenatal visits:

Trimester care began:       Institution of Birth:       Gestational Age:

### Mortality (Death) Data Requested

Time period(s) (1988 on available) (Years and/or Months): \_\_\_\_\_

Area(s) (must be census tracts, Health Status Areas, cities, or zip codes (available after 1999)): \_\_\_\_\_

Main Causes of Death (19):                       OR: Specific Cause(s): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Data Available (check only those needed):

Age:       Race/Ethnicity:       Sex:       Marital status:       Education level:

Infant mortality age components:                       Resident city at death:

### Other Data/Information

Census data by year and age/race/sex for Health Status Areas only:

Time period(s) (years only): \_\_\_\_\_

Health Status Areas(s): \_\_\_\_\_

\*\* Other census data can be obtained from the Arizona State Department of Economic Security, Population Statistics unit, or from the ASU or County library.

(Please note that additional census data are available for Department of Public Health personnel.)

Specialized data are available from other databases. Please contact our office to discuss these data:

- a. Hospital discharge data
- b. Behavioral Risk Factor Survey (BRFS)

**2003 Maricopa County Maternal and Child Health Needs Assessment  
Five-Minute Users Survey**

We want this document to be useful to you. Your reaction to this document is important to us. Please respond to the following questions within 30 days of receipt. Feel free to provide additional comments. After completion of this survey return it to Rose Howe, Family Health Partnerships Manager, Maricopa County Department of Public Health, 1845 E. Roosevelt, Phoenix, AZ 85006 or FAX it to (602) 506-6896 Thank you.

Your name: \_\_\_\_\_

Phone: \_\_\_\_\_

1. Have you had a chance to use this Needs Assessment?  Yes  No  
If yes, what have you used it for? (Please check all that apply)  
 Grant Writing  Develop new intervention  
 Policy development  Devise outreach strategies  
 Other-Please specify. \_\_\_\_\_
2. Would you like to receive this document every year?  Yes  No
3. Have you viewed this document on our website at:  
[http://www.maricopa.gov/public\\_health/epi/](http://www.maricopa.gov/public_health/epi/)?  Yes  No
4. Which aspect of the needs assessment did you find most helpful?
5. Which aspect did you find least helpful?
6. Is there a colleague you feel would benefit from receiving this needs assessment?  
 Yes  No

Please provide name and address:

7. What recommendations would you make to improve this document?