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Introduction

The New Mexico Pregnancy Risk Assessment Monitoring System (NM PRAMS) is a project of the New Mexico Department of Health with support from the national Centers for Disease Control and Prevention (CDC). PRAMS is an ongoing multi-year, multi-state, population-based surveillance system that addresses selected maternal behaviors and experiences occurring before, during and after pregnancy. Its goal is to improve the health of mothers, infants and families. NM PRAMS provides information for making policy and planning programs and for education in the public and private sectors. The NM PRAMS team makes presentations in boardrooms, professional association meetings, community gatherings and coalitions.

Thank you very much for asking these questions and I hope that you find my answers to help you and all the other mothers who want to have a baby – PRAMS mom.

This NM PRAMS Surveillance Report is based on responses from mothers with live births during 1998-2002. Years 2001 and 2002 were combined, increasing the sample size to 3,161 in order to analyze subgroups. The average unweighted response rate was 70%. This report covers selected topics from the 77 survey questions. Chapters on teen pregnancy, family planning, maternal weight problem (overweight/obesity), prenatal care, tobacco smoking and breastfeeding include more detailed analysis. The text for each topic addresses public health importance, NM PRAMS findings, local interventions and resources. Some sections also include quotes from respondents (PRAMS moms). References are included with text or under charts. Additional references are available upon request and will be posted on the web. Data tables and figures show estimates by year of infant's birth and by maternal characteristics that may help target interventions. Because PRAMS is a survey, estimates are presented with a margin of error, the 95% confidence interval (CI), sometimes indicated by the ± symbol. Page 7 is a guide for interpreting and using this report; the appendix includes the entire survey questionnaire and explains PRAMS methodology.

Learn more about NM PRAMS of the Maternal and Child Health Epidemiology Program at our home page,
http://www.health.state.nm.us/phd/prams/home.html

You may also contact us by email at
nmprams@doh.state.nm.us

By telephone at: **(505) 476-8895**

The CDC PRAMS home page is
http://www.cdc.gov/nccdphp/drh/srv prams.htm

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Executive summary

The New Mexico Pregnancy Risk Assessment Monitoring System (NM PRAMS) gives women a voice in the public policy arena on topics vital to their family's health. Providers and programs within the state's public and private sectors promote optimal health among New Mexico's mothers, fathers and infants. Still, important disparities persist in health status and access to services. Disadvantages exist for women who are teens, belong to minority racial or ethnic groups, live at or below 185% of the Federal Poverty Level (FPL),[1] have less than high school education or are single parents. These women need culturally appropriate and innovative outreach.

The New Mexico Department of Health identified obesity and teen pregnancy among priorities for action in 2004-2005. Thus, the NM PRAMS report includes special sections on overweight/obesity (weight problem) and teen pregnancy (birth years 1998-2002), in addition to other featured topics. This summary reports information for New Mexico birth years 2001-2002. Subsequent chapters present both multi-year (1998-2002) and 2001-2002 data for this state.

39% of women had a weight problem before pregnancy (excessive weight); 8% had pre-existing or gestational diabetes.

Information on physical fitness and nutrition programs needs to reach all females of childbearing age, especially Native Americans. The problem of obesity requires interventions through health insurance coverage, work-place programs and community activities.

74% of teens (15-17 years) giving live birth from 1998-2002 did not intend their pregnancy.

Sixty-eight percent of teens ages 18-19 did not intend their pregnancies. Compared to older women, teens are more likely to engage in unhealthy preconception behaviors or have adverse experiences. Teens are also more likely to give birth to premature infants and low-birth weight infants. Many programs support teens with prenatal and postpartum interventions, but these services do not reach most new teen mothers.

14% of pregnant women and their families did not have enough food to eat.

Food insecurity (not having enough to eat, the pain of hunger and scavenging for food) is common in NM.[2] It affects maternal, fetal and infant health in costly, adverse ways. Gaps in coverage by federal, state and community food programs persist: food insufficiency was higher for women receiving public assistance (20%) compared to those without public assistance (12%). Twenty-seven percent of women without a third party payer for prenatal healthcare did not have enough food for their families.

32% of all pregnant women saw a dentist; 50% with dental problems did not.

Recent research shows that untreated periodontal disease in pregnancy is associated with preeclampsia,[3] low birth weight infants,[4] and infant tooth decay.[5] Strategies must address access for women living in dental shortage areas[6] and for women dependent on low incomes.

81% of NM mothers started breastfeeding; of these, 70% continued at least 9 weeks.

NM ranks high in the nation for initiation of breastfeeding. However, for women to sustain their effort, they need more in-hospital and post-partum support. Mothers who are discharged from the hospital early after delivery or return to work within a month of delivery deserve especial attention. All mothers should be able to obtain counseling, information and support for breastfeeding.

30% of working or student mothers reported that they could use break time to nurse their baby in school or the workplace; 45% reported they could use break time to pump (save) milk.

Breastfeeding offers multiple health and economic benefits to employers and schools, as well as families. Mothers need early access to breast pumps, breastfeeding support and accommodations for breastfeeding or pumping breast-milk while at work or school.

43% of NM mothers had an unintended pregnancy; fewer than 57% of those used a birth control method.

Planned births often result in healthier outcomes for mothers and infants. Three policy issues require action: 1) barriers to financial access, such as lack of universal health coverage, low use of Medicaid-paid family planning by eligible women and high contraceptive co-pays; 2) lack of coverage for preconception healthcare; and 3) unawareness of Emergency Contraceptive Pill (ECP) or obstacles to obtaining ECP.

7% of NM women were physically abused by a partner before pregnancy; 6% were abused during pregnancy. Only 43% of NM women recalled any discussion of partner abuse.

Violence against pregnant women is more prevalent than well-known prenatal conditions such as gestational diabetes or preeclampsia.[7] Prevention of partner abuse includes obstetric recommendations for routine screening at the first prenatal visit, each trimester and postpartum,[8] and efforts within HMOs or communities.

47% of mothers drank alcohol in the 3 months before pregnancy; 18% drank frequently or binged.

The effects of alcohol on a developing fetus range from profound birth defects to lifetime learning and behavioral problems. Potential risks are high because fetal development begins before many mothers know they are pregnant. In spite of media campaigns and warning labels on alcoholic drinks, fetal exposure to alcohol continues to be a serious problem.

22% of mothers smoked before pregnancy, 10% smoked in the last three months of pregnancy, and 15% smoked at the time of survey.

Seventy-three percent of smokers reported prenatal counseling about tobacco, but few mothers participated in a smoking cessation program during pregnancy or after delivery. Statewide and community-based environmental policies to discourage smoking are increasing. However, payers of healthcare need to increase comprehensive smoking cessation services for pregnant women.

65% of women knew that folic acid is recommended to prevent birth defects; 22% took a prenatal or multivitamin every day in the three months prior to pregnancy.

Folic acid before pregnancy can prevent serious birth defects like spina bifida (a defect of the spinal cord and/or brain). Information about folic acid needs to reach all childbearing age females through effective media for those who are teens, Native American, Hispanic, single or financially challenged.

29% of new mothers had late entry to prenatal care or no prenatal care at all.

All families need to know about the importance of early prenatal care. Outreach efforts should target pregnant teens, Native American women, those with less than high school education and single women. Reducing cultural and financial barriers requires engaging, tolerant health policies and clinical practices.

42% of prenatal care for year 1998-2002 births were covered by insurance, 48% by Medicaid, and 7% by Indian Health Service; 86% had any combination of the three sources.

At delivery, 41% had insurance, 53% had Medicaid, 6% had I.H.S. and 92% of women had any combination of the three sources (8% of women had none of these).

48% of women were counseled about physical abuse, 56% about seatbelt use during pregnancy, and 82% about the blood test for HIV during prenatal care visits.

Training programs and continuing education for physicians, nurses and midwives should emphasize key topics for prenatal counseling: women value the advice of a professional. HMOs and MCOs need to reward providers who cover all critical topics.

5% of women received a home visiting service during pregnancy; only 9% had any after delivery.

Home visiting, an evidence-based intervention, can improve parenting, maternal and infant outcomes, appropriate use of primary and preventive health care and long term health outcomes for toddlers and children.

56% of pregnant women had WIC services during pregnancy.

The WIC program serves higher proportions of women who are teens, Hispanic or Native American, have less than a high school education, are single, or live at or below 185% of FPL. In other states, despite its clients' socioeconomic disadvantages, WIC had beneficial effects for infants.

65% of infants are placed to sleep on their backs.

Sudden Infant Death Syndrome (SIDS) has declined in New Mexico. To maintain ground, the "Back to Sleep" campaign needs to continue relentlessly. At discharge, hospital staff should educate families about safe sleeping practices. Statewide education should reach all infant day-care providers, babysitters and grandparents.

77% of mothers took their baby for the appropriate number of well-child visits.

Outreach is needed for all new mothers, with targeted efforts to reach those who are Native American. The NM Department of Health continues to address low infant immunization coverage in NM.

Trends and progress in the Multi-Year Tables, 1998-2002 – Prevalence of smoking is the only indicator showing improvement, but quit rates for pre-pregnancy smokers have not improved. More than one year is needed for interventions to make an impact. Policy-makers and program planners need to budget, plan and evaluate over several years.

Gaps and disparities in the Detailed Tables, Year 2001-2002 Births – The detailed tables identify socio-economic differences. Many indicators could improve if clinicians, policy-makers and programs followed culturally appropriate, affordable and effective ways to reach less advantaged women: teens, minority groups and those who live with the burdens of lower education, single parenting or low income.

References

[1] In 2000, the 185% FPL was equal to $15,244 for one person; $20,461 for a family of 2; $25,678 for a family of 3. FPL guidelines are available at http://aspe.hhs.gov/poverty

[2] Food Security Institute. Hunger and Food Insecurity in the Fifty States: 1998-2000. Brandes, MA: Center on Hunger and Poverty, Heller School for Social Policy & Management, Brandeis University, August 2002.

[3] Boggess KA, et al. Maternal periodontal disease is associated with an increased risk for preeclampsia. Obstet Gynecol 2003; 101: 227-231.

[4] Jeffcoat M, et al. Periodontal infection and preterm birth: results of a prospective study. J Amer Dent Assoc 2001; 132:875-80

[5] Tanzer JM, et al. The microbiology of primary dental caries in humans. J Dent Educ 2001; 65:1028-37.

[6] Based on correlating the number of live births in a county from the 2000 Annual Report of the NM Office of Vital Records and Health Statistics with the county-level designation for shortage areas for dental professionals in Quick Facts 2003, Health Care in New Mexico, NM Health Policy Commission, www.hpc.state.nm.us.

[7] JA Gazmarian, S. Laxorick, AM Spitz et al. Prevalence of violence against pregnant women. JAMA 1996; 275: 1915-20 in NFIMR Newsletter Spring 2001, www.acog.org.

[8] ACOG Technical Bulletin on Domestic Violence, 1999 www.acog.org.

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NMDOH (New Mexico Department of Health)
PHD (Public Health Division)
FHB (Family Health Bureau)
BVRHS (Bureau of NM Vital Records & Health Statistics)
TUPAC (Tobacco Use Prevention & Control Program)
WIC (Family, Food and Nutrition Services: Women, Infant and Children)
UNM (University of New Mexico)

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How to use this report

Public health surveillance is the ongoing systematic collection, analysis, and interpretation of health data.

Difference between sample and population

The "population" is all New Mexican resident mothers with live birth in a given year (minus those who gave their infant for adoption). Each respondent speaks for about twelve other mothers in the state. Because PRAMS data are based on a sample, not the entire population of mothers, information is estimated.

To address uncertainty about each estimate, we calculate a margin of error. This helps us compare two estimates. If the margins of error do not overlap, we are fairly sure that there is a difference between the estimates. If there is a large overlap, we are fairly sure that there is no difference.*

In general, the precision of estimates depends upon the number of respondents, percentage responding "yes" or "no" to the question, and on the sample design. The CI (margin of error) is larger if the number of respondents is smaller, or the percentage answering "yes" (or "no") is close to 50%.

How to read the figures (charts) and tables

There are figures with lines for multi-year data, and tables with bars for comparing subgroups. For each multiyear line figure, a table shows data. We calculate the lower and upper limits of the margin by subtracting or adding the number in the "±" column from the figure in the "percent (%)" column.

In the tables with bars, a black line at the end of the bar shows the range of the error. The columns labeled "Lower" and "Upper" contain the lower and upper limits of the margin of error (95% confidence limits).

For example, in Table 3, among 15-17-year-olds, 31.9% were aware of folic acid benefits. The margin of error ranged from 24.8% to 39.1% (14.3 percentage points). Among 18- to 19- year-olds, 40.6% were aware, with a margin of error 34.7% to 46.6%. These margins overlap, so even though 31.9% and 40.6% may seem different, we interpret the estimates as not different. Among 20- to 24-year-olds, 59.2% were aware, so there does appear to be difference between 15-17-year-olds and 20- to 24-year-olds (or between 18- to 19- year-olds and 20- to 24-year-olds).

> *I think more teenage mothers need to know what drinking and smoking can do to an unborn baby. I have heard so many awful stories about young mothers drinking during pregnancy, and it's hard enough to adjust to a new baby when you're so young. They don't know they're making it so much harder on themselves and the baby when the baby has fetal alcohol syndrome. – PRAMS mom*

Organization

This report was designed so that each chapter is located within a broader topic but can also stand alone. On the web, each chapter will be a single document. For the survey questions corresponding to each chapter, please refer to the appendix (on the web, download the PRAMS questionnaire document). For definitions of variables and information about collection and analysis of data, see the appendix.

** Note: Strictly speaking, more tests should be done to determine whether estimates are significantly different. Moreover, some statisticians require additional calculations if more than two groups are compared at the same time.*

New Mexico public health districts at time of data collection

For maternal residence variable

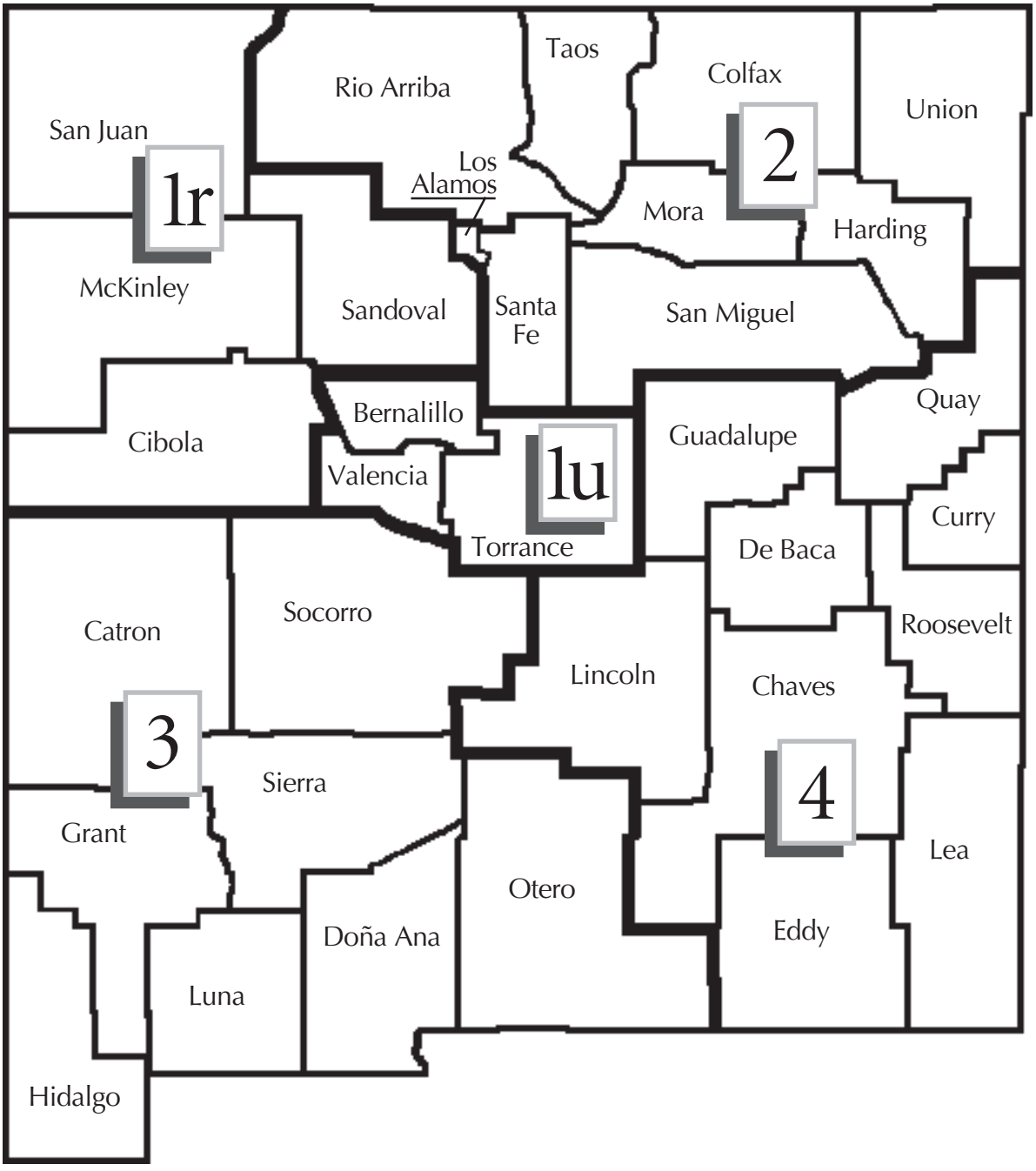
1r – District One, rural – is comprised of McKinley, San Juan, Cibola and Sandoval counties, minus the cities of Bernalillo and Rio Rancho

1u – District One, urban – includes Torrance, Valencia and Bernalillo counties, plus the cities of Bernalillo and Rio Rancho

2 – District Two, northeast

3 – District Three, southwest

4 – District Four, southeast



Preconception health

Prenatal care should begin before conception. Key steps include reviewing maternal medical, behavioral and psychosocial concerns, vaccinations, screening for diseases and counseling. Paternal medical history and behaviors are also important. Effective, evidence-based interventions include promoting folic acid use and addressing smoking, alcohol use, obesity and social and economic factors.[1,2] Postpartum care and well-child visits provide further opportunities for preconception planning.

This section includes multivitamin use and intention of pregnancy, family planning and teen pregnancy. Subsequent chapters address tobacco, alcohol and physical abuse by a partner.

NM PRAMS findings

Among all new mothers, only 12.6% (± 1.3%) were prepared using all of these criteria: the woman intended the pregnancy, took a multi- or prenatal vitamin daily during the month before pregnancy, did not drink alcohol frequently or binge during the 3 months before pregnancy, did not smoke during the 3 months before pregnancy *and* was not abused by her partner during the 12 months before pregnancy (years 2001-2002, no table).

Intended pregnancy (wanting the pregnancy at the time of conception or sooner) was linked with healthier preconception behaviors and experiences than mistimed (wanted later) or unwanted pregnancy. Daily use of a multivitamin was more likely among women with intended (28.8%) than mistimed (14.0%) or unwanted (12.8%) pregnancies. Smoking cigarettes was less likely among intended than mistimed or unwanted pregnancies (16.8% v. 28.5% or 33.9%), as was frequent or binge drinking (13.8% v. 22.0% or 29.5%). Physical abuse by a partner was less likely among intended (5.6%) than unwanted (11.5%) pregnancies. (Table 1 / Figure 1)

Figure 1

Behaviors and experiences correlated with time when mothers wanted the pregnancy

Year 2001-2002 births

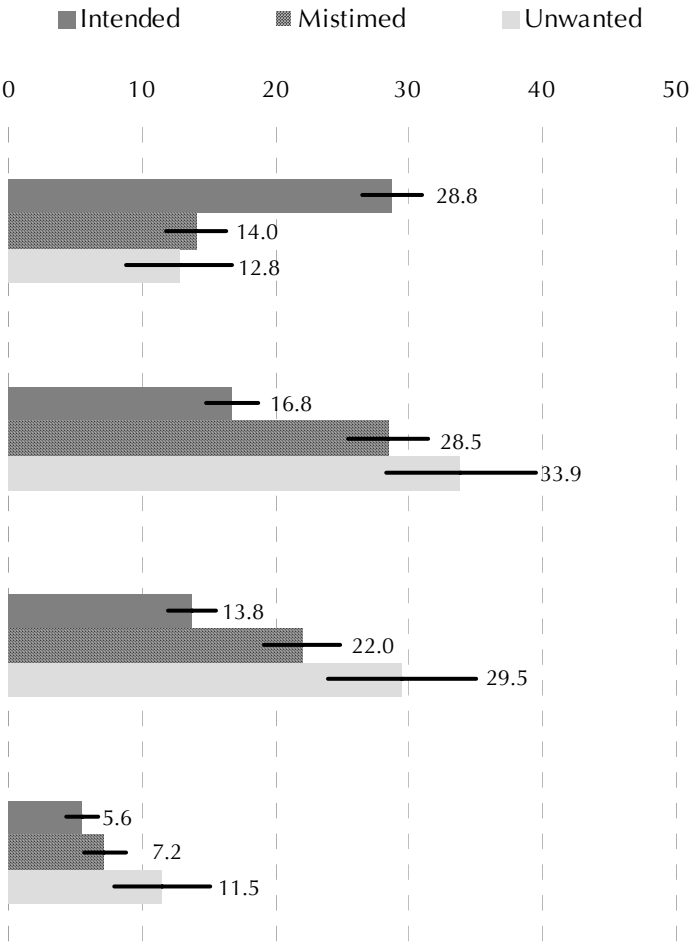


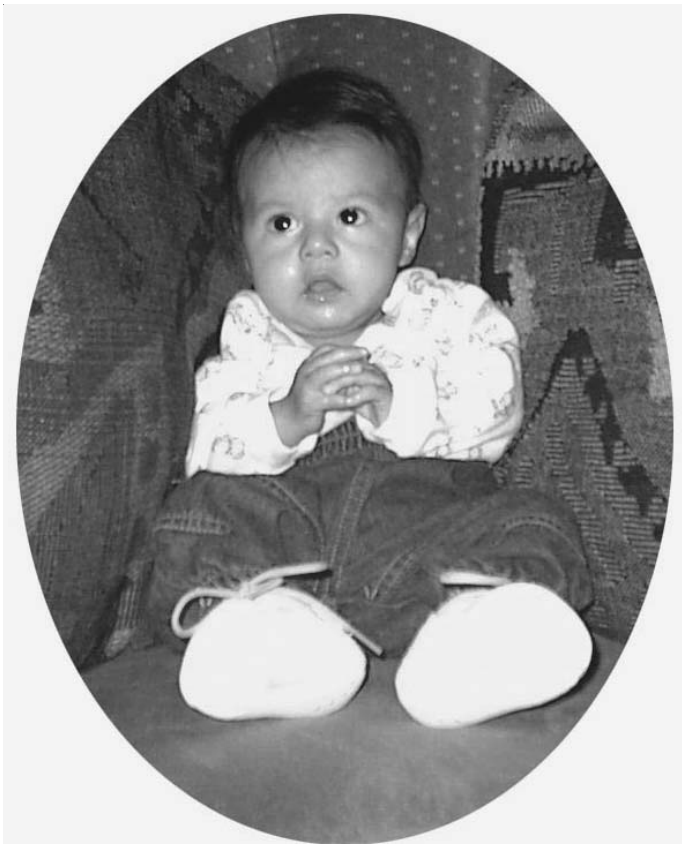
Table 1

% who took a multivitamin daily		
	%	±
Intended	**28.8**	*2.3*
Mistimed	**14.0**	*2.3*
Unwanted	**12.8**	*3.9*

% who smoked during 3 mo. before pregnancy		
	%	±
Intended	**16.8**	*1.9*
Mistimed	**28.5**	*3.0*
Unwanted	**33.9**	*5.7*

Frequent or binge drinking during 3 mo. before pregnancy		
	%	±
Intended	**13.8**	*1.7*
Mistimed	**22.0**	*2.8*
Unwanted	**29.5**	*5.5*

Were abused by partner during the year before pregnancy		
	%	±
Intended	**5.6**	*1.2*
Mistimed	**7.2**	*1.6*
Unwanted	**11.5**	*3.6*



Continued from Page 9

Resources

See chapter on intention of pregnancy.

References

[1] AAP/ACOG- American Academy of Pediatrics; American College of Obstetricians and Gynecologists (AAP/ACOG). *Guidelines for perinatal care*. 5th ed. Elk GroveVillage, IL: American Academy of Pediatrics; Washington, DC: American College of Obstetricians and Gynecologists, 2002. Other evidence-based interventions are: managing diabetes, hyperthyroidism, HIV/AIDS, maternal phenylketonuria; discussing drugs that could harm the fetus; evaluating for rubella immunization

[2] Freda MC, Chazotte C, Bernstein P et al. Interdisciplinary development of a preconception health curriculum for four medical specialties. Obstet Gynecol Feb 2002; 099(2):301-6.

Folic acid awareness and use

Prams asks 1) why health experts recommended taking folic acid, and 2) how often the respondent took a multivitamin in the month before pregnancy.

Public health importance

If taken before conception and during early pregnancy, folic acid (a B vitamin) can help reduce the occurrence of neural tube defects (NTDs, birth defects of the spinal cord and brain) by at least 50-70%. The average lifetime cost per case of spina bifida is estimated at $635,763 ($279,210 direct costs).[1] Health experts recommend that all women of childbearing age take 400 micrograms (0.4 mg) of folic acid daily. Women who have had an NTD-affected pregnancy should take 4 milligrams (4000 micrograms) daily.[2] The Healthy People 2010 target is to increase pregnancies begun with optimum folic acid levels from 21% to 80%.

NM PRAMS findings

Twenty-two percent of new mothers in 2002 took a multi- or prenatal vitamin daily during the month before pregnancy. This means that among more than 26,000 new mothers, only 5,876 took a multi/prenatal vitamin daily.[3] Sixty-one percent did not take a multi/prenatal vitamin at all.[4] Awareness that folic acid can help prevent birth defects has not increased (63.5% of mothers in 2002, Table 2 / Figure 2). Daily use of a multivitamin was more likely among women with more than high school education (33% v. 17% with high school, v. 14% with less than high school education); were married (29% v. 14% if not married); not on public assistance (25% v. 14% if on public assistance); or who had private insurance (Table 4). The same characteristics were associated with awareness of folic acid benefits(Table 3).

Action in NM

The NM Birth Defects Prevention Task Force, the WIC nutrition program, the Cooperative Extension Service and the Navajo Nation work to educate the public. Medicaid pays for prenatal vitamins with folic acid for mothers receiving prenatal but not family planning services.

Resources

March of Dimes http://www.marchofdimes.com/professionals/690.asp
March of Dimes NM Chapter (505) 344-5150

Figure 2

Percent of women who

- were aware that folic acid can help prevent birth defects (question changed in 2000)
- used a multi- or prenatal vitamin daily during the month before pregnancy, by year of birth

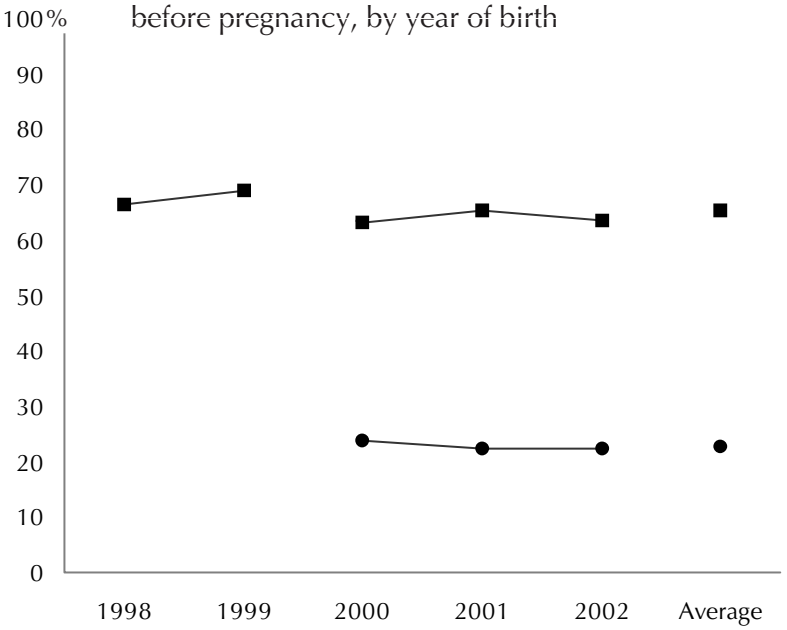


Table 2

% aware of folic acid		
Year	**%**	**±**
1998	**66.3**	*3.4*
1999	**68.9**	*2.6*
2000	**63.1**	*2.5*
2001	**65.5**	*2.6*
2002	**63.5**	*2.6*
1998-2002	**65.5**	*1.2*
% who took a multivitamin daily		
Year	**%**	**±**
2000	**23.9**	*2.2*
2001	**22.2**	*2.2*
2002	**22.4**	*2.2*
1998-2002	**22.8**	*1.3*

References

[1] Waitzman NJ, Romano PS, Grosse SD. Half-life of cost of illness estimates: the case of spina bifida. In: Wyszynski DF, ed. Neural Tube Defects: From Origin to Treatment. Oxford University Press. In press.

[2] CDC. Recommendations for the use of folic acid to reduce the number of cases of spina bifida and other neural tube defects. MMWR 1992; 41 (RR-14):1-7.

[3] 95% confidence interval 5306 to 6446, year 2002 data, no table.

[4] 95% confidence interval 58.5 to 63.6, year 2002 data, no table.

Awareness that folic acid is recommended to prevent birth defects

NM PRAMS, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents=3161, population=52072. Sample and weighted numbers, methods and variable definitions are in Appendix. Map of NM districts precedes this section.

Table 3

By maternal characteristic	Percent of mothers who were aware that folic acid can prevent birth defects			
	%	*Lower*	*Upper*
All NM mothers	**64.5**	*62.6*	*66.3*
Age			
15-17	**31.9**	*24.8*	*39.1*
18-19	**40.6**	*34.7*	*46.6*
20-24	**59.2**	*55.8*	*62.5*
25-34	**75.5**	*73.0*	*78.0*
35 +	**75.6**	*70.5*	*80.7*
Ethnicity			
Non-Hispanic White	**78.5**	*75.8*	*81.3*
Native American	**48.0**	*42.8*	*53.2*
Hispanic White	**58.5**	*55.8*	*61.2*
Education			
Less than high school	**44.1**	*40.4*	*47.9*
High school	**60.7**	*57.4*	*64.0*
More than high school	**82.2**	*79.9*	*84.4*
Marital status			
Married	**76.9**	*74.7*	*79.0*
Not married	**50.2**	*47.3*	*53.1*
Any previous live birth			
No	**61.4**	*58.4*	*64.4*
Yes	**66.5**	*64.1*	*68.8*
Residence			
Central: District 1 urban	**66.1**	*62.5*	*69.6*
Northeast: District 2	**63.3**	*59.6*	*67.0*
Southwest: District 3	**62.8**	*59.0*	*66.6*
Southeast: District 4	**70.5**	*67.0*	*73.9*
Northwest: District 1 rural	**57.1**	*52.7*	*61.4*
Public assistance			
No	**68.3**	*66.2*	*70.3*
Yes	**52.3**	*48.4*	*56.3*
Payer of prenatal care			
IHS w/wo Medicaid/insurance	**54.9**	*48.0*	*61.8*
Medicaid w/wo insurance; no IHS	**54.1**	*51.3*	*56.9*
Insurance only	**80.4**	*77.8*	*83.0*
None	**62.0**	*56.6*	*67.4*

Multivitamin use

NM PRAMS, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents=3161, population=52072. Sample and weighted numbers, methods and variable definitions are in Appendix. Map of NM districts precedes this section.

Table 4

By maternal characteristic	Percent of mothers who took a multivitamin or prenatal vitamin daily during the month before pregnancy			
	%	*Lower*	*Upper*
All NM mothers	**22.3**	*20.8*	*23.9*
Age			
15-17	**17.7**	*11.7*	*23.8*
18-19	**9.9**	*6.4*	*13.5*
20-24	**15.3**	*12.9*	*17.7*
25-34	**28.3**	*25.7*	*30.9*
35 +	**33.5**	*28.2*	*38.8*
Ethnicity			
Non-Hispanic White	**27.8**	*24.9*	*30.7*
Native American	**18.5**	*14.7*	*22.4*
Hispanic White	**19.8**	*17.7*	*21.9*
Education			
Less than high school	**14.1**	*11.6*	*16.7*
High school	**17.4**	*15.0*	*19.9*
More than high school	**32.6**	*29.8*	*35.4*
Marital status			
Married	**29.2**	*26.9*	*31.5*
Not married	**14.3**	*12.4*	*16.3*
Any previous live birth			
No	**22.4**	*19.9*	*24.9*
Yes	**22.3**	*20.3*	*24.3*
Residence			
Central: District 1 urban	**24.8**	*21.7*	*27.9*
Northeast: District 2	**23.3**	*20.1*	*26.5*
Southwest: District 3	**20.3**	*17.2*	*23.3*
Southeast: District 4	**18.8**	*15.9*	*21.7*
Northwest: District 1 rural	**20.8**	*17.3*	*24.2*
Public assistance			
No	**24.9**	*23.0*	*26.7*
Yes	**13.9**	*11.3*	*16.6*
Payer of preconception healthcare			
Medicaid	**19.5**	*16.0*	*23.0*
Private insurance	**32.5**	*29.8*	*35.3*
Indian Health Service for PNC	**13.5**	*8.1*	*19.0*
None	**13.2**	*11.2*	*15.3*

Intention of pregnancy

This report also includes chapters on contraceptive use and on teens, which discuss evidence-based strategies for postponing childbearing and family planning.

PRAMS asks mothers how they felt about being pregnant at the time of conception. Response options are that they wanted to be pregnant: 1) sooner, 2) later – mistimed, 3) then, or 4) not then or at any time – unwanted. Intended means that she wanted the pregnancy sooner than or at the time of conception. Unintended includes mistimed and unwanted pregnancies. PRAMS estimates only include pregnancies ending with live birth.

Public health importance

Intended pregnancy provides families time for preconception planning. Unintended pregnancy is associated with adverse outcomes such as premature delivery, low birth weight and small size for gestational age.[1] These may result from maternal behaviors also associated with unintended pregnancy.[2]

Figure 3

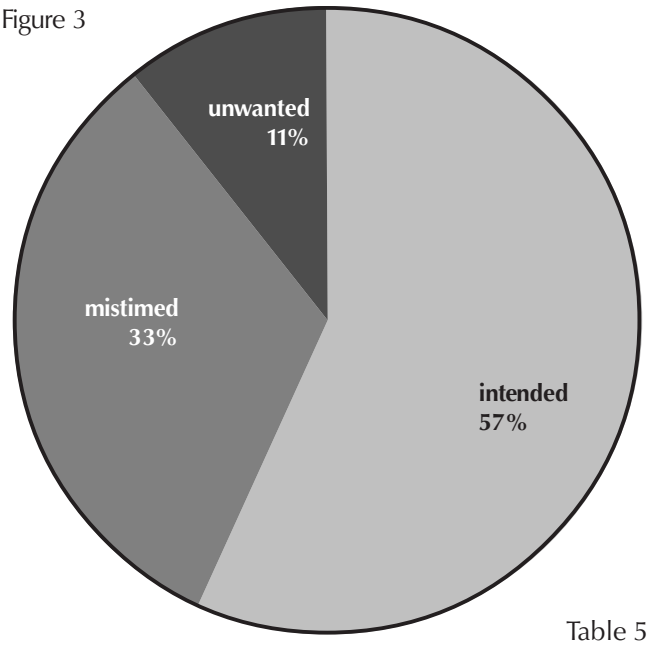


Table 5

Intention of pregnancy among mothers with live birth in 2001-2002 (n=3127)

	%	±
Intended	**56.7**	1.9
Mistimed	**32.7**	1.8
Unwanted	**10.6**	1.2

Use of contraception is not entirely determined by intention: in all PRAMS states, among women with unintended pregnancy, 37.7% to 56.0% were using contraception at conception.[3] If regular contraception is not used or if it fails, emergency contraceptive pills (ECPs) are an effective and safe way to reduce unwanted pregnancies. ECPs can reduce the risk of pregnancy by 89% and do not cause abortions.[4] Advance provision of emergency contraceptive pills (ECPs) can save $263 to $498 in a managed care setting and $99 to $205 in a public payer setting.[5] Over 70 professional organizations have supported a recommendation that the Federal Drug Administration approve over-the-counter sale of ECPs.[6]

Healthy People 2010 aims to increase the proportion of intended pregnancies to at least 70%.[7]

NM PRAMS findings

In all PRAMS states, the rate of intended pregnancy among women with live birth ranged from 46.6% to 68.4% in 2000.[3] For 2001-2002, 57% of NM mothers intended their pregnancy and 44% did not: 33% of live births resulted from mistimed and 11% from unwanted pregnancy (Figure 3 / Table 5). This means that there were at least 8,100 mistimed and 2,300 unwanted pregnancies resulting in live birth in 2002.[8] From 1998 to 2002, rates of intended, mistimed and unwanted pregnancy were stable (Figure 4 / Table 6).

Tables 7 and 8 highlight some disparities. Table 8 shows that intended pregnancy increased with maternal age, ranging from 25% of 15 to 17-year-olds to 72.9% of women 35 years or older. Educational level and marital status were also associated with intention. Intended pregnancy was less likely among recipients of public assistance (43%) than non-recipients (61%) or among women with Medicaid (43%) or no payer of prenatal care (54%) than women with private insurance (67%). Native Americans (48%) were less likely to intend than non-Hispanic whites (61%), and Hispanics were in between (56%). NM PRAMS estimated that in 2002, 1,816 (±342) Medicaid women with live birth did not want their pregnancy. For these births, Medicaid paid an estimated $15.2 million dollars (±$2.9 million) for pre-natal care, delivery, and the first year of the infant's care.[9]

Action in NM

Low-income couples may access family planning methods and education provided by state and community agencies. Recent policy changes support ECP. NM is the fourth state to allow pharmacists to prescribe ECP.[10] In addition, hospitals are required by law to inform rape survivors about ECP and offer treatment.[11] The ECP workgroup promotes pharmacy access and education about ECP to providers and the public. The group worked with the NM Department of Health and the NM Medical Society to make prevention of unintended pregnancy a Clinical Prevention Initiative. The NMDOH Comprehensive Health Plan describes activities addressing teen pregnancy in school-based health centers, comprehensive youth development programs and male involvement (see chapter on teens).

Resources

Preconception
Screening tools are available at http://search.marchofdimes.com/
The March of Dimes also provides information about preventing birth defects and prematurity. http://www.modimes.org/

Figure 4

Percent of women with live birth who had
- ■ intended pregnancy
- ● mistimed pregnancy
- ▲ or unwanted pregnancy, by infant's year of birth

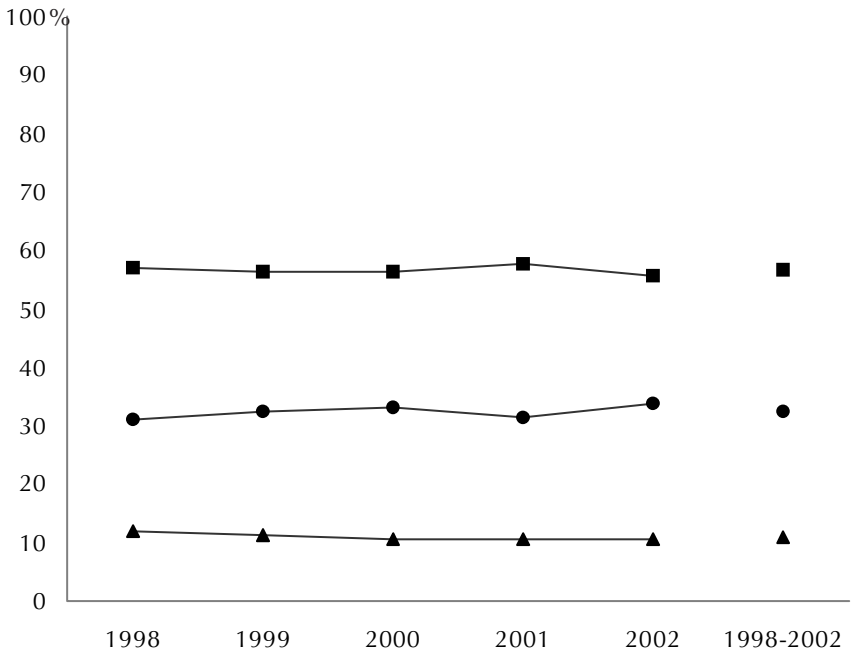


Table 6

% of women with live birth, intended pregnancy		
Year	**%**	**±**
1998	**57.1**	*3.7*
1999	**56.4**	*2.9*
2000	**56.4**	*2.6*
2001	**57.7**	*2.7*
2002	**55.8**	*2.6*
1998-2002	**56.7**	*1.3*

% of women with live birth, mistimed pregnancy		
Year	**%**	**±**
1998	**30.9**	*3.5*
1999	**32.4**	*2.7*
2000	**33.1**	*2.4*
2001	**31.6**	*2.5*
2002	**33.8**	*2.5*
1998-2002	**32.4**	*1.2*

% of women with live birth, unwanted pregnancy		
Year	**%**	**±**
1998	**12.0**	*2.5*
1999	**11.2**	*1.8*
2000	**10.5**	*1.6*
2001	**10.8**	*1.7*
2002	**10.5**	*1.6*
1998-2002	**11.0**	*0.8*

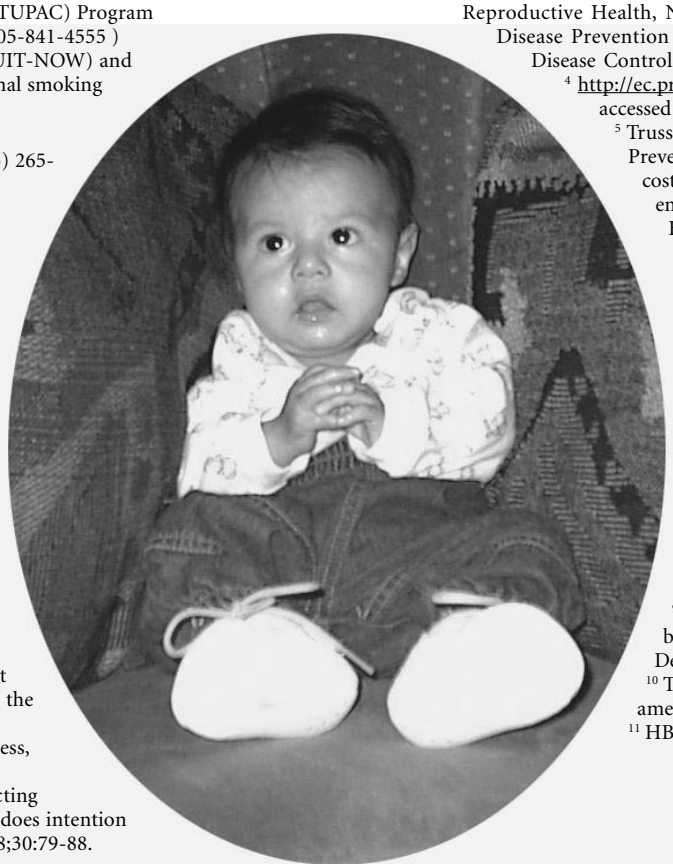
NM Birth Defects Prevention and Surveillance System (BDPASS), led by the New Mexico Department of Health, develops educational modules for prevention of birth defects (505-476-8859).
Tobacco Use Prevention and Control (TUPAC) Program (New Mexico Department of Health, 505-841-4555) provides a toll-free Quitline (1-800-QUIT-NOW) and community programs to reduce maternal smoking and second-hand smoke exposure.

Family planning

New Mexico Planned Parenthood, (505) 265-5976.
New Mexico Teen Pregnancy Coalition www.nmtpc.org (505) 254-8737.
NM Department of Health: Family Planning Program (505) 476-8882 for information about community projects and health centers), Adolescent Pregnancy Prevention Program and Office of School Health.

Emergency Contraception Website

http://ec.princeton.edu/ maintained by the Office of Population Research at Princeton University and by the Association of Reproductive Health Professionals.



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[1] Committee on Unintended Pregnancy, Institute of Medicine. National Academy of Sciences. The Best Intentions: Unintended Pregnancy and the Well-Being of Children and Families. Washington, DC: National Academy Press, 1995.

[2] Kost K, Landry DJ, Darroch JE. Predicting maternal behaviors during pregnancy: does intention status matter? Fam Plann Perspect 1998;30:79-88.

[3] Williams LM, Morrow B, Beck LF, Barfield W, D'Angelo D, Helms K, Johnson CH, Lipscomb LE, Whitehead N. PRAMS 2000 Surveillance Report. (forthcoming) Atlanta, GA: Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, 2005.

[4] http://ec.princeton.edu/info/ecminip.html, accessed Feb. 12, 2005.

[5] Trussell J, Koenig J, Ellertson C, Stewart F. Preventing unintended pregnancy: the cost-effectiveness of three methods of emergency contraception. Am J Public Health 1997; 87: 932-7.

[6] Current http://www.ec.princeton.edu/news

[7] US Department of Health and Human Services. Healthy People 2010: Conference Edition. Washington, DC: US Department of Health and Human Services, Public Health Services; 2000. http://www.healthypeople.gov/document/html/objectives/09-01.htm accessed Feb. 15, 2004.

[8] Number of mistimed pregnancies estimated at 8,767 (8,111 to 9,423), unwanted at 2,718 (2,300 to 3,135).

[9] Average costs for FY2001-2002 based on data from Human Services Department, State of NM, Aug 15, 2003.

[10] The Pharmacy Act (16NMAC 19.26), amended 2003.

[11] HB119, 2003.

Continued from Page 9

Resources

See chapter on intention of pregnancy.

References

[1] AAP/ACOG- American Academy of Pediatrics; American College of Obstetricians and Gynecologists (AAP/ACOG). *Guidelines for perinatal care*. 5th ed. Elk GroveVillage, IL: American Academy of Pediatrics; Washington, DC: American College of Obstetricians and Gynecologists, 2002. Other evidence-based interventions are: managing diabetes, hyperthyroidism, HIV/AIDS, maternal phenylketonuria; discussing drugs that could harm the fetus; evaluating for rubella immunization

[2] Freda MC, Chazotte C, Bernstein P et al. Interdisciplinary development of a preconception health curriculum for four medical specialties. Obstet Gynecol Feb 2002; 099(2):301-6.

Unintended pregnancy resulting in live birth

NM PRAMS, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents=3161, population=52072. Sample and weighted numbers, methods and variable definitions are in Appendix. Map of NM districts precedes this section.

Table 7

By maternal characteristic	Percent of mothers with live birth resulting from unintended pregnancy			
	%	*Lower*	*Upper*
All NM women	**43.3**	*41.4*	*45.2*
Age			
15-17	**75.0**	*68.2*	*81.9*
18-19	**69.3**	*63.7*	*74.8*
20-24	**50.1**	*46.7*	*53.5*
25-34	**31.6**	*28.9*	*34.3*
35 +	**27.1**	*21.9*	*32.2*
Ethnicity			
Non-Hispanic White	**38.7**	*35.6*	*41.9*
Native American	**51.9**	*46.8*	*57.1*
Hispanic White	**44.6**	*41.9*	*47.2*
Education			
Less than high school	**51.6**	*47.8*	*55.3*
High school	**45.6**	*42.4*	*48.9*
More than high school	**34.3**	*31.5*	*37.1*
Marital status			
Married	**28.8**	*26.6*	*31.1*
Not married	**59.9**	*57.1*	*62.7*
Any previous live birth			
No	**46.2**	*43.2*	*49.3*
Yes	**41.4**	*39.0*	*43.7*
Residence			
Central: District 1 urban	**39.3**	*35.7*	*43.0*
Northeast: District 2	**42.2**	*38.4*	*45.9*
Southwest: District 3	**42.3**	*38.5*	*46.1*
Southeast: District 4	**48.9**	*45.2*	*52.7*
Northwest: District 1 rural	**50.3**	*45.9*	*54.6*
Public assistance			
No	**39.1**	*37.0*	*41.2*
Yes	**56.7**	*52.8*	*60.6*
Payer of preconception healthcare			
Medicaid	**57.0**	*52.5*	*61.5*
Private insurance	**33.3**	*30.5*	*36.1*
Indian Health Service for PNC	~~**57.6**~~	~~*49.0*~~	~~*66.1*~~
None	**46.4**	*43.3*	*49.5*

Intended pregnancy resulting in live birth

NM PRAMS, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents=3161, population=52072. Sample and weighted numbers, methods and variable definitions are in Appendix. Map of NM districts precedes this section.

Table 8

By maternal characteristic	Percent of mothers with live birth resulting from intended pregnancy	%	*Lower*	*Upper*
	0 10 20 30 40 50 60 70 80 90 100			
All NM mothers		**56.7**	*54.9*	*58.6*
Age				
15-17		**25.0**	*18.1*	*31.8*
18-19		**30.7**	*25.2*	*36.3*
20-24		**49.9**	*46.5*	*53.3*
25-34		**68.4**	*65.7*	*71.1*
35 +		**72.9**	*67.8*	*78.1*
Ethnicity				
Non-Hispanic White		**61.3**	*58.1*	*64.4*
Native American		**48.1**	*42.9*	*53.2*
Hispanic White		**55.5**	*52.8*	*58.1*
Education				
Less than high school		**48.4**	*44.7*	*52.2*
High school		**54.4**	*51.1*	*57.7*
More than high school		**65.7**	*62.9*	*68.5*
Marital status				
Married		**71.2**	*68.9*	*73.4*
Not married		**40.1**	*37.3*	*42.9*
Any previous live birth				
No		**53.8**	*50.8*	*56.8*
Yes		**58.6**	*56.3*	*61.0*
Residence				
Central: District 1 urban		**60.7**	*57.1*	*64.3*
Northeast: District 2		**57.8**	*54.1*	*61.6*
Southwest: District 3		**57.7**	*53.9*	*61.6*
Southeast: District 4		**51.1**	*47.3*	*54.8*
Northwest: District 1 rural		**49.8**	*45.4*	*54.1*
Public assistance				
No		**60.9**	*58.8*	*63.0*
Yes		**43.3**	*39.4*	*47.2*
Payer of preconception healthcare				
Medicaid		**43.0**	*38.5*	*47.5*
Private insurance		**66.7**	*63.9*	*69.5*
Indian Health Service for PNC		~~**42.4**~~	~~*33.9*~~	~~*51.0*~~
None		**53.6**	*50.5*	*56.7*

Family planning

The following chapters address teen pregnancy, abstinence and contraception before and after pregnancy. Postpartum visits are one of many opportunities for preconception planning. Some activities related to family planning in New Mexico are listed below. The NM Department of Health (NMDOH) Family Planning Program oversees projects and provides information (telephone 505.476.8882 and www.health.state.nm.us/phd/fp/index.htm).

Teen pregnancy prevention

The Young Fathers Project targets young fathers, or males acting as fathers, to improve parenting skills, educational attainment, employment, social stability and to reduce repeated pregnancies.

Please find a way to make it easier for moms to get on birth control, WIC and Medicaid without having to drive back and forth. – PRAMS mom

The Graduation Reality and Dual-Role Skills (GRADS) program aims to prevent repeat unintended teen pregnancies.

The Abstinence-only Education Program works through schools and faith-based organizations to educate youth and parents.

Prenatal Care Utilization Task Force

This group launched a campaign to make every woman's health care visit an opportunity for preconception counseling. State and community agencies educate clients with income below 185% of the federal poverty level (FPL) and increase their access to family planning methods.

The Prenatal Care Utilization Task Force includes representatives from the NMDOH, the New Mexico Prenatal Care Network, the New Mexico Hospital and Health Systems Association, the March of Dimes, Lovelace, Cimarron and Presbyterian Health Plans and others. Contact: Maternal, Child, Adolescent, Family Health Program, NMDOH, 505-476-8908.

Programs to increase intended births

- Low-cost clinical family planning services offered by NMDOH Family Planning Program, community health centers and Planned Parenthood
- Comprehensive programs for teens with training of health care providers and evaluation of these activities
- School-based health centers offering education and direct care or referrals for primary health care, mental health, substance abuse and reproductive health services
- Healthier School sites with coordinated services in schools and communities
- The Emergency Contraceptive Pill (ECP) Workgroup worked with the NMDOH and NM Medical Society to make unintended pregnancy a Clinical Prevention Initiative. The ECP group's activities include educating providers about contraception, third party coverage of contraceptives, research about ECP availability, media campaigns to raise public awareness of ECP, access to ECP in pharmacies and legislative advocacy. Planning occurs through collaboration between community agencies such as county health coalitions; providers funded by the Medicaid 1115 Family Planning waiver; New Mexico Planned Parenthood; New Mexico Teen Pregnancy Prevention Coalition; New Mexico March of Dimes; NMDOH Family Planning, Adolescent Pregnancy Prevention, Youth Development and School Health programs.

Resources

Preconception

Screening tools are available at http://search.marchofdimes.com/
The March of Dimes also provides information about preventing birth defects and prematurity. http://www.modimes.org/
NM Birth Defects Prevention and Surveillance System (BDPASS), led by the New Mexico Department of Health, develops educational modules for prevention of birth defects (1.505.476.8890).
Tobacco Use Prevention and Control (TUPAC) Program (New Mexico Department of Health, 505.841.4555) provides a toll-free Quitline (1-800-QUIT-NOW) and community programs to reduce maternal smoking and second-hand smoke exposure.

Family planning

New Mexico Planned Parenthood, (505) 265.5976.
New Mexico Teen Pregnancy Coalition www.nmtpc.org (505) 254-8737.
NM Department of Health: Family Planning Program (505) 476.8882 for information about community projects and health centers), Adolescent Pregnancy Prevention Program, and Office of School Health.
Emergency Contraception Website http://ec.princeton.edu/ maintained by the Office of Population Research at Princeton University and by the Association of Reproductive Health Professionals.

Teen pregnancy

This section is a summary of multi-year (1998-2002) data for births to teen mothers 15-19 years old. For PRAMS, young teens are defined as 15 to17 years and older teens are 18 to 19.

Public health importance.

Between 1990 and 2002 the national teen (15-19) birth rate declined from 60 to 43 per 1000 teens.[1] Despite this steady change, the majority of industrialized nations still trail U.S. teen pregnancy and birth rates.[2] There is substantial variation between rates in individual states. New Mexico's teen birth rate has dropped considerably, mirroring the U.S. trend, but remained at 62 births per 1000 in 2002.[1] The Healthy People 2010 goals are to increase abstinence among adolescents 15-17, reduce teen pregnancies to 43 per 1000 of these young teens, and to increase pregnancy prevention education and protection from sexually transmitted diseases (STDs).[3]

Health risks for pregnant teens include poor preconceptional habits, inadequate prenatal care and giving birth to premature and low birth weight infants.[4] Teen pregnancies and births are also expensive. In the United States, they are associated with at least $7 billion annually.[5] In addition to increased costs for prenatal care and delivery, there are long-term public expenditures related to teenage childbearing. A recent study estimates that public assistance to families started by teens costs NM $152,000,000 per year.[6]

According to a 1999 report by the Alan Guttmacher Institute, teenage pregnancy owes its recent decline to a combination of episodic sexual abstinence and increasing access to and use of condoms and long-acting (oral, implant and injectable) contraceptives. The report also stresses that lower birth rates are the result of declining pregnancy rates among sexually experienced teens, not an increase in abortion rates.[7] Successful policies and programs promote abstinence as well as access to and education about contraceptives. Current controversy involves parental consent for minors' access to contraceptives. Individual states determine whether or not contraceptive services to minors remain confidential. Some studies suggest that mandating parental involvement puts teens at a higher risk for pregnancy and contracting STDs.[8]

Protective factors for teen pregnancy prevention include comprehensive youth development programs, access to a continuum of family planning education and services (from abstinence to emergency contraception), strong child-parent or child-adult relationships and participation in school activities.[9] The Youth Risk and Resiliency Survey (YRRS) measures developmental assets, including those associated with lower risks for teen pregnancy. In 2001, NM YRRS reported that 76% of NM's youth said they had a parent or some other adult at home who listened to them when they had something to say. Fifty-six percent of all respondents said they had never had sex, but 11% said they had sex at age 13 or younger.[10]

Supporting teens who are already pregnant requires both family and clinical intervention. Evidence shows that home visiting programs and targeted services for pregnant and parenting teens provide short and long-term benefits.[11] The Centering Pregnancy model, among other group interventions, provides teens with increased peer support and interaction throughout the prenatal and postpartum periods.[12] These programs usually result in better attendance for clinic visits, more client satisfaction for moms and dads and improved birth outcomes among teens.[13]

I am 18 with a 3-month-old baby and sometimes get treated differently for just that – my husband and I are good parents and provide my baby all she needs. – PRAMS mom

NM PRAMS findings

Preconception planning (Table 9) – Healthy pregnancies start before conception. Preparation includes planning for or postponing childbearing, changing unhealthy behaviors or relationships, and maintaining social support, health care or other clinical resources. As expected, most teen mothers indicated that their pregnancy was unintended (wanted later or not at all): 74% of young teens (15 to17 years old) and 68% of older teens (18 to19 years old). On the other hand, 26% of young teen mothers and 32% of older teens intended their pregnancy (wanted it sooner or then).

Daily use of a multivitamin with 400mcg folic acid and abstinence from both cigarette smoking and alcohol can improve infant outcomes. Only 12% of young teens and 9% of older teens reported all three behaviors for the preconception period. Folic acid can prevent neural tube defects, but only 15% of young and 12% of older teens took a multivitamin daily. Seventeen percent of young and 19% of older teens drank alcohol frequently or binged; 27% of young and 35% of older teens smoked cigarettes in the preconception period.

Physical abuse by a partner is the tip of the iceberg for psychosocial challenges. Nine percent of young and 8% of older teens said they had this experience in the year before pregnancy. During pregnancy, abuse and other social stressors experienced by mothers of any age may continue or intensify. (See section on support for teens below.)

Prenatal care and infant outcomes (Table 10) – Third-party payers provide financial access to prenatal care for most New Mexican women: 85% of young teens and 90% of older teens were covered by Medicaid, private insurance or Indian Health Service (IHS). Nevertheless, late or no prenatal care was common among young (45%) or older teens (40%), and more likely than among women over 20 years of age (30%).[14] Efforts to motivate and educate women are needed: among all women with late prenatal care, 63%[15] said they started as early as they wanted (no table).

In NM, pregnant teens are at risk for adverse outcomes. Fifteen percent of young teen mothers and 14% of older teens gave birth to a premature infant, compared with 8% of older mothers. The percentages of low birth weight infants were 12%, 10% and 7%, respectively, for these age groups.[16] On a positive note, initiation of breastfeeding among teens was high (78% of young and 73% of older teens), comparing favorably with rates among women over 20 years (80%).[17] However, only 47% of young and 55% of older teens continued for at least two months, compared with 70% of older mothers.

Support for teen parents – Throughout pregnancy and post-partum, teen mothers may lack support from their male partner, friends or families as well as financial resources. Conversely, with increased social support and resources, teens (like other women) can have positive perinatal experiences and birth outcomes.[18] However, prenatal home visiting services reached only 11% of young and 9% of older teens. Opportunities to improve case management, with referrals for other services, are underutilized in New Mexico. Prenatal interventions targeting teens reached only 19% of all teens; after delivery, 18% of young versus 5% of older teens received these services.

Action in NM

The NMDOH Family Planning Program (FPP) offers pregnancy prevention counseling, contraception services, referrals and education at clinical sites throughout the state. The FPP contracts with seven community organizations to provide comprehensive school based education.

Continued on Page 22

Table 9

Preconception

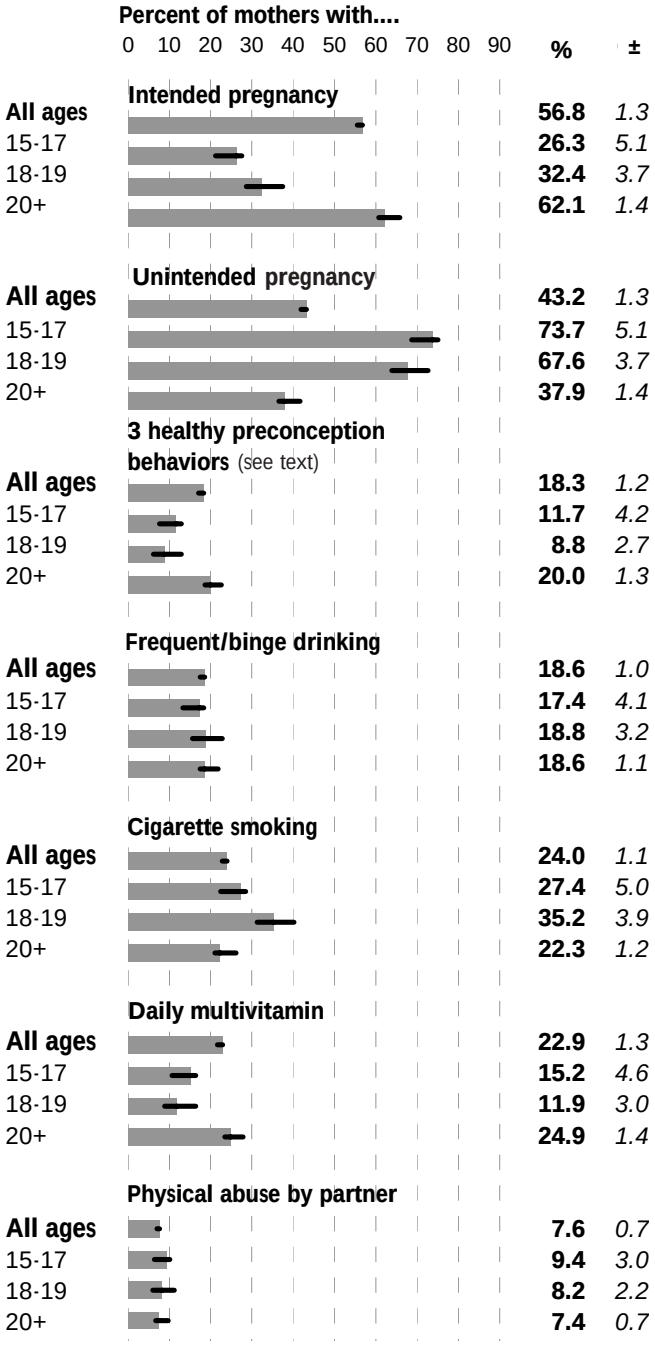
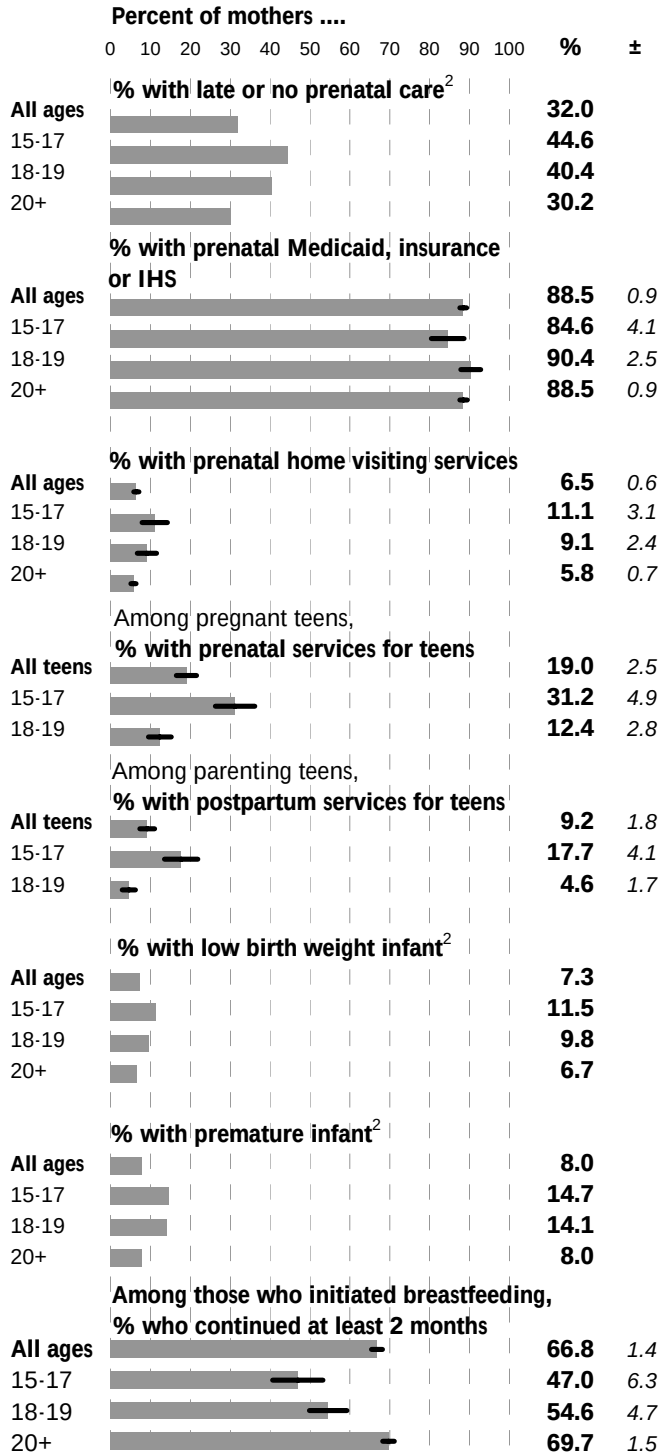


Table 10

Prenatal and birth outcomes



[2] Calculated from birth certificate data for NM PRAMS frame, year 2002; thus, confidence intervals are not provided. Because of PRAMS exclusions, numbers may differ from NM Vital Records Annual Report. Late prenatal care refers to entry after the first three months. Low birth weight is defined as below 2500 grams and prematurity as fewer than 37 completed weeks gestation. Sample and weighted numbers, methods, and variable definitions are in Appendix.

Continued from Page 20

It has a demonstration project on male involvement in reproductive health in the South Valley of Albuquerque.

The NMDOH Abstinence Program contracts with six public education sites to provide abstinence related curricula.

The NM GRADS (Graduation, Reality and Dual-roles Skills) program, under the Department of Education, helps pregnant and parenting teenagers graduate from high school, improve their parenting skills and attain economic independence. One offshoot of this program is the GRADS Dads program, part of the NM fatherhood initiative.

I hope that pregnant teens get the care they need and are taught to take good care of themselves in middle school and high school, and learn to not party until they are unhealthy. . . – PRAMS mom

The NM Teen Pregnancy Coalition (NMTPC) has a similar program called the Young Fathers Project for ages 26 and under. The mission of the New Mexico Young Fathers Project is to promote social and family stability by improving the quality of father-child relationships in young families and by preventing repeat pregnancies. The NMTPC also provides teaching resources, statistics and publications about reducing teen pregnancy.

The NMDOH Families FIRST program provides case management and referrals to Medicaid eligible teens. It strives to support parents and reduce repeat teen pregnancies.

The NM Children Youth and Families Department provides teen parent residences throughout the state.

Centering Pregnancy, group prenatal care, is a model some clinics and hospitals in New Mexico have adopted in order to increase prenatal visit attendance and peer, as well as partner support, for adolescent mothers.

Resources:

See Page 18 or contact the NMDOH Family Planning Program.
Tel. 505-476-8882 in Santa Fe or 505-841-8962 in Albuquerque.

Families FIRST case management: call local public health district offices or toll free, 1-877-842-4152.

Centering Pregnancy Association
http://www.centeringpregnancy.com

References

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[13] Grady MA, Bloom KC Pregnancy outcomes of adolescents enrolled in a Centering Pregnancy program. J Midwifery Womens Health 2004; 49:412-20.
[14] Calculated from birth certificate data for NM PRAMS frame, year 2002; thus, confidence intervals are not provided. Because of PRAMS exclusions, numbers differ from NM Vital Records Annual Report. Late prenatal care refers to entry after the first three months.
[15] NM PRAMS year 2002 births: 62.8 (±4.8%).
[16] Calculated from birth certificate data for NM PRAMS frame, year 2002; thus, confidence intervals are not provided. Because of PRAMS exclusions, numbers differ from NM Vital Records Annual Report. Low birth weight is defined as below 2500 grams, and prematurity as fewer than 37 completed weeks gestation.
[17] 78.0% (±4.6) of young teens, 72.9% (±3.8%) of older teens, and 80.2% (±1.2%) of women 20 years and older initiated breastfeeding.
[18] Glazier RH, Elgar FJ, Goel V, Holzapfel S. Stress, social support, and emotional distress in a community sample of pregnant women. J Psychosomatic Obstet Gynaecol. 2004;25:247-55.

Contraceptive use

This report also includes chapters on intention of pregnancy and on teens, for whom contraceptive access alone is not sufficient to prevent unintended pregnancy.

PRAMS asks women about contraception (if they were doing anything to keep from getting pregnant) at the time of conception or at the time of the survey.

Public health importance

For sexually active couples not desiring a pregnancy, motivation to use contraception and education about correct use are essential.

Payers of care stand to gain by providing effective contraception. The financial costs of an unintended pregnancy were estimated at $3,795 in a managed care setting and $1,680 in a publicly funded program from a study in 1995, and *any* method of contraception was very cost-effective when compared to no method.[1]

NM PRAMS findings

Among women who were not trying to get pregnant, 43% were and 57% were not using contraception at conception (year 2002 data in Table 11 / Figure 5). Native Americans (70%) were more likely to be non-users (v. 53% of non-Hispanic whites or 54% of Hispanics). Non-use was more likely among women without a previous live birth (62%) than those with one or more. Within other subgroups there were no striking disparities (Table 14).

Among women who were not trying to get pregnant, the most common reason for not using a method at conception was that the respondent did not mind getting pregnant (41%), followed by problems getting birth control (29%) and their partner's wish not to use a method (22%). (Data for years 2001-2002 combined, Table 15.)

After delivery, 89% of women were using contraception (year 2002 data in Table 12 / Figure 6).

Figure 5

Percent of women*

■ using or

● not using contraception at conception

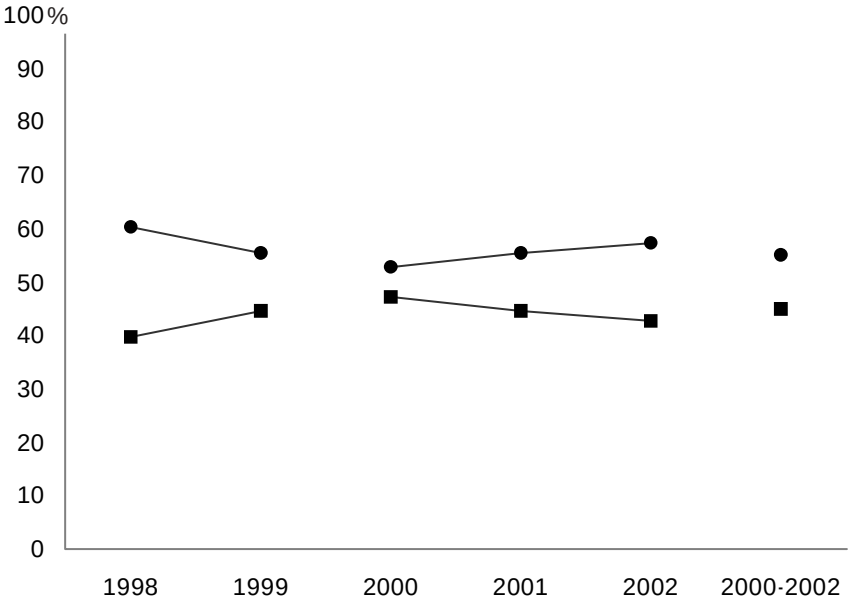


Table 11

% using contraception		
Year	**%**	**±**
1998	**39.7**	*5.7*
1999	**44.5**	*4.4*
2000	**47.3**	*3.5*
2001	**44.4**	*3.8*
2002	**42.6**	*3.5*
2000-2002	**44.8**	*2.1*
% not using contraception		
Year	**%**	**±**
1998	**60.4**	*5.7*
1999	**55.5**	*4.4*
2000	**52.7**	*3.5*
2001	**55.6**	*3.8*
2002	**57.4**	*3.5*
2000-2002	**55.2**	*2.1*

*1998-1999: among those who had unintended pregnancy
2000-2002: among those who were not trying to get pregnant (question was added in 2000)

Action in NM

New Mexico law requires that health insurance plans (except when purchased by religious employers) with a prescription drug benefit also include equitable coverage for prescription contraceptives.[2] In 2002, a survey found that, of 589 NM health insurers, only 47 offered coverage of prescription contraceptives.[3] The Medicaid 1115 Family Planning Waiver and federal Title X funds provide services to low-income women through community and state-run clinics.

Resources

See Family Planning, page 18.

References

[1] Trussell J, Leveque JA, Koenig JD,London R, Borden S, Henneberry J, LaGuardia KD et al. The economic value of contraception: a comparison of 15 methods. Am J Public Health 1995;85:494-503.

[2] N.M. Stat. Ann. §§ 59A-22-42, -23-4, -47-33 (Enacted 2001).

[3]Contact the Superintendent of Insurance, Public Regulation Commission, State of NM, 1120 Paseo de Peralta, Santa Fe, NM 87504. http://www.nmprc.state.nm.us

Figure 6

Among all new NM mothers, % using postpartum contraception by year of infant's birth

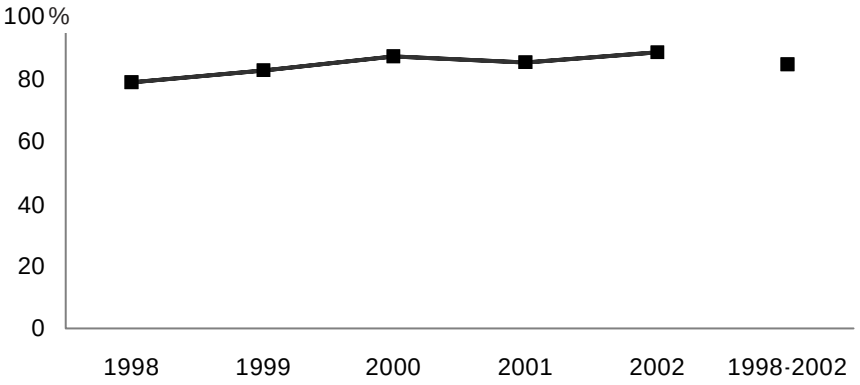


Table 12

% using postpartum contraception		
Year	**%**	**±**
1998	**78.7**	*2.9*
1999	**82.5**	*2.1*
2000	**86.9**	*1.7*
2001	**85.2**	*1.9*
2002	**88.6**	*1.7*
1998-2002	**84.4**	*0.9*

Use of contraception at conception

NM PRAMS, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents not trying to get pregnant=1711, population size=28065. Sample and weighted numbers, methods and variable definitions are in Appendix. Map of NM districts precedes this section.

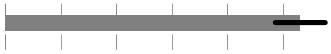
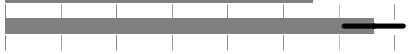
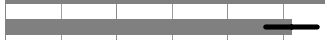
Table 13

By maternal characteristic	Among women who were not tryng to get pregnant, percent who *were* using contraception at conception (0 10 20 30 40 50 60 70 80 90 100)	%	*Lower*	*Upper*
All NM Women		**43.5**	*40.9*	*46.0*
Age				
15-17		~~**41.5**~~	~~*32.9*~~	~~*50.1*~~
18-19		**38.9**	*31.9*	*45.8*
20-24		**42.9**	*38.6*	*47.2*
25-34		**48.6**	*44.1*	*53.1*
35 +		~~**35.9**~~	~~*27.6*~~	~~*44.2*~~
Ethnicity				
Non-Hispanic White		**46.6**	*41.9*	*51.4*
Native American		**29.7**	*23.7*	*35.7*
Hispanic White		**45.9**	*42.3*	*49.4*
Education				
Less than high school		**43.2**	*38.5*	*47.9*
High school		**40.9**	*36.6*	*45.2*
More than high school		**47.0**	*42.4*	*51.5*
Marital status				
Married		**47.3**	*43.3*	*51.3*
Not married		**41.1**	*37.8*	*44.4*
Any previous live birth				
No		**38.3**	*34.3*	*42.3*
Yes		**46.9**	*43.6*	*50.3*
Residence				
Central: District 1 urban		**44.4**	*39.1*	*49.8*
Northeast: District 2		**50.2**	*44.9*	*55.5*
Southwest: District 3		**44.8**	*39.5*	*50.1*
Southeast: District 4		**44.7**	*39.9*	*49.5*
Northwest: District 1 rural		**33.7**	*28.4*	*39.1*
Public assistance				
No		**45.0**	*42.0*	*48.1*
Yes		**40.1**	*35.4*	*44.8*
Payer of preconception healthcare				
Medicaid		**41.7**	*36.2*	*47.1*
Private insurance		**48.5**	*43.9*	*53.2*
Indian Health Service for PNC		~~**33.2**~~	~~*23.1*~~	~~*43.3*~~
None		**41.9**	*37.9*	*45.8*

Non-use of contraception at conception

NM PRAMS, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents not trying to get pregnant=1711, population size=28065. Sample and weighted numbers, methods and variable definitions are in Appendix. Map of NM districts precedes this section.

Table 14

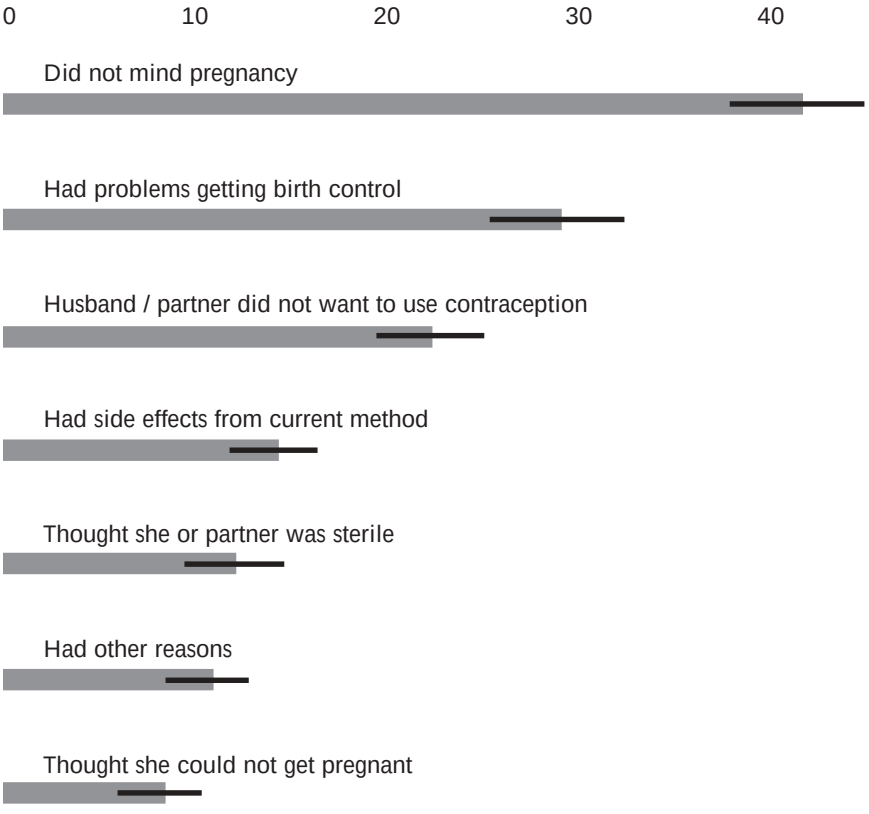
By maternal characteristic	Among women who were not trying to get pregnant, percent who were *not* using contraception at conception			
	0 10 20 30 40 50 60 70 80 90 100	%	*Lower*	*Upper*
All NM women		**56.5**	*54.0*	*59.1*
Age				
15-17		**~~58.5~~**	*~~49.9~~*	*~~67.2~~*
18-19		**61.1**	*54.2*	*68.1*
20-24		**57.1**	*52.8*	*61.4*
25-34		**51.4**	*46.9*	*55.9*
35 +		**~~64.1~~**	*~~55.9~~*	*~~72.4~~*
Ethnicity				
Non-Hispanic White		**53.4**	*48.6*	*58.2*
Native American		**70.3**	*64.3*	*76.3*
Hispanic White		**54.1**	*50.6*	*57.7*
Education				
Less than high school		**56.8**	*52.1*	*61.6*
High school		**59.1**	*54.8*	*63.4*
More than high school		**53.1**	*48.5*	*57.6*
Marital status				
Married		**52.7**	*48.7*	*56.7*
Not married		**58.9**	*55.6*	*62.2*
Any previous live birth				
No		**61.7**	*57.7*	*65.7*
Yes		**53.1**	*49.8*	*56.4*
Residence				
Central: District 1 urban		**55.6**	*50.2*	*60.9*
Northeast: District 2		**49.8**	*44.5*	*55.1*
Southwest: District 3		**55.2**	*49.9*	*60.5*
Southeast: District 4		**55.3**	*50.5*	*60.1*
Northwest: District 1 rural		**66.3**	*61.0*	*71.6*
Public assistance				
No		**55.0**	*51.9*	*58.1*
Yes		**59.9**	*55.2*	*64.6*
Payer of preconception healthcare				
Medicaid		**58.4**	*52.9*	*63.8*
Private insurance		**51.5**	*46.8*	*56.1*
Indian Health Service for PNC		**~~66.8~~**	*~~56.7~~*	*~~76.9~~*
None		**58.1**	*54.2*	*62.1*

Reasons for not using contraception

Source: NM PRAMS and Vital Records, from NM residents with in-state birth, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval. Data available for 930 of 3161 respondents, population = 15460
Sample and weighted numbers, methods and variable definitions are in Appendix.
Map of NM districts precedes this section.

Table 15

Among women who were not trying to get pregnant *and* not using contraception at conception, percent with each reason



	%	*Lower*	*Upper*
Did not mind pregnancy	**41.3**	*37.9*	*44.7*
Had problems getting birth control	**29.0**	*25.9*	*32.1*
Husband / partner did not want to use contraception	**22.1**	*19.3*	*25.0*
Had side effects from current method	**14.2**	*11.8*	*16.6*
Thought she or partner was sterile	**11.7**	*9.5*	*14.0*
Had other reasons	**10.6**	*8.4*	*12.7*
Thought she could not get pregnant	**8.5**	*6.5*	*10.5*

Postpartum use of contraception

NM PRAMS, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents=3161, population size=52072. Sample and weighted numbers, methods and variable definitions are in Appendix.
Map of NM districts precedes this section.

Table 16

By maternal characteristic	Percent of mothers using postpartum contraception (0 10 20 30 40 50 60 70 80 90 100)	%	*Lower*	*Upper*
All NM mothers		**86.9**	*85.6*	*88.2*
Age				
15-17		**87.7**	*82.9*	*92.5*
18-19		**85.5**	*81.2*	*89.9*
20-24		**88.9**	*86.7*	*91.0*
25-34		**86.3**	*84.2*	*88.3*
35 +		**84.8**	*80.8*	*88.8*
Ethnicity				
Non-Hispanic White		**88.0**	*85.9*	*90.1*
Native American		**80.1**	*76.0*	*84.2*
Hispanic White		**87.7**	*85.9*	*89.5*
Education				
Less than high school		**86.0**	*83.4*	*88.5*
High school		**88.2**	*86.1*	*90.3*
More than high school		**86.3**	*84.2*	*88.4*
Marital status				
Married		**89.2**	*87.6*	*90.8*
Not married		**84.2**	*82.2*	*86.3*
Any previous live birth				
No		**85.1**	*83.0*	*87.3*
Yes		**88.2**	*86.6*	*89.8*
Residence				
Central: District 1 urban		**86.6**	*84.1*	*89.1*
Northeast: District 2		**87.0**	*84.5*	*89.6*
Southwest: District 3		**87.9**	*85.4*	*90.5*
Southeast: District 4		**90.6**	*88.4*	*92.8*
Northwest: District 1 rural		**82.6**	*79.4*	*85.8*
Public assistance				
No		**88.1**	*86.7*	*89.5*
Yes		**83.1**	*80.1*	*86.0*
Payer of delivery				
IHS w/wo Medicaid/insurance		~~**80.6**~~	~~*74.2*~~	~~*87.1*~~
Medicaid w/wo insurance; no IHS		**86.3**	*84.5*	*88.1*
Insurance only		**88.8**	*86.8*	*90.9*
None		**86.4**	*81.9*	*91.0*

Maternal alcohol use

PRAMS asks about alcohol consumption during the three months before pregnancy and then during the last 3 months of pregnancy. This report defines frequent drinking as 7 or more drinks per week or 5 or more on any one occasion (binge drinking).[1]

Public health importance

Frequent prenatal exposure to alcohol is among the most commonly identifiable causes of mental retardation and neurodevelopmental disorders. Prenatal alcohol exposure is also associated with miscarriages, birth defects and growth disorders. The terms, Fetal Alcohol Syndrome (FAS), Alcohol-Related Neurodevelopmental Disorder (ARND) and Alcohol-Related Birth Defects (ARBD) identify infants affected by prenatal exposure to alcohol.[2,3] For FAS, the first 3 to 8 weeks of pregnancy are the critical exposure period.[4] There is no known safe level of or time for prenatal alcohol.[2] Thus, in 2005, the U.S. Surgeon General warned women who are pregnant or may become pregnant to abstain from alcohol consumption.[5] The Healthy People 2010 objective is to increase abstinence from alcohol by pregnant women to at least 94%.[6]

The prevalence of FAS in New Mexico for 1992 was estimated at 1 per 1000,[7] comparable to other national estimates.[8] In 1991, the estimated annual financial burden FAS placed on the nation was at least $75 million.[9]

In other PRAMS states, 22.8% to 60.1% of new mothers used any alcohol in the 3 months before pregnancy, and 2.1% to 9.0% drank during the last 3 months of pregnancy (for year 2000 births).[10]

NM PRAMS findings

In 2002, during the 3 months before pregnancy, 17% of women drank frequently or binged (Table 17 / Figure 7), and 46% drank any alcohol (Table 18 / Figure 8). In the last 3 months of pregnancy, 4% drank any alcohol (Table 18 / Figure 8). Frequent or binge drinking before pregnancy was more likely among those who were not married (24% v. 14%) or who were on public assistance (22% v. 17%); see Table 19.

Action in NM

In 1996, the State Legislature passed HB 171 authorizing funds for a statewide Fetal Alcohol Syndrome Prevention Program. Community activities include media campaigns, developing and distributing informational materials and coordinating educational programs for pregnant women, professionals, families and students. When cases of FAS are identified, mothers are linked with services to prevent future FAS-affected infants. The "Pregnant Pause Campaign", launched in 1996, emphasizes that pregnant women should stop drinking. In New Mexico, women who have had a child with FAS usually gave birth to their first child in their teens, so prevention efforts target youth. A dynamic trainer facilitates a FAS curriculum developed for middle schools.

Figure 7

Percent of women who drank alcohol frequently or binged during the 3 months before pregnancy

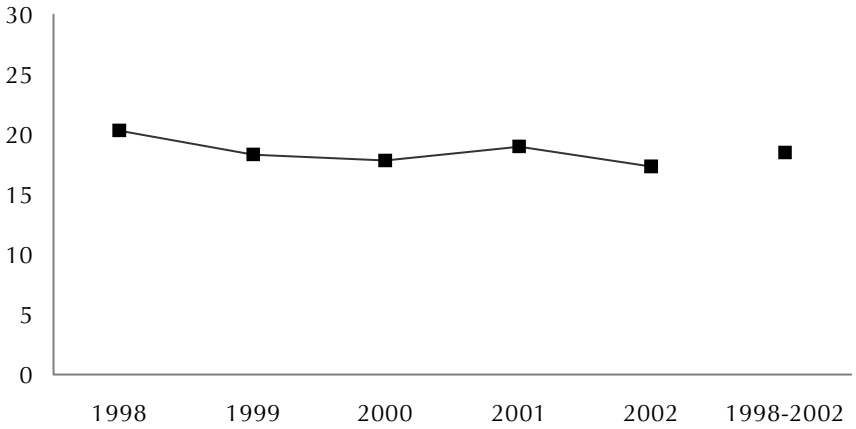


Table 17

% who drank frequently or binged during 3 months before pregnancy

Year	%	±
1998	**20.3**	*2.9*
1999	**18.4**	*2.2*
2000	**17.8**	*2.0*
2001	**19.0**	*2.2*
2002	**17.4**	*2.0*
1998-2002	**18.6**	*1.0*

Resources

V.A.S.T. (Violence, Alcohol, Substance abuse, and Tobacco use), NM Dept. of Health: 505-476-8882.

Center of Alcoholism, Substance Abuse, and Addictions at University of New Mexico (CASAA): 505-925-2302

March of Dimes, NM Chapter: 505-344-5150.

References

[1] CDC. Alcohol use among women of childbearing age - United States, 1991-1999. Atlanta, GA: MMWR 2002;51:273-6.
[2] Reviews: American Academy of Pediatrics Committee on Substance Abuse and Committee on Children with Disabilities. Fetal alcohol syndrome and alcohol-related neurodevelopmental disorders. Pediatrics. 2000;106:358-361.
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[10] Williams LM, Morrow B, Beck LF, Barfield W, D'Angelo D, Helms K, Johnson CH, Lipscomb LE, Whitehead N. PRAMS 2000 Surveillance Report. Atlanta, GA: Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, 2005.

A detailed list is available upon request.

Figure 8

Percent of women who drank any alcohol

- ■ during the 3 months before pregnancy or
- ● during the last 3 months of pregnancy, by year of infant's birth

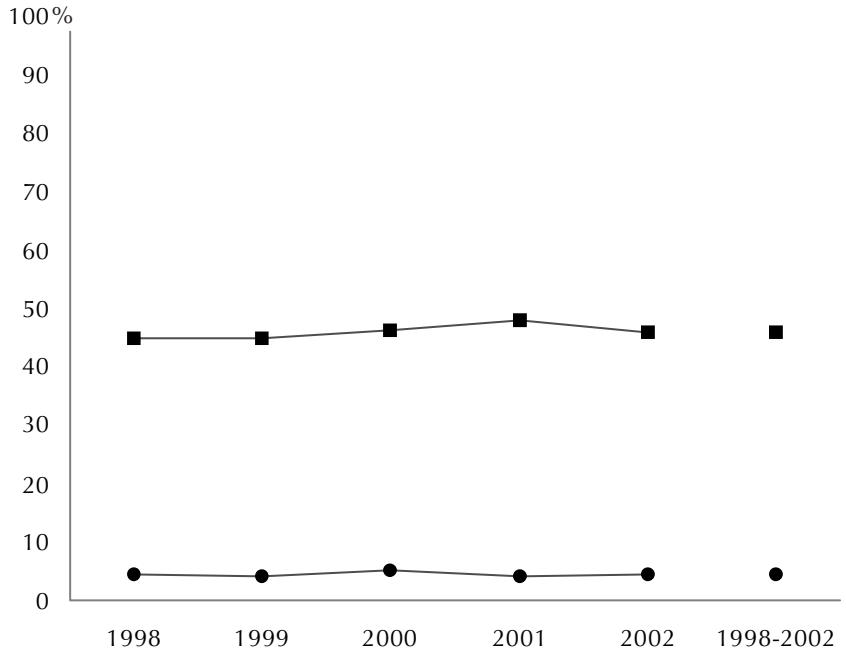


Table 18

% who drank before pregnancy		
Year	**%**	**±**
1998	**44.7**	*3.6*
1999	**44.7**	*2.8*
2000	**46.2**	*2.6*
2001	**48.0**	*2.7*
2002	**45.9**	*2.6*
1998-2002	**45.9**	*1.3*

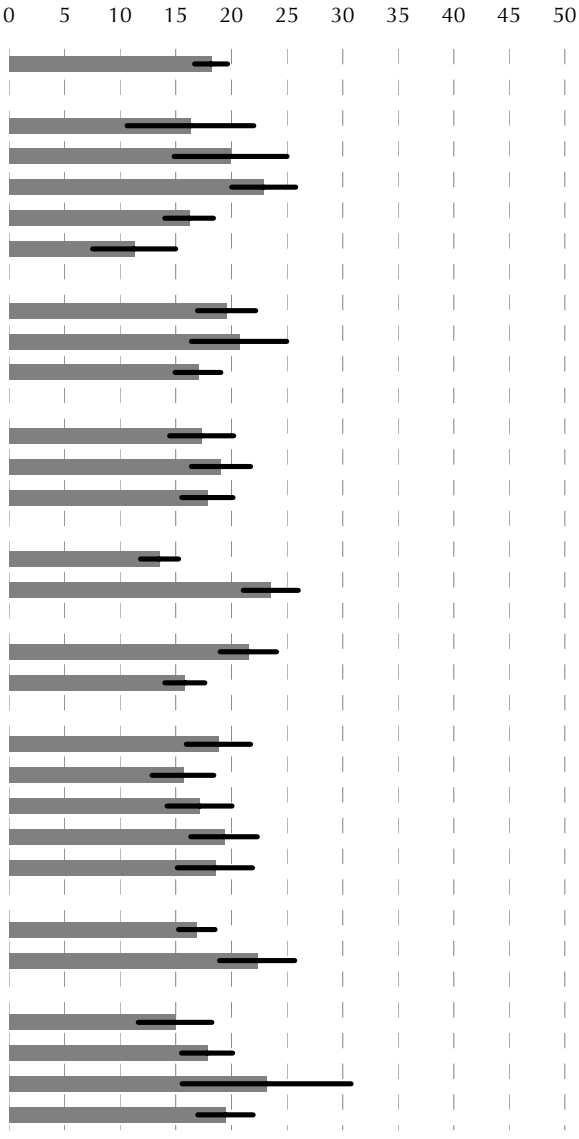
% who drank during pregnancy		
Year	**%**	**±**
1998	**4.4**	*1.4*
1999	**4.1**	*1.1*
2000	**5.1**	*1.1*
2001	**4.3**	*1.0*
2002	**4.4**	*1.1*
1998-2002	**4.5**	*0.5*

Frequent or binge drinking during the 3 months before pregnancy,

Defined as 7 or more drinks per week, or more than 4 drinks at a sitting. NM PRAMS, years 2001-2002.
"Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents=3161, population =52072. Sample and weighted numbers, methods and variable definitions are in Appendix. Map of NM districts precedes this section.

Table 19

By maternal characteristic	Percent of mothers who drank frequently or binged during the 3 months before pregnancy			
		%	*Lower*	*Upper*
All NM mothers		**18.2**	*16.7*	*19.6*
Age				
15-17		**16.3**	*10.6*	*22.0*
18-19		**19.9**	*14.9*	*25.0*
20-24		**22.9**	*20.0*	*25.8*
25-34		**16.2**	*14.0*	*18.4*
35 +		**11.3**	*7.5*	*15.0*
Ethnicity				
Non-Hispanic White		**19.6**	*16.9*	*22.2*
Native American		**20.7**	*16.4*	*25.0*
Hispanic White		**17.0**	*15.0*	*19.0*
Education				
Less than high school		**17.3**	*14.5*	*20.2*
High school		**19.0**	*16.4*	*21.7*
More than high school		**17.8**	*15.5*	*20.1*
Marital status				
Married		**13.5**	*11.8*	*15.2*
Not married		**23.5**	*21.0*	*26.0*
Any previous live birth				
No		**21.5**	*19.0*	*24.1*
Yes		**15.8**	*14.0*	*17.6*
Residence				
Central: District 1 urban		**18.8**	*15.9*	*21.7*
Northeast: District 2		**15.6**	*12.9*	*18.4*
Southwest: District 3		**17.1**	*14.2*	*20.1*
Southeast: District 4		**19.3**	*16.3*	*22.3*
Northwest: District 1 rural		**18.5**	*15.1*	*21.9*
Public assistance				
No		**16.9**	*15.3*	*18.5*
Yes		**22.3**	*18.9*	*25.7*
Payer of preconception healthcare				
Medicaid		**14.9**	*11.6*	*18.2*
Private insurance		**17.8**	*15.5*	*20.1*
Indian Health Service for PNC		~~**23.2**~~	~~*15.6*~~	~~*30.8*~~
None		**19.5**	*17.0*	*21.9*



Use of any alcohol during 3 months before pregnancy

NM PRAMS, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents=3161, population=52072. Sample and weighted numbers, methods and variable definitions are in Appendix. Map of NM districts precedes this section.

Table 20

By maternal characteristic	Percent of mothers who drank any alcohol during 3 months before pregnancy			
	%	*Lower*	*Upper*
All NM mothers	**46.9**	*45.0*	*48.8*
Age			
15-17	**32.4**	*25.0*	*39.9*
18-19	**40.8**	*34.7*	*46.9*
20-24	**49.8**	*46.4*	*53.2*
25-34	**47.6**	*44.6*	*50.5*
35 +	**49.9**	*44.2*	*55.7*
Ethnicity			
Non-Hispanic White	**62.1**	*59.0*	*65.3*
Native American	**34.9**	*29.9*	*39.9*
Hispanic White	**40.4**	*37.7*	*43.0*
Education			
Less than high school	**32.1**	*28.6*	*35.6*
High school	**48.2**	*44.8*	*51.5*
More than high school	**56.8**	*53.8*	*59.7*
Marital status			
Married	**48.5**	*46.0*	*51.0*
Not married	**45.1**	*42.3*	*48.0*
Any previous live birth			
No	**52.9**	*49.8*	*56.0*
Yes	**43.1**	*40.7*	*45.5*
Residence			
Central: District 1 urban	**50.7**	*47.1*	*54.4*
Northeast: District 2	**46.9**	*43.1*	*50.7*
Southwest: District 3	**44.6**	*40.7*	*48.5*
Southeast: District 4	**45.8**	*42.0*	*49.6*
Northwest: District 1 rural	**40.5**	*36.2*	*44.7*
Public assistance			
No	**47.0**	*44.8*	*49.1*
Yes	**46.9**	*42.9*	*50.8*
Payer of prenatal care			
IHS w/wo Medicaid/insurance	**33.8**	*29.5*	*38.2*
Medicaid w/wo insurance; no IHS	**57.3**	*54.4*	*60.2*
Insurance only	~~**34.0**~~	~~*25.5*~~	~~*42.4*~~
None	**43.0**	*39.9*	*46.0*

Use of any alcohol during the last 3 months of pregnancy

NM PRAMS, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents=3161, population size=52072. Sample and weighted numbers, methods and variable definitions are in Appendix.
Map of NM districts precedes this section.

Table 21

By maternal characteristic	Percent of mothers who drank any alcohol during the last 3 months of pregnancy 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70	%	*Lower*	*Upper*
All NM mothers		**4.3**	*3.6*	*5.1*
Age				
15-17		~~**2.0**~~	~~*0.6*~~	~~*4.7*~~
18-19		~~**2.2**~~	~~*0.2*~~	~~*4.3*~~
20-24		**3.4**	*2.3*	*4.6*
25-34		**4.5**	*3.4*	*5.6*
35 +		**9.6**	*6.3*	*12.8*
Ethnicity				
Non-Hispanic White		**5.8**	*4.4*	*7.2*
Native American		**4.0**	*1.9*	*6.1*
Hispanic White		**3.4**	*2.5*	*4.3*
Education				
Less than high school		**2.8**	*1.5*	*4.1*
High school		**3.4**	*2.2*	*4.6*
More than high school		**6.1**	*4.7*	*7.4*
Marital status				
Married		**5.2**	*4.1*	*6.3*
Not married		**3.3**	*2.3*	*4.2*
Any previous live birth				
No		**3.5**	*2.5*	*4.6*
Yes		**4.9**	*3.9*	*5.9*
Residence				
Central: District 1 urban		**3.6**	*2.3*	*5.0*
Northeast: District 2		**6.4**	*4.5*	*8.3*
Southwest: District 3		**4.9**	*3.2*	*6.5*
Southeast: District 4		**4.3**	*2.7*	*5.8*
Northwest: District 1 rural		**3.8**	*2.2*	*5.5*
Public assistance				
No		**4.3**	*3.5*	*5.2*
Yes		**4.3**	*2.9*	*5.7*
Payer of prenatal care				
IHS w/wo Medicaid/insurance		~~**4.8**~~	~~*1.8*~~	~~*7.7*~~
Medicaid w/wo insurance; no IHS		**3.7**	*2.7*	*4.7*
Insurance only		**5.3**	*4.0*	*6.7*
None		**3.4**	*1.5*	*5.4*

Cigarette smoking

If the respondent said she smoked at least 100 cigarettes during the last two years, PRAMS asked about the number of cigarettes smoked during the 3 months before pregnancy (referred to as "before pregnancy" in this report), the last 3 months of pregnancy ("during pregnancy") and at the time of the survey ("currently"). PRAMS asked mothers about prenatal discussion of smoking and about the infant's exposure to smoke.

Chapters on health related services, oral health and infant sleep position include material about smoking.

Public health importance

The problem – Cigarette smoking is the largest modifiable risk factor for pregnancy-related morbidity and mortality in developed countries.[1] Smoking during pregnancy increases the risk of neonatal mortality, stillbirth, preterm delivery, decreased birth weight and sudden infant death syndrome (SIDS).[2,3] Smoking is also a major risk factor for gum disease, which is associated with preterm low birth weight.[4] After pregnancy, maternal smoking increases the infant's risk of respiratory illnesses and SIDS.[5,6]

Smoking-attributable neonatal expenditures were estimated at $366 million in 1996 or $704 per maternal smoker.[7,8] This would exceed $1.6 million per year for New Mexico (1996 dollars multiplied by number of year 2002 births), of which Medicaid would pay at least $800,000 – a conservative estimate, because Medicaid funds nearly half of all deliveries[9] and serves women who are more likely to smoke during late pregnancy (15% v. 6% of non-Medicaid mothers).[10]

What can be done – Healthy People 2010 has set objectives to lower the prevalence of smoking among pregnant women to 1%, increase smoking cessation during pregnancy to 30% and reduce the proportion of children who are regularly exposed to tobacco smoke at home to 10%.[11]

As many as 80% of post-partum women in Alaska indicated they would like to quit smoking.[12] However, barriers are not limited to knowledge and attitudes. Increased duration and level of smoking, more advanced age[13, 14] and smoking by the partner, hinder cessation.[15] Women who succeed in quitting tend to be better educated and have social support;[16,17] they are less likely to be single parents.[18]

Encounters during prenatal care present a window of opportunity for smoking cessation. Clinical practice guidelines support evidence-based educational methods; these include brief sessions or self-help materials provided during routine prenatal visits.[19, 20, 21, 22, 23, 24] Meta-analysis of 8 evaluation studies among 4,000 patients indicated that using evidence-based methods might produce an additional 4% to 8% annual cessation rate.[25] Smoking cessation interventions are cost-effective. A report from 1993 estimated that $6.72 to $17.18 spent on adverse outcomes were saved for each dollar invested in cessation.[26]

Figure 9

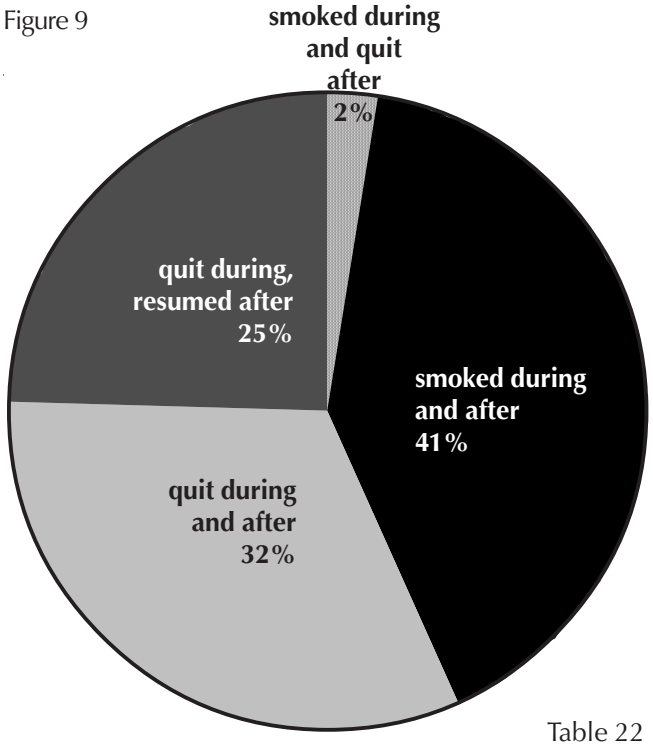


Table 22

Among mothers who smoked before pregnancy in 2001-2002 (n=678), smoking status during and after pregnancy

	%	±
Smoked during, quit after	2.4	*1.1*
Smoked during & after	40.8	*4.1*
Quit during & after	32.3	*3.9*
Quit during, resumed after	24.5	*3.5*

NM PRAMS findings

Maternal smoking – Although New Mexico's rate of 8.5% in 2002 compares favorably with the nation's (11.4%),[27, 28] more than 2,000 newborns were exposed to maternal smoking during pregnancy.[29]

From 1998 to 2002, smoking rates decreased: before pregnancy, from 26% to 20%; during pregnancy, from 13% to 9%; and at the time of the survey, from 20% to 14% (Table 23 / Figure 10). However, there was no significant decrease for moderate to heavy smoking (15 or more cigarettes/day) during late pregnancy, which ranged from 2% in 1999 to 1% in 2002 (no table).

Although approximately one-half of women who smoked before pregnancy said they quit during pregnancy (year 2001-2002), relapses were common. Thirty-two percent of women quit during pregnancy without relapsing, but 24% quit and relapsed (Table 22 / Figure 9). From 1998 to 2002, rates did not change significantly for smoking cessation among pre-pregnancy smokers (Table 24 / Figure 11), or for abstaining from cigarettes after delivery among those who smoked during pregnancy (Table 25 / Figure 12).[30]

For birth years 2001-2002 combined, 74% of all mothers recalled prenatal discussion of how maternal smoking could affect the baby (Prenatal Care chapter, Table 42). Of women who smoked during the 3 months before pregnancy, 85% (±1.9%) recalled such discussions; among these smokers, 82% (±2.8%) of successful and 89% (±2.6%) of unsuccessful quitters reported such discussions.[31]

Disparities in smoking status were examined during the three time periods. Smoking was more prevalent among women with less socioeconomic advantage. Before pregnancy (Table 27), smoking rates were higher among women with fewer than 12 years of education (27% v. 25% with high school or 16% with more than high school level); those receiving income from public assistance (36% v. 18% without assistance); non-Hispanic whites (28% v. 17% of Native Americans and 21% of Hispanics); and unmarried women (31% v. 15% of married respondents). Medicaid carried an extra burden of smokers: 27% of women with preconception Medicaid smoked before pregnancy v. 15% of those with private insurance or 12% of those with Indian Health Service. Women 20 to 24-years old were more likely to smoke than young teens (15-17 years old) or women 25 years and older (Table 27). During pregnancy (Table 28) and at the time of the survey (Table 29), similar patterns were observed.

Infant smoke exposure – Seven percent of mothers indicated that their infant was regularly exposed to tobacco smoke (birth year year 2002, Table 26 / Figure 13). This translates into more than 1,700 smoke-exposed infants for one birth year.[32]

Action in NM

The Clinical Prevention Initiative, a partnership between the NM Department of Health (NMDOH) and New Mexico Medical Society, provides materials and consultation.[33] The New Mexico Violence, Substance Abuse and Tobacco (VAST) project of the NMDOH trains providers

to identify and assist smokers. VAST also addresses behaviors related to smoking.

Coverage for smoking cessation services is still limited. Although New Mexican law[34] requires any insurer providing maternity benefits to cover smoking cessation, Medicaid Managed Care Organizations are not subject to this law because they are federally funded. Medicaid fee-for-service payers must cover cessation aids (including over-the-counter medications) prescribed by a physician but do not need to cover counseling or classes.

Although pharmacotherapy (nicotine replacement or bupropion) can be an effective adjunct to other interventions, health care providers may hesitate to prescribe these drugs during pregnancy because of concerns about safety. However, toxins in cigarette smoke can be more harmful to reproduction than exposure to pure nicotine. Pharmacotherapy may be used with caution: the Public Health Service guidelines[35] and American College of Obstetricians and Gynecologists[36] recommend using it only when a pregnant woman is unable to quit by simply using behavioral cessation strategies and, at the same time, the potential benefits outweigh the risks.[37]

Community-based approaches that emphasize policy development and public support are also important.[38] *The Guide to Community Preventive Services: Tobacco Use Prevention and Control* recommends the use of media campaigns, increasing the cost of tobacco products and workplace smoking bans as effective interventions to complement clinical cessation services. [39] Although bills to ban smoking in most public places and worksites (HB354, SB515) died in committee (March 2005), the proposals show awareness that smoking creates health hazards.

Resources

ACOG packet: Phelan ST, Albrecht S, Hartmann KE, Melvin C, Ockene JK. Smoking cessation during pregnancy: a clinician's guide to helping pregnant women quit smoking. American College of Obstetricians and Gynecologists, 2002. Contact smoking@acog.org

March of Dimes provides fact sheets and nursing modules: The Fulfillment Center at 800-367-6630, or NM Chapter of the March of Dimes, 505-344-5150. Website, http://www.marchofdimes.com/

American Lung Association 505-265-0732

Great Start Quit Line, 866-667-8278

Violence, Substance Abuse and Tobacco (VAST) project provides trainings and materials. Family Planning Program, New Mexico Department of Health, 505-476-8882

NM Tobacco Use Prevention and Control Program (TUPAC) runs a toll-free Quitline service at 1-800-QUIT-NOW and statewide community programs. This line provides information about pharmacists trained in

smoking cessation counseling, and health care centers and pharmacies dispensing free nicotine replacement therapy. TUPAC website: http://www.thestink.org/

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[10] (15% ± 1%, 6% ± 1%)

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Figure 10

Percent of new mothers who smoked

- ■ during the 3 months before pregnancy
- ▲ during last 3 months of pregnancy or
- ● who smoke currently

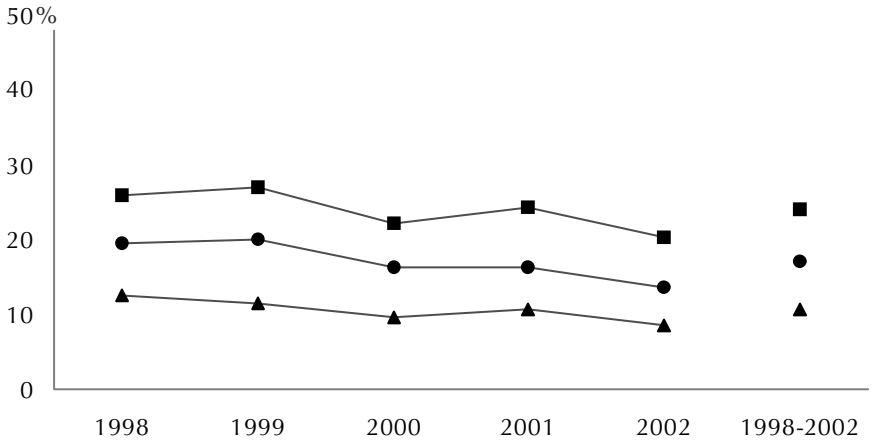

Table 23

% who smoked during 3 mo. before pregnancy		
Year	**%**	**±**
1998	*25.9*	*3.2*
1999	*27.1*	*2.5*
2000	*22.2*	*2.2*
2001	*24.4*	*2.4*
2002	20.4	*2.1*
1998-2002	24.0	*1.1*
% who smoked during pregnancy		
Year	**%**	**±**
1998	12.6	*2.5*
1999	11.6	*1.8*
2000	9.7	*1.5*
2001	10.7	*1.7*
2002	8.5	*1.5*
1998-2002	10.6	*0.8*
% who smoke currently		
Year	**%**	**±**
1998	19.5	*3.0*
1999	20.1	*2.3*
2000	16.4	*1.9*
2001	16.2	*2.1*
2002	13.7	*1.8*
1998-2002	17.2	*1.0*

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[26]Windsor R, Lowe J, Perkins L, Smith-Yoder D, Artz L, Crawford M, Amburgy K, Boyd N: Health education methods for pregnant smokers: its behavioral impact and cost benefit. Am J Public Health. 1993;83:201-206.
[27] CDC. Smoking during pregnancy – United States, 1990-2002. MMWR; 2004;53:911-915. Data from birth certificates. NM is among 18 states with a rate under 10.5%.
[28] The rate is higher (11.3, 95% CI 9.7 to 13.0%) if estimated by combining data from birth certificates (smoking at unspecified time during pregnancy) and PRAMS survey (smoking during the last 3 months of pregnancy). NM PRAMS.
[29] Estimated number 2,215 (1,836 to 2,595), year 2002.
[30] Lack of statistical significance may be due to relatively small numbers (available on request).
[31] Data from 1998-2002 were combined to increase stability of estimates; tables are available on request.
[32] For year 2002, estimate was 1,723 (1,395 to 2,051).
[33] New Mexico Medical Society, Clinical Preventive Initiative, http://www.nmms.org.
[34] New Mexico SB743 passed in 2003 mandates any payer with maternity benefits to cover up to 90 minutes of smoking cessation counseling or 2 multi-session classes/yr, and 90 days of pharmacotherapy. Molina offers classes.
[35] Fiore MC, Bailey WC, Cohen SJ, et al. *Treating tobacco use and dependence: a clinical practice guideline*. Rockville, MD: US Department of Health and Human Services. Public Health Service, 2000.
[36] Phelan ST, Albrecht S, Hartmann KE, Melvin C, Ockene JK. Smoking cessation during pregnancy: a clinician's guide to helping pregnant women quit smoking. Washington, DC; American College of Obstetricians and Gynecologists, 2002.
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[38] CDC. Best Practices for Comprehensive Tobacco Control Programs – August 1999. Atlanta GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 1999. http://www.cdc.gov/tobacco/bestprac.htm accessed 3/28/2005.
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Figure 11

Among mothers who smoked during the 3 months before pregnancy, percent who quit during the last 3 months of pregnancy, by year of infant's birth

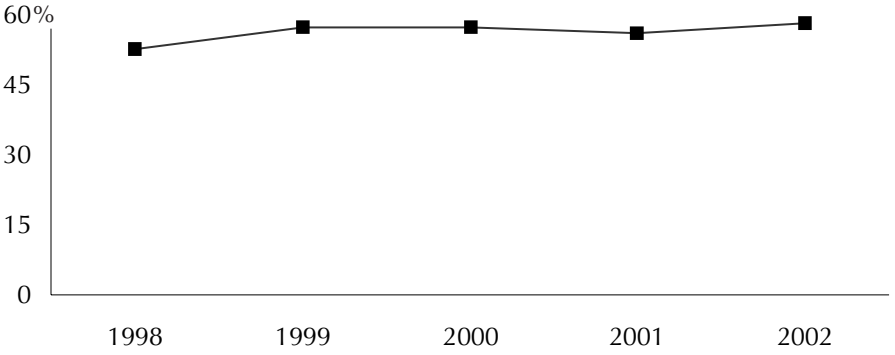


Table 24

Among pre-pregnancy smokers, % who quit during pregnancy		
Year	%	±
1998	52.5	7.3
1999	57.4	5.5
2000	57.4	5.5
2001	55.8	5.7
2002	58.0	5.8

Figure 12

Among mothers who quit smoking during the last 3 months of pregnancy, percent who did not smoke after delivery, by year of infant's birth

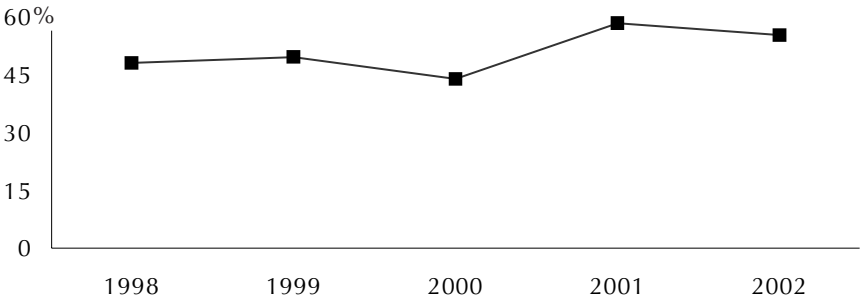


Table 25

Among smokers who quit during pregnancy, % who did not smoke after delivery		
Year	%	±
1998	~~48.1~~	~~9.9~~
1999	49.4	7.2
2000	43.7	7.4
2001	~~58.3~~	~~7.5~~
2002	~~55.3~~	~~7.8~~

Figure 13

Percent of mothers whose infant is exposed to tobacco smoke, by year of infant's birth

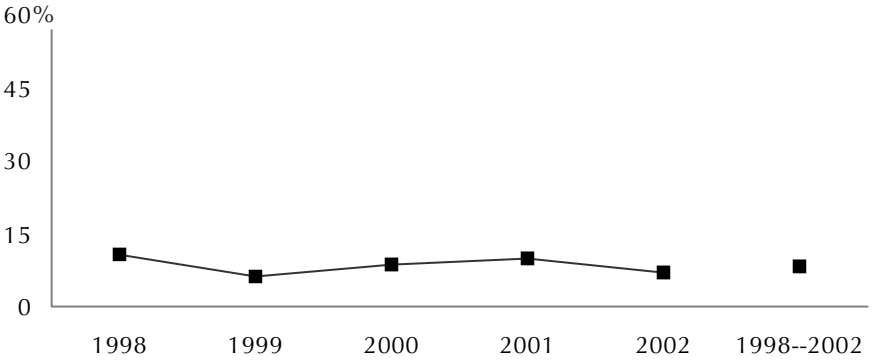


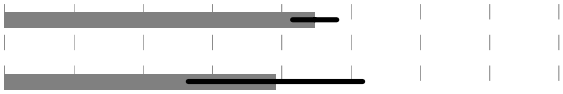
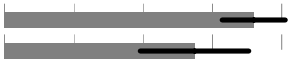
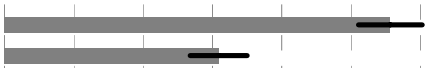
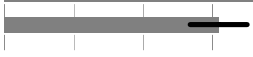
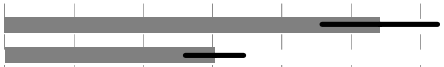
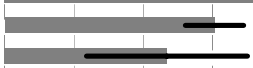
Table 26

% exposed to tobacco smoke		
Year	**%**	±
1998	**10.8**	*2.4*
1999	**6.1**	*1.4*
2000	**8.6**	*1.5*
2001	**9.7**	*1.6*
2002	**6.9**	*1.3*
1998-2002	**8.4**	*0.8*

Cigarette smoking during the three months before pregnancy

NM PRAMS, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents=3161, population=52072. Sample and weighted numbers, methods and variable definitions are in Appendix. Map of NM districts precedes this section.

Table 27

By maternal characteristic	Percent of mothers who smoked any cigarettes during the 3 months before pregnancy	%	*Lower*	*Upper*
	0 5 10 15 20 25 30 35 40			
All NM mothers		**22.4**	*20.8*	*24.0*
Age				
15-17		**19.6**	*13.3*	*25.9*
18-19		**31.2**	*25.5*	*36.9*
20-24		**29.0**	*25.9*	*32.1*
25-34		**18.0**	*15.7*	*20.3*
35 +		**13.7**	*9.8*	*17.6*
Ethnicity				
Non-Hispanic White		**27.8**	*24.8*	*30.7*
Native American		**16.5**	*12.6*	*20.4*
Hispanic White		**20.7**	*18.5*	*22.9*
Education				
Less than high school		**27.0**	*23.6*	*30.4*
High school		**25.3**	*22.4*	*28.2*
More than high school		**15.6**	*13.4*	*17.7*
Marital status				
Married		**15.4**	*13.6*	*17.1*
Not married		**30.5**	*27.8*	*33.1*
Any previous live birth				
No		**25.3**	*22.6*	*28.0*
Yes		**20.5**	*18.5*	*22.5*
Residence				
Central: District 1 urban		**23.1**	*19.9*	*26.3*
Northeast: District 2		**22.2**	*19.0*	*25.4*
Southwest: District 3		**18.6**	*15.6*	*21.6*
Southeast: District 4		**26.6**	*23.3*	*29.9*
Northwest: District 1 rural		**20.6**	*17.1*	*24.1*
Public assistance				
No		**18.1**	*16.4*	*19.8*
Yes		**36.2**	*32.4*	*40.0*
Health insurance before pregnancy				
No		**27.8**	*25.5*	*30.1*
Yes		**15.5**	*13.4*	*17.5*
Payer of preconception healthcare				
Medicaid		**27.1**	*22.9*	*31.2*
Private insurance		**15.2**	*13.1*	*17.3*
Indian Health Service for PNC		**11.7**	*5.9*	*17.5*
None		**29.5**	*26.6*	*32.4*

Cigarette smoking during the last three months of pregnancy

NM PRAMS, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents=3161, population=52072. Sample and weighted numbers, methods and variable definitions are in Appendix. Map of NM districts precedes this section.

Table 28

By maternal characteristic	Percent of mothers who smoked any cigarettes during the last 3 months of pregnancy			
	%	*Lower*	*Upper*
All NM Mothers	**9.6**	*8.5*	*10.8*
Age			
15-17	**4.9**	*2.2*	*7.6*
18-19	**10.5**	*6.6*	*14.3*
20-24	**12.4**	*10.1*	*14.7*
25-34	**8.5**	*6.8*	*10.1*
35 +	**7.0**	*4.1*	*10.0*
Ethnicity			
Non-Hispanic White	**13.4**	*11.2*	*15.6*
Native American	**5.1**	*2.5*	*7.6*
Hispanic White	**8.4**	*6.9*	*10.0*
Education			
Less than high school	**13.1**	*10.6*	*15.7*
High school	**10.0**	*8.0*	*11.9*
More than high school	**6.2**	*4.7*	*7.7*
Marital status			
Married	**6.5**	*5.3*	*7.8*
Not married	**13.2**	*11.2*	*15.2*
Any previous live birth			
No	**7.7**	*6.1*	*9.3*
Yes	**10.7**	*9.2*	*12.3*
Residence			
Central: District 1 urban	**9.4**	*7.2*	*11.6*
Northeast: District 2	**8.5**	*6.3*	*10.8*
Southwest: District 3	**9.2**	*6.9*	*11.4*
Southeast: District 4	**13.6**	*11.0*	*16.2*
Northwest: District 1 rural	**7.8**	*5.4*	*10.1*
Public assistance			
No	**6.9**	*5.8*	*8.0*
Yes	**18.3**	*15.2*	*21.5*
Health insurance before pregnancy			
No	**13.9**	*12.1*	*15.7*
Yes	**4.2**	*3.2*	*5.3*
Payer of prenatal care			
IHS w/wo Medicaid/insurance	~~**2.5**~~	- ~~*0.1*~~	~~*5.1*~~
Medicaid w/wo insurance; no IHS	**15.3**	*13.3*	*17.4*
Insurance only	**4.2**	*2.9*	*5.4*

Current cigarette smoking

NM PRAMS, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents=3161, population=52072. Sample and weighted numbers, methods and variable definitions are in Appendix. Map of NM districts precedes this section.

Table 29

By maternal characteristic	Percent of mothers who currently smoke any cigarettes (0 5 10 15 20 25 30 35 40)	%	*Lower*	*Upper*
All NM mothers		**15.0**	*13.6*	*16.3*
Age				
15-17		**14.5**	*9.2*	*19.8*
18-19		**18.9**	*14.1*	*23.6*
20-24		**20.8**	*18.0*	*23.7*
25-34		**11.3**	*9.5*	*13.2*
35 +		**8.4**	*5.2*	*11.6*
Ethnicity				
Non-Hispanic White		**18.6**	*16.1*	*21.1*
Native American		**9.2**	*6.1*	*12.3*
Hispanic White		**14.3**	*12.3*	*16.2*
Education				
Less than high school		**19.4**	*16.4*	*22.5*
High school		**17.3**	*14.8*	*19.8*
More than high school		**9.0**	*7.3*	*10.7*
Marital status				
Married		**9.7**	*8.2*	*11.1*
Not married		**21.1**	*18.7*	*23.4*
Any previous live birth				
No		**14.2**	*12.0*	*16.4*
Yes		**15.3**	*13.5*	*17.1*
Residence				
Central: District 1 urban		**15.4**	*12.7*	*18.1*
Northeast: District 2		**13.6**	*10.9*	*16.2*
Southwest: District 3		**13.5**	*10.8*	*16.1*
Southeast: District 4		**19.1**	*16.2*	*22.1*
Northwest: District 1 rural		**12.5**	*9.7*	*15.3*
Public assistance				
No		**11.5**	*10.1*	*12.8*
Yes		**26.2**	*22.7*	*29.7*
Payer of delivery				
IHS w/wo Medicaid/insurance		**~~4.9~~**	*~~1.8~~*	*~~8.1~~*
Medicaid w/wo insurance; no IHS		**21.1**	*18.9*	*23.2*
Insurance only		**8.1**	*6.3*	*10.0*
None		**10.1**	*6.0*	*14.3*

Infants exposed to tobacco smoke

NM PRAMS, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents=3161, population=52072. Sample and weighted numbers, methods and variable definitions are in Appendix. Map of NM districts precedes this section.

Table 30

By maternal characteristic	Percent of mothers whose infant is exposed to tobacco smoke (0 5 10 15 20 25 30 35 40)	%	*Lower*	*Upper*
All NM mothers		**8.3**	*7.3*	*9.3*
Age				
15-17		**9.0**	*5.0*	*13.0*
18-19		**11.3**	*7.3*	*15.3*
20-24		**8.9**	*7.1*	*10.7*
25-34		**6.6**	*5.2*	*8.1*
35 +		**9.5**	*5.9*	*13.2*
Ethnicity				
Non-Hispanic White		**12.8**	*10.7*	*14.9*
Native American		**3.4**	*1.4*	*5.5*
Hispanic White		**6.5**	*5.1*	*7.8*
Education				
Less than high school		**8.1**	*6.2*	*10.0*
High school		**9.7**	*7.8*	*11.7*
More than high school		**6.7**	*5.1*	*8.3*
Marital status				
Married		**6.9**	*5.6*	*8.2*
Not married		**9.9**	*8.2*	*11.6*
Any previous live birth				
No		**8.5**	*6.7*	*10.2*
Yes		**8.3**	*7.0*	*9.6*
Residence				
Central: District 1 urban		**6.9**	*4.9*	*8.8*
Northeast: District 2		**5.0**	*3.2*	*6.7*
Southwest: District 3		**9.1**	*6.8*	*11.3*
Southeast: District 4		**15.0**	*12.2*	*17.7*
Northwest: District 1 rural		**7.6**	*5.3*	*9.9*
Public assistance				
No		**6.7**	*5.6*	*7.7*
Yes		**13.6**	*11.0*	*16.2*
Payer of delivery				
IHS w/wo Medicaid/insurance		~~**2.0**~~	- ~~*0.3*~~	~~*4.3*~~
Medicaid w/wo insurance; no IHS		**10.9**	*9.3*	*12.5*
Insurance only		**6.2**	*4.5*	*7.8*
None		**4.0**	*1.7*	*6.3*

Physical abuse by a husband or partner

PRAMS asks about physical abuse by a husband or partner during the 12 months before pregnancy or during pregnancy. In PRAMS findings, "abuse" is limited to this meaning.

Public health importance

Prenatal physical abuse of mothers can result in fetal death, early labor, preterm, low birth weight of the infant or maternal medical problems.[1] Children who are exposed to domestic violence are at increased risk for behavioral difficulties, emotional problems, poor academic performance, delinquency[2] and impaired health during adulthood.[3]

Economic effects of abuse include increased medical costs in emergency rooms, where battered women may account for 22% to 35% of women seeking care.[4]

NM mothers were more likely to admit being abused than other PRAMS mothers in the US, where the range was 3.0% to 9.0% during the 12 months before and 2.3% to 7.3% during pregnancy (year 2000 births).[5] The Healthy People Objective 2010 aims for fewer than 3.3 physical assaults by a current or former intimate partner per 1,000 persons, 12 years or older.[6]

NM PRAMS findings

In 2002, almost 2000 new mothers (7.6% of the total) recalled being abused during the 12 months before pregnancy (Table 31 / Figure 14).[7] During pregnancy, the rate was 5.6% (Table 31 / Figure 14). In 2001-2002, abuse during pregnancy was far more likely among women who were unmarried (8.2% v. 3.2% if married), had public assistance (10.0% v. 4.1% if without assistance) or were Native American (10.0% v. 5.9% of Hispanic whites and 3.5% of non-Hispanic whites); see Table 33. Findings were similar before pregnancy (Table 32).

Action in NM

Community-based groups connect law enforcement, judicial and social service agencies. Gaps in services include shelters and programs, transitional housing and vocational preparation for women; batterer's treatment programs that also address alcohol, substance abuse, and parenting issues; and children's counseling services.

Resources

The Coalition Against Domestic Violence, 505-246-9240, is a clearinghouse for training.

The NM Department of Health's V.A.S.T (Violence, Alcohol, Substance Abuse, and Tobacco use) program trains clinical providers: 505-476-8882.

References

[1] LE, Gaffield ME, Colley Gilbert B, Rogers M, Whitehead N. PRAMS 1999 Surveillance Report. Atlanta, GA: Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, 2003. Cites original sources.
[2] Osofsky JD. The impact of violence on children. The Future of Children 1999(3);9:33-49. http://www.futureofchildren.org/pubs-info2825/pubs-info.htm?doc_id=70473 accessed 1/31/2005.
[3] Felitti VJ, Anda RF, Nordenberg D, et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. Am J Prev Med 1998;14:245-258.
[4] References in American Medical Association. Diagnostic and treatment guidelines on domestic violence. Chicago: AMA, 1992.

Figure 14

Percent of women whose partner physically abused them

■ during the 12 months before pregnancy or
● during pregnancy, by year of infant's birth

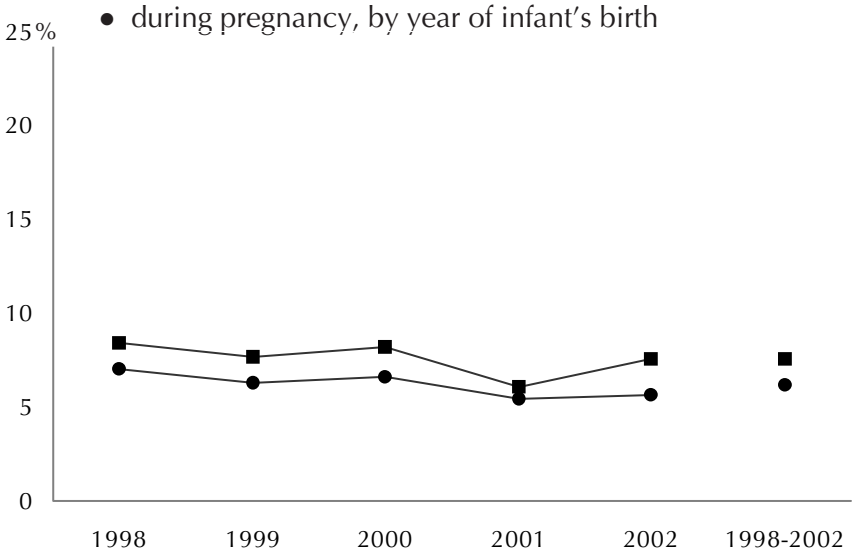


Table 31

% abused during 12 mo. before pregnancy		
Year	**%**	**±**
1998	**8.4**	*2.0*
1999	**7.7**	*1.5*
2000	**8.2**	*1.5*
2001	**6.0**	*1.2*
2002	**7.6**	*1.4*
1998-2002	**7.6**	*0.7*
% abused during pregnancy		
Year	**%**	**±**
1998	**7.0**	*1.8*
1999	**6.3**	*1.4*
2000	**6.6**	*1.3*
2001	**5.4**	*1.1*
2002	**5.6**	*1.2*
1998-2002	**6.2**	*0.6*

[5]Williams LM, Morrow B, Beck LF, Barfield W, D'Angelo D, Helms K, Johnson CH, Lipscomb LE, Whitehead N. PRAMS 2000 Surveillance Report. Atlanta, GA: Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, 2005.

[6] US. Department of Health and Human Services. Healthy People 2010 Conference Edition. Washington, DC: US Department of Health and Human Services; 2000. http://www.healthypeople.gov/document/html/objectives/15-34.htm accessed 2/15/2004.

[7] Estimated number 1985, 95% CI was 1,615 to 2,534 for year 2002, no table.

A detailed list of references is available upon request.

Physical abuse by a partner or husband during the 12 months before pregnancy

NM PRAMS, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents=3161, population size=52072. Sample and weighted numbers, methods and variable definitions are in Appendix.
Map of NM districts precedes this section.

Table 32

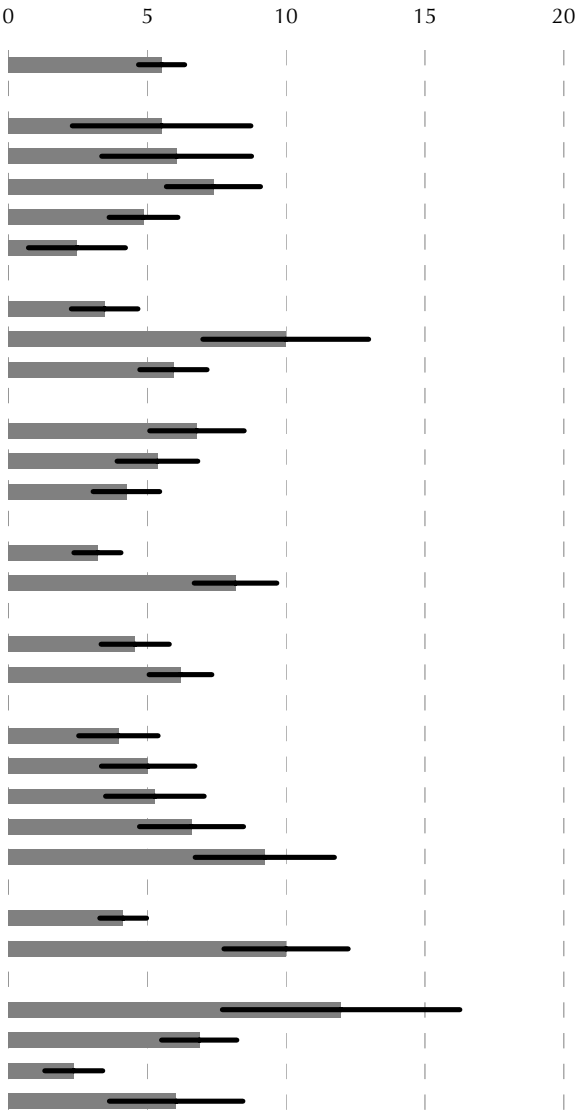
By maternal characteristic	Percent of mothers who were abused by a partner or husband during the 12 months before pregnancy			
	%	*Lower*	*Upper*
All NM mothers	**6.8**	*5.9*	*7.7*
Age			
15-17	**6.6**	*3.1*	*10.1*
18-19	**6.5**	*3.6*	*9.4*
20-24	**8.9**	*7.1*	*10.8*
25-34	**6.0**	*4.6*	*7.3*
35 +	**4.8**	*2.4*	*7.2*
Ethnicity			
Non-Hispanic White	**4.6**	*3.2*	*6.0*
Native American	**14.2**	*10.5*	*17.8*
Hispanic White	**6.8**	*5.5*	*8.0*
Education			
Less than high school	**8.5**	*6.5*	*10.4*
High school	**7.4**	*5.7*	*9.1*
More than high school	**4.9**	*3.6*	*6.2*
Marital status			
Married	**4.7**	*3.7*	*5.8*
Not married	**9.2**	*7.6*	*10.8*
Any previous live birth			
No	**5.0**	*3.8*	*6.3*
Yes	**8.1**	*6.8*	*9.4*
Residence			
Central: District 1 urban	**5.2**	*3.6*	*6.9*
Northeast: District 2	**5.5**	*3.8*	*7.2*
Southwest: District 3	**6.1**	*4.2*	*8.0*
Southeast: District 4	**8.4**	*6.3*	*10.6*
Northwest: District 1 rural	**11.3**	*8.5*	*14.1*
Public Assistance			
No	**5.4**	*4.5*	*6.4*
Yes	**11.3**	*8.9*	*13.6*
Payer of preconception healthcare			
Medicaid	**8.5**	*6.2*	*10.8*
Private insurance	**3.4**	*2.3*	*4.5*
Indian Health Service for PNC	**18.8**	*12.1*	*25.6*
None	**8.5**	*6.8*	*10.2*

Physical abuse by a partner or husband during pregnancy

NM PRAMS, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents=3161, population size=52072. Sample and weighted numbers, methods and variable definitions are in Appendix. Map of NM districts precedes this section.

Table 33

By maternal characteristic	Percent of mothers who were abused by a partner or husband during pregnancy			
	%	*Lower*	*Upper*	
All NM mothers	**5.5**	*4.7*	*6.3*	
Age				
15-17	**5.5**	*2.3*	*8.7*	
18-19	**6.1**	*3.4*	*8.8*	
20-24	**7.4**	*5.7*	*9.1*	
25-34	**4.9**	*3.6*	*6.1*	
35 +	**~~2.5~~**	*~~0.7~~*	*~~4.2~~*	
Ethnicity				
Non-Hispanic White	**3.5**	*2.3*	*4.7*	
Native American	**10.0**	*7.0*	*13.0*	
Hispanic White	**5.9**	*4.7*	*7.2*	
Education				
Less than high school	**6.8**	*5.1*	*8.5*	
High school	**5.4**	*3.9*	*6.8*	
More than high school	**4.2**	*3.0*	*5.4*	
Marital status				
Married	**3.2**	*2.4*	*4.1*	
Not married	**8.2**	*6.7*	*9.7*	
Any previous live birth				
No	**4.6**	*3.3*	*5.8*	
Yes	**6.2**	*5.1*	*7.3*	
Residence				
Central: District 1 urban	**4.0**	*2.5*	*5.4*	
Northeast: District 2	**5.0**	*3.4*	*6.7*	
Southwest: District 3	**5.3**	*3.5*	*7.0*	
Southeast: District 4	**6.6**	*4.7*	*8.5*	
Northwest: District 1 rural	**9.2**	*6.7*	*11.7*	
Public Assistance				
No	**4.1**	*3.3*	*5.0*	
Yes	**10.0**	*7.8*	*12.2*	
Payer of prenatal care				
IHS w/wo Medicaid/insurance	**12.0**	*7.7*	*16.3*	
Medicaid w/wo insurance; no IHS	**6.9**	*5.5*	*8.2*	
Insurance only	**2.4**	*1.3*	*3.4*	
None	**6.0**	*3.6*	*8.4*	



Weight problem and diabetes

PRAMS asks mothers about their pre-pregnancy height and weight. Definitions for weight categories are based on Body Mass Index (BMI). Body Mass Index (BMI) is calculated from the weight (kg) divided by height squared (m^2). BMI categories for children and adults are not entirely comparable.[1] To address this discrepancy, the NM Department of Health Chronic Disease Epidemiology Program has developed a variable that can be applied across age groups. Adults who are obese or overweight, or children who are overweight or at risk for overweight, are referred to as having a "weight problem" or "weighing too much". PRAMS uses this method to describe overweight/obesity for women 15 years and older.

Public health importance

In 1999-2002, an estimated 65 percent of U.S. adults were either overweight or obese.[2] This translates into approximately 128 million adults.[3] Since 1976-1980, there has been a considerable increase in the percentage of adults who are overweight or obese. In NM, 57% of adults were overweight or obese in 2002.[4]

Adults who are overweight or obese are at increased risk for hypertension, lipid disorders, type 2 diabetes, coronary heart disease, stroke, gallbladder disease, osteoarthritis, sleep apnea, respiratory problems and certain cancers. Overweight and obesity are a major cause of preventable death in the United States. Overweight-associated mortal-ity accounted for approximately 350,000 deaths in 2000.[5]

Healthy People 2010 objectives are to increase the proportion of adults at a healthy weight to 60% and reduce the proportion who are obese to 15%.[6]

Obesity and pregnancy outcomes

During pregnancy obese women have a higher risk of complications related to high blood pressure or gestational diabetes, preeclampsia and problems with delivery, including caesearean section. Even among glucose-tolerant women, prepregnancy overweight and obesity are associated with hypertensive complications, cesarean section and macrosomia (excessive birth weight, which is associated with delivery complications).[7] Risks to the infant include being large for gestational age (with increased risk for hypoglycemia),[8] stillbirth and early neonatal death.[9, 10] Maternal obesity is also implicated in birth defects such as neural tube[11] or congenital heart defects.[12, 13] The risk of certain defects increases among women who are both obese and diabetic.[14]

Figure 15

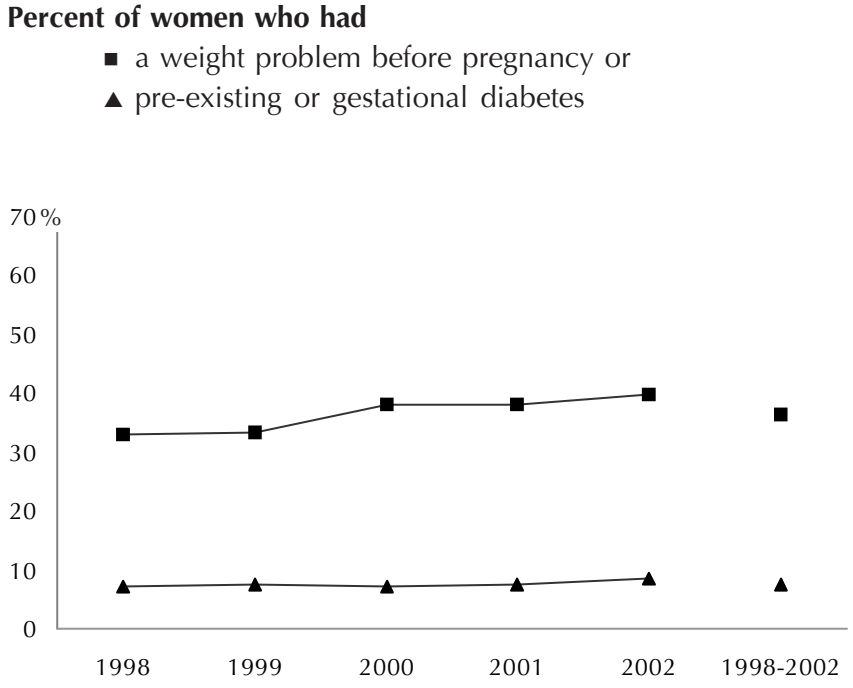


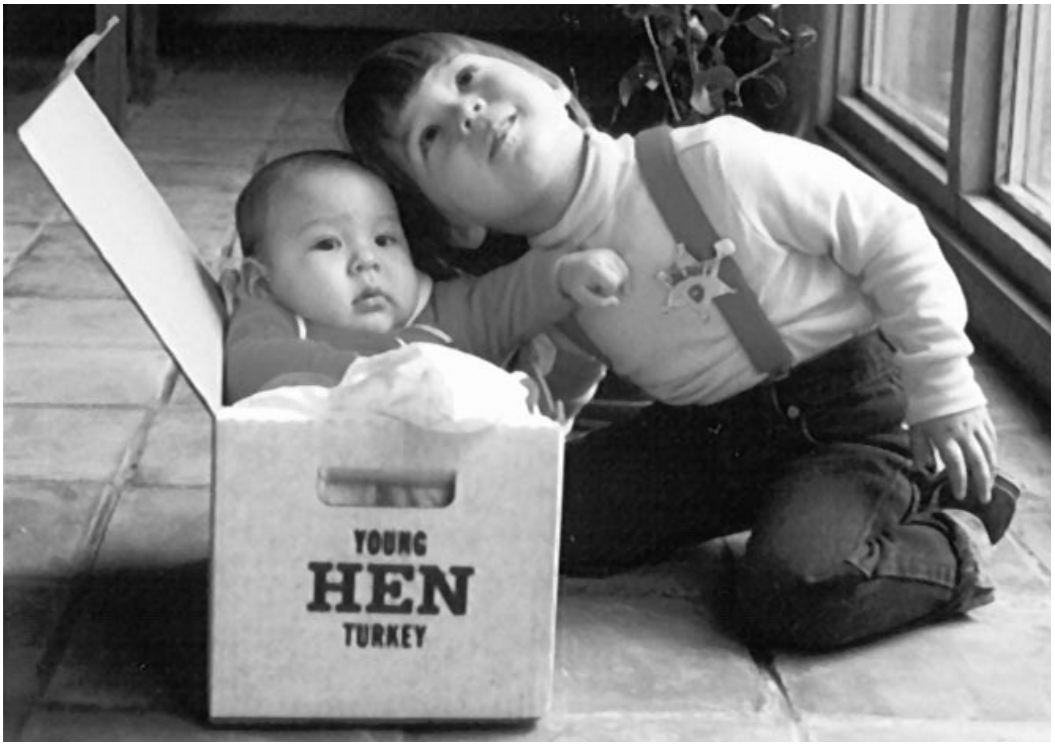
Table 34

% of women with "weight problem"		
Year	**%**	**±**
1998	**32.9**	*3.3*
1999	**33.4**	*2.6*
2000	**38.0**	*2.5*
2001	**38.1**	*2.6*
2002	**39.8**	*2.6*
1998-2002	**36.5**	*1.2*

% of women with diabetes		
Year	**%**	**±**
1998	**7.0**	*1.8*
1999	**7.4**	*1.5*
2000	**7.3**	*1.3*
2001	**7.6**	*1.4*
2002	**8.6**	*1.5*
1998-2002	**7.6**	*0.7*

Childhood overweight – In 2003, 23% of NM high school students were overweight or at risk for overweight.[15] In NM, 21.5% of two- to five-year olds who participated in federally funded nutrition programs were overweight or at risk for overweight.[16]

Maternal obesity is predictive of childhood overweight. The relationship between a mother's obesity and her child's risk for overweight has both biological and environmental implications. Prenatally, a woman's body composition helps determine the weight of her child from infancy through adolescence.[17, 18] Some studies suggest that breastfeeding may also protect against childhood and adolescent overweight.[19]



In 2003, the Surgeon General announced an initiative to prevent childhood obesity. The 1988-1994 baseline for "overweight or obesity" was 11% for children ages 6 to 19 years old. The Healthy People 2010 target is to reduce the prevalence to 5%.[20]

Costs of obesity – Annual U.S. obesity-attributable medical expenditures are estimated at $75 billion (year 2003 dollars). Medicare and Medicaid finance approximately one-half of this amount.[21] Estimates including treatment of diabetes put obesity-attributable figures closer to $98 billion.[22] Because treatment of obesity is very difficult and costly, prevention is essential. Without expenses related to obesity, the United States could reduce its entire health care budget by 6 to 10%.[23]

In New Mexico, an estimated $324 million dollars per year for adult health care expenses are attributable to obesity. This includes 8.5% of Medicaid expenditures, or $84 million per year. These estimates do not include decreased productivity, absenteeism, or other non-medical costs.[24]

NM PRAMS findings

In 2002, 40% of New Mexico mothers had a weight problem before pregnancy, and 9% of all mothers had either pre-existing or gestational diabetes. (Table 34 / Figure 15). Both rates increased from 1998 when 33% had a weight problem and 7% had diabetes. In 2001-2002, forty-one percent of Hispanic women and 55% of Native American women had a pre-conception weight problem compared with 32% of non-Hispanic Whites (Table 35). Among all ethnic groups, women who received public assistance were more likely to have a weight problem than women not receiving assistance (47% versus 37%). As expected, those with previous live birth were more likely to have a weight problem.

Women had higher rates of pre-existing or gestational diabetes when they were ages 25-34 (10%) and especially if they were ages 35 and older (15%) compared to 5% of younger women (Table 36). Higher rates were also observed for women with no payer of prenatal care (11%) or for Native American women (15%).

Action in NM

Reducing obesity is one of five current priorities for the NM Department of Health and is featured in the Department's 2004 Strategic Plan. A comprehensive *New Mexico Plan for Obesity Control and Prevention* is being developed with support from the Centers for Disease Control and Prevention. The *Clinical Prevention Initiative* and *Envision New Mexico* programs are developing a systematic approach to promoting healthier weight among youth and adults in health care settings, including school-based health centers. The NM Pediatric Society promotes clinical interventions to reduce obesity. They are advocates for physical education programs in public schools and legislation regulating foods distributed or sold in public schools.

- Over 50 schools statewide have nutrition, physical activity and health curricula for 3rd – 5th grade students, their families, and school staff through the *Coordinated Approach To Child Health (CATCH)* program.
- Over 3,000 New Mexicans have registered for *New Mexico On The Move* (at www.AmericaOnTheMove.org) to increase daily activity and decrease caloric intake.
- The *Women, Infants and Children (WIC)* program provides nutrition education to promote breastfeeding and healthy weight. Since 2003, NM DOH Family Planning clinics have participated in a campaign to reduce obesity among women of childbearing age. The campaign focuses on teens.

In 2005, HB 61 was signed with the goal of decreasing childhood overweight statewide. The law requires rules governing foods and beverages sold or distributed in all public schools to students outside of U.S. Department of Agriculture (USDA) school meal programs. The rules address nutrition standards, portion sizes and times when students may access these items.

Resources

Clinical guidelines for the identification, evaluation, and treatment of overweight and obesity in adults http://www.health.gov/dietaryguidelines/dga2005/recommendations.htm accessed 1/20/2005
http://www.nhlbi.nih.gov/guidelines/obesity/ob_home.htm accessed 1/19/2005.
U.S. Department of Health and Human Services and U.S. Department of Agriculture. Dietary guidelines for Americans 2005. 6th edition, Washington, DC: U.S Government Printing Office, January 2005.
http://www.healthierus.gov/dietaryguidelines
CDC statistics http://www.cdc.gov/nccdphp/dnpa
New Mexico Pediatric Society http://www.nmpeds.org accessed 2/28/2005.

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[1]For adults over 20 years old, most CDC reports define underweight as BMI less than 18.5; normal, 18.5 to 24.9; overweight, 25.0 to 29.9; and obese, 30.0 and above. (National Heart, Lung, and Blood Institute. Clinical Guidelines on the Identification, Evaluation and Treatment of Overweight and Obesity in Adults: The Evidence Report. Washington, DC: Government Printing Office; 1998. BMI cutoffs posted on http://www.cdc.gov/nccdphp/dnpa/bmi/bmi-adult.htm
For children and adolescents 2-20 years of age, gender and age-specific charts (BMI-for-age) define underweight as BMI-for-age at or below the fifth percentile; normal, 5th to below 85th percentile; at risk for overweight, 85th to below 95th percentile; and overweight, 95th percentile or more. BMI-for-age definitions and charts: http://www.cdc.gov/nccdphp/dnpa/bmi/bmi-for-age.htm accessed 2/24/2005.
The Institute of Medicine uses different cutoffs for BMI: Institute of Medicine, Committee on Nutritional Status during Pregnancy and Lactation. *Nutrition during Pregnancy.* Part 1: Weight Gain. Washington DC: National Academy Press, 1990.
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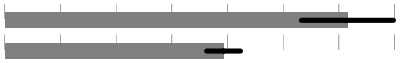
Preconception (excessive) weight problem

Adults 21 years or older: obese or overweight. Adolescents: overweight or at risk for overweight. See Appendix for details. NM PRAMS, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents=3161, population size=52072. Sample and weighted numbers, methods and variable definitions are in Appendix. Map of NM districts precedes this section.

Table 35

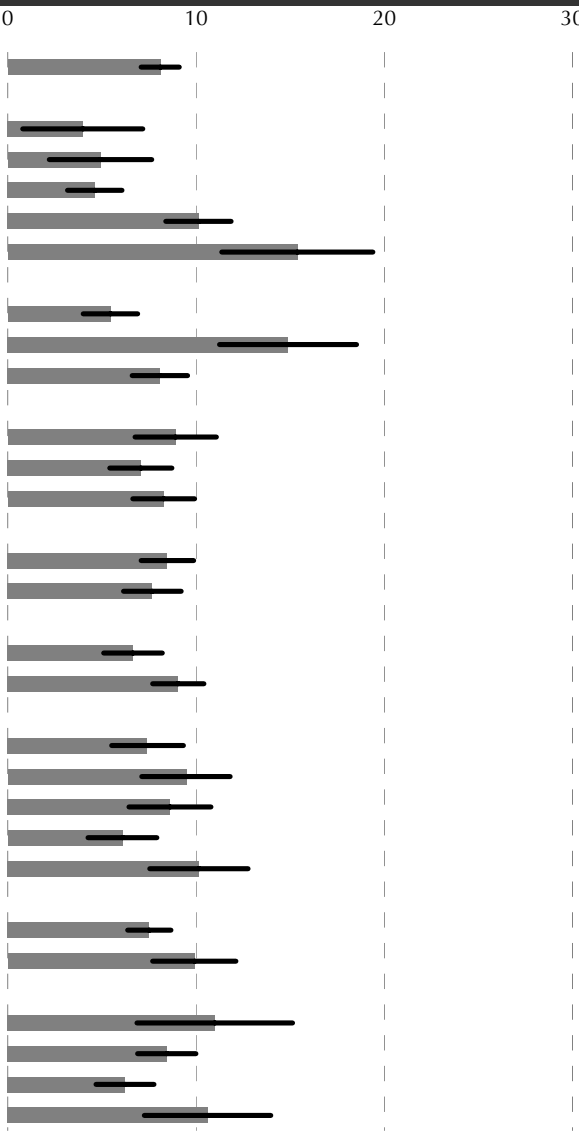
By maternal characteristic	Percent of mothers with a preconception weight problem (0 10 20 30 40 50 60 70 80 90 100)	%	*Lower*	*Upper*
All NM mothers		**39.0**	*37.2*	*40.8*
Age				
15-17		**17.4**	*11.5*	*23.2*
18-19		**19.9**	*14.8*	*24.9*
20-24		**37.0**	*33.7*	*40.2*
25-34		**46.3**	*43.5*	*49.2*
35 +		**44.7**	*39.1*	*50.3*
Ethnicity				
Non-Hispanic White		**31.9**	*28.9*	*34.9*
Native American		**55.2**	*50.1*	*60.3*
Hispanic White		**40.5**	*37.9*	*43.1*
Education				
Less than high school		**33.5**	*30.0*	*37.0*
High school		**45.0**	*41.7*	*48.3*
More than high school		**37.4**	*34.6*	*40.3*
Marital status				
Married		**40.0**	*37.5*	*42.4*
Not married		**37.9**	*35.1*	*40.6*
Any previous live birth				
No		**30.4**	*27.6*	*33.2*
Yes		**44.6**	*42.2*	*46.9*
Residence				
Central: District 1 urban		**37.1**	*33.6*	*40.6*
Northeast: District 2		**35.1**	*31.5*	*38.7*
Southwest: District 3		**37.1**	*33.4*	*40.8*
Southeast: District 4		**40.1**	*36.4*	*43.7*
Northwest: District 1 rural		**48.3**	*44.0*	*52.6*
Had public assistance				
No		**36.5**	*34.5*	*38.6*
Yes		**46.8**	*42.9*	*50.8*
Payer of preconception healthcare				
Medicaid		**38.6**	*34.1*	*43.0*
Private insurance		**36.5**	*33.7*	*39.3*
Indian Health Service for PNC		~~**61.6**~~	~~*53.3*~~	~~*69.8*~~
None		**39.3**	*36.3*	*42.3*

Pre-existing or gestational diabetes

NM PRAMS, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents=3161, population=52072. Sample and weighted numbers, methods and variable definitions are in Appendix. Map of NM districts precedes this section.

Table 36

By maternal characteristic	Percent of mothers who had pre-existing or gestational diabetes			
	%	*Lower*	*Upper*
All NM mothers	**8.1**	*7.1*	*9.1*
Age			
15-17	**~~4.0~~**	*~~0.8~~*	*~~7.2~~*
18-19	**4.9**	*2.2*	*7.7*
20-24	**4.6**	*3.2*	*6.1*
25-34	**10.1**	*8.4*	*11.9*
35 +	**15.4**	*11.4*	*19.4*
Ethnicity			
Non-Hispanic White	**5.5**	*4.0*	*6.9*
Native American	**14.9**	*11.2*	*18.5*
Hispanic White	**8.1**	*6.6*	*9.5*
Education			
Less than high school	**8.9**	*6.8*	*11.1*
High school	**7.1**	*5.4*	*8.7*
More than high school	**8.3**	*6.6*	*9.9*
Marital status			
Married	**8.5**	*7.1*	*9.9*
Not married	**7.7**	*6.2*	*9.2*
Any previous live birth			
No	**6.7**	*5.1*	*8.2*
Yes	**9.1**	*7.7*	*10.4*
Residence			
Central: District 1 urban	**7.4**	*5.5*	*9.3*
Northeast: District 2	**9.5**	*7.1*	*11.8*
Southwest: District 3	**8.6**	*6.5*	*10.8*
Southeast: District 4	**6.1**	*4.3*	*7.9*
Northwest: District 1 rural	**10.2**	*7.6*	*12.8*
Had public assistance			
No	**7.5**	*6.4*	*8.7*
Yes	**9.9**	*7.7*	*12.1*
Payer of prenatal care			
IHS w/wo Medicaid/insurance	**11.0**	*6.9*	*15.1*
Medicaid w/wo insurance; no IHS	**8.4**	*6.9*	*10.0*
Insurance only	**6.2**	*4.7*	*7.8*
None	**10.6**	*7.3*	*14.0*



Prenatal care

Related chapters discuss payer of care and prenatal services.

PRAMS asks when the respondent started prenatal visits, whether this was as early as desired, and what prevented timely care.

Birth certificates provide information about the number and start of prenatal visits. This report uses birth certificate data to calculate timely or adequate prenatal care. However, NM Vital Records data may differ from PRAMS estimates, which are based on a sample that excludes out-of-state births.

In this report, timely prenatal care means visits started within the first three months of pregnancy. Adequacy of prenatal care utilization (APNCU) is defined by the Kotelchuck index.[1]

Public health importance

Timely and adequate prenatal care permits evaluation of medical and psychosocial risks, treatment of problems and referral for support services. It also gives families a chance to discuss maternal and infant health.

Use of prenatal care is associated with decreased rates of preterm birth,[2, 3] fetal death[4] and low birth weight.[5] Preterm labor and low birth weight are costly: a recent study estimated that total expenditures for preterm-labor hospitalization for the United States were in excess of $820 million.[6] Reducing publicly funded prenatal care could increase low birth weight, prematurity and postnatal expenses. In a recent study of undocumented immigrants, every dollar cut would increase the cost of postnatal care by $3.33 and incremental long-term costs by $4.63.[7]

The Healthy People 2010 objective is to increase to at least 90% the proportion of all pregnant women who receive early (beginning in the first trimester) and adequate prenatal care.[8]

NM PRAMS findings

In 2002, 71% of mothers began PNC in the first trimester (Table 37 / Figure 16). The increase from 65% in 1998 needs testing for significance. PNC utilization was inadequate for 22%, intermediate for 17% and adequate for 33% (Table 38 / Figure 17).[9]

For years 2001-2002 combined, late or no prenatal care was associated with maternal age, ethnicity, education, marital status, residence, use of public assistance and

Figure 16

Percent of women with

■ timely (within first 3 months) or

▲ late or no prenatal care, by year of infant's birth

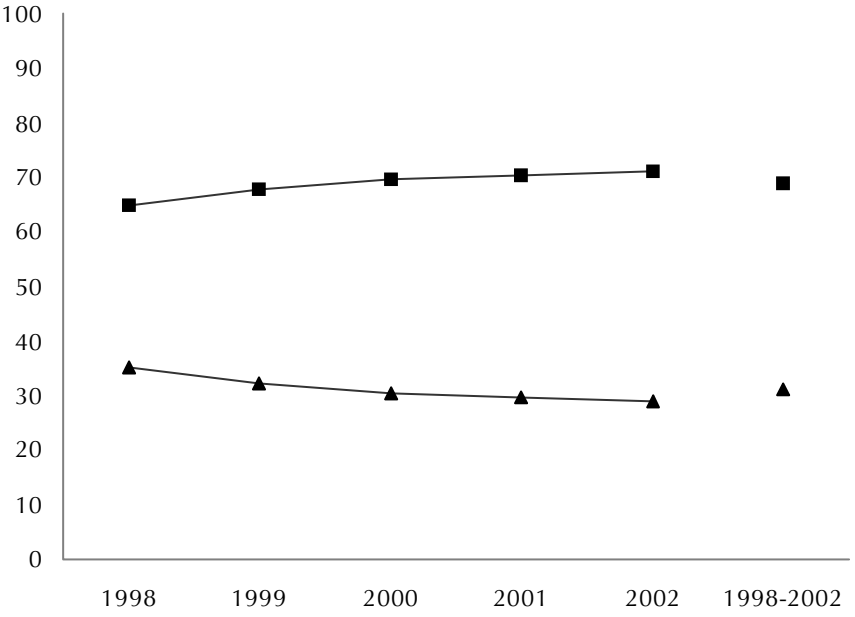


Table 37

% with timely prenatal care		
Year	**%**	**±**
1998	**64.9**	*3.6*
1999	**67.7**	*2.7*
2000	**69.6**	*2.5*
2001	**70.4**	*2.5*
2002	**71.1**	*2.4*
1998-2002	**68.7**	*1.3*
% with late/no prenatal care		
Year	**%**	**±**
1998	**35.1**	*3.6*
1999	**32.3**	*2.7*
2000	**30.4**	*2.5*
2001	**29.6**	*2.5*
2002	**28.9**	*2.4*
1998-2002	**31.3**	*1.3*

payer of prenatal care (Table 39). Adequate utilization of PNC was only associated with maternal education or use of public assistance (Table 40).[10]

However, in a multinomial, multivariable analysis using data from 1997-2002, other factors were associated with APNCU. The following statements apply to the model comparing inadequate with adequate utilization. Inadequate utilization was less likely among women with a third-party payer compared to those with no insurance;

or for women with preconception care paid by insurance compared to those with neither Medicaid nor insurance. Inadequate utilization was strongly associated with lack of childcare or transportation.[11] Women were also more likely to underutilize PNC if they did not want the pregnancy, had less than a high school education, did not participate in prenatal WIC, were unmarried or of Native American ethnicity; or if they had an annual family income under $23,400, experienced the stress of unpaid bills or had one previous live birth.[12]

In 2001-2002, 59.3% (±3.4%) of women with late or no prenatal care said they started as early as desired (no table). Among those who started late, the main reasons were not knowing they were pregnant (36%), lack of money or insurance (30%) or inability to get an appointment (26%); see Table 41.

Table 42 shows topics discussed during PNC. Most women (more than 80%) recalled talking about breastfeeding, safe medicines, postpartum birth control, tests for birth defects, management of early labor or getting an HIV test; fewer recalled discussing maternal alcohol use (74%), smoking (73%), illegal drugs (68%), seat belts (56%) or partner abuse (48%).

Action in NM

Motivation to use PNC appears to be an issue, given that more than half of women with late prenatal care said they started as early as desired. The Centering Pregnancy Program can encourage pregnant women's interest in PNC. Offered in several NM sites, this approach empowers women and develops support networks through group sessions. Professionally facilitated group meetings complement standard clinical visits. Women engage in self-care activities of recording their own weight and blood pressure, estimating gestational age and discussing topics related to pregnancy, childbirth, parenting and personal growth.

Strategies to increase access to care include supporting Certified Nurse Midwives and Licensed Midwives, who attend more than one third of the deliveries in New Mexico. Current liability insurance requirements jeopardize the availability of their services. During the winter of 2005, bills (SB5, SB292, SB419) that died in committee were introduced to cover midwives' risk insurance.

The "safety net" for uninsured women includes Medicaid, primary care clinics, NMDOH Public Health offices offering prenatal care, and a fund that pays specialty providers to care for medically indigent, high-risk women. Medicaid pays for approximately half of NM deliveries.[13] Pregnant women whose family income is at or below 185% of poverty may apply for pregnancy-related Medicaid, which covers medical conditions related to the pregnancy, delivery, post-partum and family planning. For pregnant women in Medicaid Category 35,[14] two of the three managed care organizations (Lovelace and Molina) also provide comprehensive care. Timely prenatal care is facilitated by Presumptive Eligibility Medicaid On Site Application Assistance, which permits application for Medicaid in the provider's office or clinic.

Prenatal care support services include case management for Medicaid clients through Families FIRST. The WIC nutrition program provides vouchers for healthy foods, nutrition counseling and education and referrals to other services to pregnant or recently delivered women whose income is at or below 185% of the federal poverty level.

The NM Prenatal Care Taskforce increases PNC utilization through evidence-based strategies. This group has been active in supporting midwives.

Resources

Centering Pregnancy http://www.centeringpregnancy.com/
Information about High Risk Prenatal Fund, midwifery regulations and New Mexico Prenatal Care Taskforce:
Maternal Child, Adolescent and Families Program, NM Department of Health. 505-476-8908.
New Mexico Medicaid Program:
Human Services Department, Medical Assistance Division at 888-997-2583
http://www.state.nm.us/hsd/mad

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[9] Among all births to NM residents, 66% began PNC in the first trimester. APNCU was inadequate for 24.3; intermediate for 17.9%; adequate for 32.7%; and adequate plus for 25.1%. Bureau of NM Vital Records and Health Statistics. 2002 New Mexico Selected Health Statistics. NM Department of Health, Santa Fe, NM, 2004.

[10] The significance of the other characteristics needs further testing.

[11] Barriers to PNC were reported by women who said they did not start PNC as early as desired.

[12] Predictors were different for the models of intermediate v. adequate and adequate plus v. adequate utilization. Data are available from NM PRAMS, nmprams@doh.state.nm.us.

[13] In 1999-2000, NM Vital Records' linked birth-Medicaid study found that Medicaid paid for 49% of NM deliveries. Office of New Mexico Vital Records and Health Statistics. Medicaid paid births: 2003 update. NM Department of Health, Santa Fe, NM, 2003.

[14] See chapter on payer of care.

Figure 17

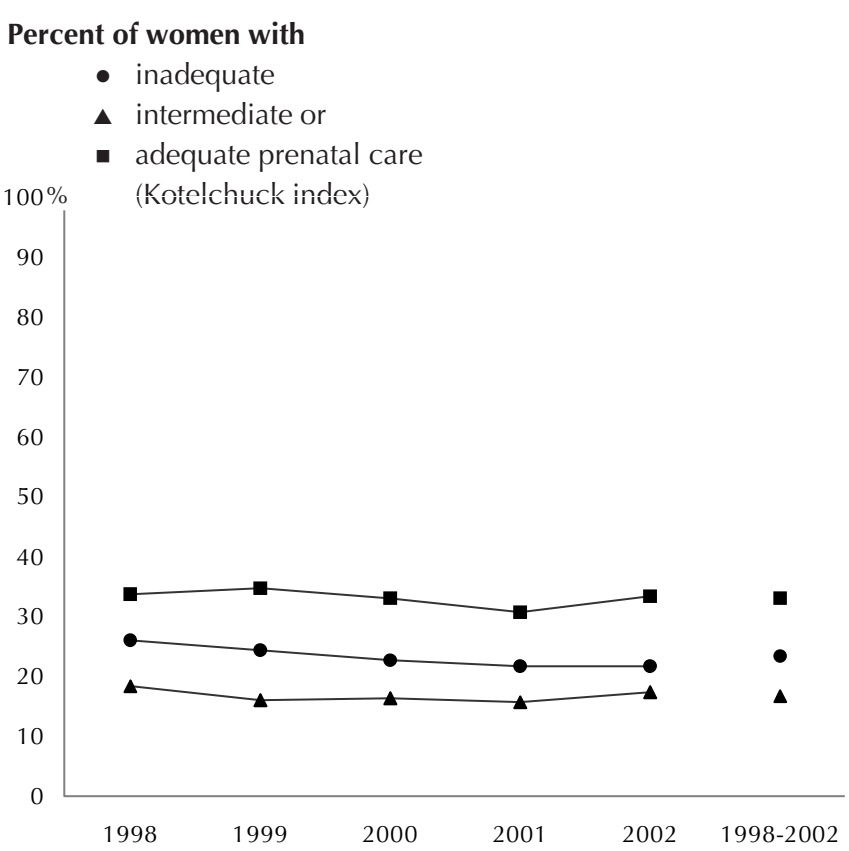


Table 38

% with inadequate PNC		
Year	**%**	**±**
1998	**26.1**	*3.4*
1999	**24.2**	*2.5*
2000	**22.7**	*2.3*
2001	**21.8**	*2.3*
2002	**21.8**	*2.2*
1998-2002	**23.3**	*1.2*
% with intermediate PNC		
Year	**%**	**±**
1998	**18.3**	*2.8*
1999	**15.9**	*2.1*
2000	**16.5**	*2.0*
2001	**15.7**	*1.9*
2002	**17.2**	*2.0*
1998-2002	**16.7**	*1.0*
% with adequate PNC		
Year	**%**	**±**
1998	**33.5**	*3.5*
1999	**34.6**	*2.7*
2000	**33.0**	*2.5*
2001	**30.7**	*2.5*
2002	**33.4**	*2.5*
1998-2002	**33.0**	*1.2*

Late (after first 3 months) or no prenatal care

Source: NM PRAMS and Vital Records (VR), from NM residents with in-state birth, years 2001-2002.
Estimates may differ from VR report. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Data available for 3025 of 3161 respondents, population=49622. Sample and weighted numbers, methods and variable definitions are in Appendix. Map of NM districts on Page 8.

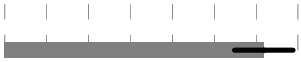
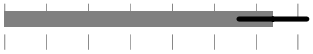
Table 39

By maternal characteristic	Percent of mothers with late or no prenatal care (0 10 20 30 40 50 60 70)	%	*Lower*	*Upper*
All NM mothers		**29.3**	*27.5*	*31.0*
Age				
15-17		**~~44.4~~**	*~~36.4~~*	*~~52.5~~*
18-19		**38.0**	*31.9*	*44.1*
20-24		**33.5**	*30.3*	*36.7*
25-34		**23.3**	*20.9*	*25.8*
35 +		**23.7**	*18.9*	*28.5*
Ethnicity				
Non-Hispanic White		**21.3**	*18.7*	*24.0*
Native American		**36.3**	*31.2*	*41.4*
Hispanic White		**33.1**	*30.6*	*35.7*
Education				
Less than high school		**43.1**	*39.4*	*46.9*
High school		**29.3**	*26.2*	*32.3*
More than high school		**19.3**	*17.0*	*21.7*
Marital status				
Married		**21.6**	*19.6*	*23.7*
Not married		**38.1**	*35.3*	*40.9*
Any previous live birth				
No		**27.5**	*24.8*	*30.2*
Yes		**30.4**	*28.2*	*32.7*
Residence				
Central: District 1 urban		**23.6**	*20.3*	*26.9*
Northeast: District 2		**32.8**	*29.2*	*36.4*
Southwest: District 3		**29.5**	*25.9*	*33.1*
Southeast: District 4		**30.7**	*27.1*	*34.2*
Northwest: District 1 rural		**39.0**	*34.8*	*43.3*
Public assistance				
No		**26.0**	*24.1*	*27.9*
Yes		**40.0**	*36.0*	*43.9*
Payer of prenatal care				
IHS w/wo Medicaid/insurance		**36.7**	*29.9*	*43.5*
Medicaid w/wo insurance; no IHS		**34.3**	*31.6*	*37.0*
Insurance only		**15.9**	*13.5*	*18.2*
None		**44.7**	*39.3*	*50.1*

Adequate prenatal care (APNCU or Kotelchuck Index)

Source: NM PRAMS and Vital Records (VR), from NM residents with in-state birth, years 2001-2002. Estimates may differ from VR report. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Data available for 2979 of 3161 respondents, population=48821 of 52072. Sample and weighted numbers, methods and variable definitions are in Appendix. Map of NM districts on Page 8.

Table 40

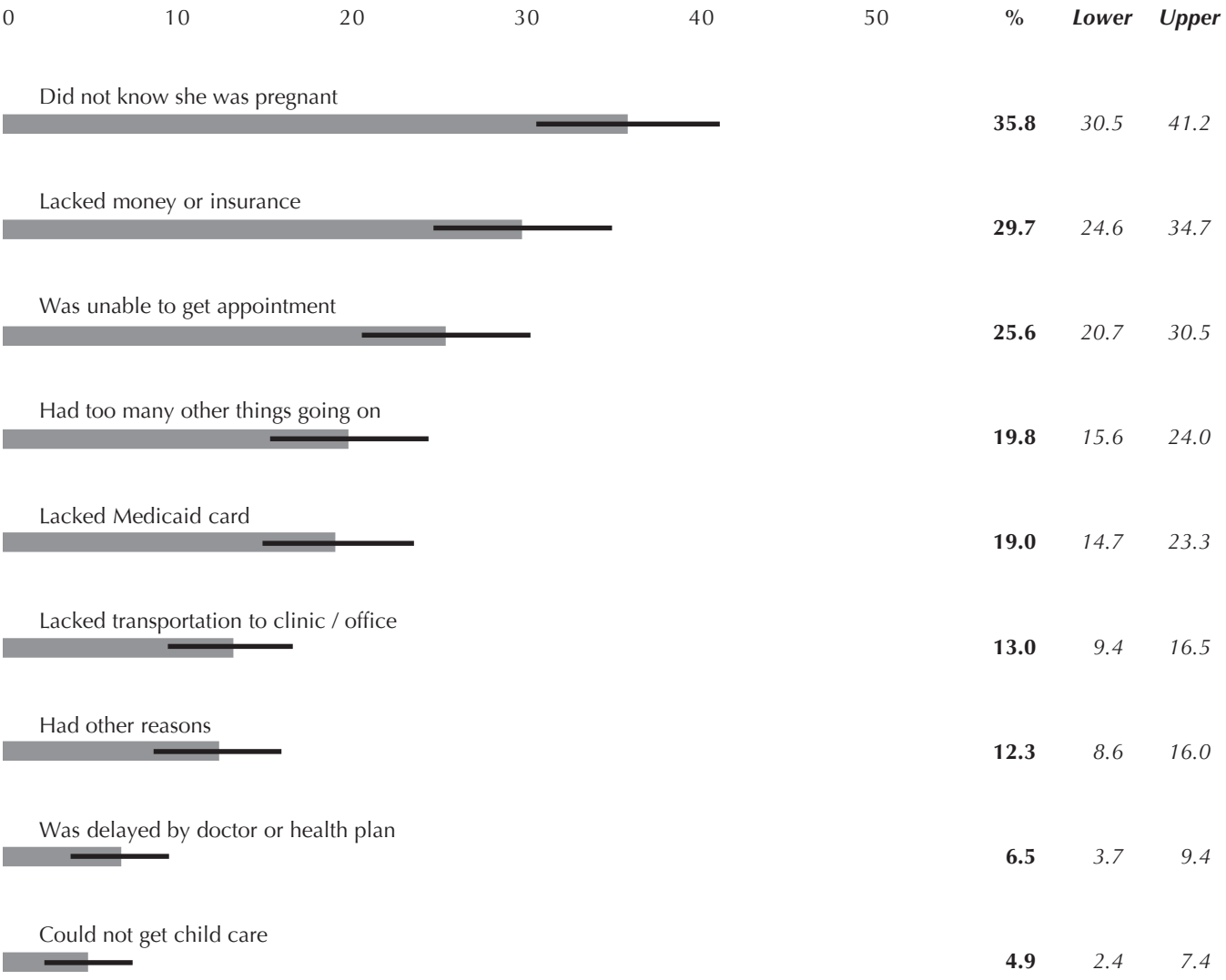
By maternal characteristic	Percent of women with adequate prenatal care			
	0 5 10 15 20 25 30 35 40 45 50 55 60	%	*Lower*	*Upper*
All NM women		**32.0**	*30.3*	*33.8*
Age				
15-17		**30.2**	*22.9*	*37.6*
18-19		**26.4**	*21.0*	*31.8*
20-24		**33.5**	*30.2*	*36.7*
25-34		**33.3**	*30.5*	*36.1*
35 +		**29.9**	*24.6*	*35.1*
Ethnicity				
Non-Hispanic White		**34.8**	*31.6*	*37.9*
Native American		**35.0**	*30.0*	*39.9*
Hispanic White		**29.6**	*27.2*	*32.1*
Education				
Less than high school		**27.4**	*24.1*	*30.8*
High school		**31.9**	*28.8*	*35.0*
More than high school		**35.7**	*32.8*	*38.6*
Marital status				
Married		**33.5**	*31.1*	*35.9*
Not married		**30.3**	*27.7*	*33.0*
Any previous live birth				
No		**35.2**	*32.2*	*38.1*
Yes		**30.1**	*27.8*	*32.3*
Residence				
Central: District 1 urban		**30.9**	*27.4*	*34.4*
Northeast: District 2		**33.2**	*29.6*	*36.8*
Southwest: District 3		**31.9**	*28.2*	*35.5*
Southeast: District 4		**34.2**	*30.6*	*37.8*
Northwest: District 1 rural		**32.0**	*28.0*	*36.1*
Public assistance				
No		**34.2**	*32.1*	*36.2*
Yes		**25.1**	*21.8*	*28.5*
Payer of prenatal care				
IHS w/wo Medicaid/insurance		**37.7**	*30.9*	*44.5*
Medicaid w/wo insurance; no IHS		**30.2**	*27.6*	*32.8*
Insurance only		**34.3**	*31.2*	*37.4*
None		**29.4**	*24.5*	*34.4*

Reasons for late prenatal care

Source: NM PRAMS and Vital Records, from NM residents with in-state birth, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Data were available for 360 respondents, population = 5986.
Sample and weighted numbers, methods and variable definitions are in Appendix.
Map of NM districts precedes this section on Page 8.

Table 41

Among women who had late or no PNC and did not start as early as desired, reasons for delay



	%	*Lower*	*Upper*
Did not know she was pregnant	**35.8**	*30.5*	*41.2*
Lacked money or insurance	**29.7**	*24.6*	*34.7*
Was unable to get appointment	**25.6**	*20.7*	*30.5*
Had too many other things going on	**19.8**	*15.6*	*24.0*
Lacked Medicaid card	**19.0**	*14.7*	*23.3*
Lacked transportation to clinic / office	**13.0**	*9.4*	*16.5*
Had other reasons	**12.3**	*8.6*	*16.0*
Was delayed by doctor or health plan	**6.5**	*3.7*	*9.4*
Could not get child care	**4.9**	*2.4*	*7.4*

Topics discussed with a prenatal healthcare worker

Source: NM PRAMS and Vital Records, from NM residents with in-state birth, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval. Data available for 3161 respondents, population = 52072.
Sample and weighted numbers, methods and variable definitions are in Appendix.
Map of NM districts precedes this section on Page 8.

Table 42

Percent of women recalling that a prenatal healthcare worker talked with them about

	%	*Lower*	*Upper*
Breastfeeding	**87.3**	*86.0*	*88.6*
Medicines that are safe during pregnancy	**86.5**	*85.2*	*87.8*
Birth control methods to use after pregnancy	**84.6**	*83.2*	*85.9*
Doing tests to screen for birth defects in the family	**83.7**	*82.3*	*85.1*
What to do for early labor	**82.1**	*80.7*	*83.6*
Getting a blood test for HIV	**81.8**	*80.4*	*83.3*
How mother's use of alcohol during pregnancy could affect the baby	**73.8**	*72.2*	*75.5*
How mother's smoking during pregnancy could affect the baby	**73.1**	*71.4*	*74.7*
How illegal drugs could affect the baby	**67.8**	*66.0*	*69.5*
Using a seatbelt during pregnancy	**56.3**	*54.4*	*58.2*
Physical abuse to women by their husbands or partners	**48.0**	*46.1*	*49.9*

Payer of healthcare

Related chapters discuss prenatal care and services.

PRAMS asks about payer of healthcare for the period just before pregnancy, prenatal care and for delivery. For preconception payer, PRAMS asks about Medicaid and insurance, omitting Indian Health Service (IHS). For each time period, respondents may select more than one payer.

Public health importance

Medicaid is a joint federal and state program that pays for healthcare to New Mexicans who are eligible for Medicaid benefits.[1]

Pregnant women may apply for pregnancy-related Medicaid, which covers medical conditions related to pregnancy, delivery, post-partum care and family planning. For pregnant women in Medicaid Category 35,[2] two of the three managed care organizations (Lovelace and Molina) also provide comprehensive care. Medicaid classifies labor and delivery as an emergency and covers these conditions (excluding scheduled C-sections) for undocumented immigrants. Timely prenatal care is facilitated by Presumptive Eligibility Medicaid On Site Application Assistance (MOSAA), which allows some medical providers to begin the eligibility process in their office or clinic.

In 1999-2000, the NM Vital Records' linked birth-Medicaid study found that Medicaid paid for 49% of NM deliveries.[3]

Figure 18

Percent of women with preconception healthcare paid by

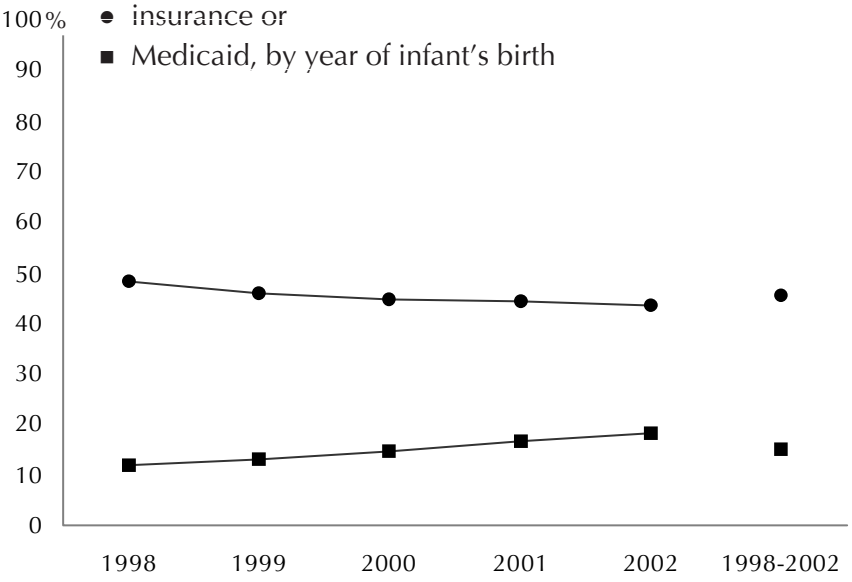


Table 43

% with insurance		
Year	**%**	**±**
1998	**48.3**	*3.5*
1999	**46.0**	*2.8*
2000	**44.5**	*2.5*
2001	**44.2**	*2.6*
2002	**43.5**	*2.5*
1998-2002	**45.3**	*1.3*
% with Medicaid for preconception care		
Year	**%**	**±**
1998	**11.9**	*2.4*
1999	**13.1**	*1.9*
2000	**14.7**	*1.9*
2001	**16.4**	*2.0*
2002	**18.3**	*2.0*
1998-2002	**14.9**	*0.9*

NM PRAMS findings

The percentage of women with Medicaid before pregnancy rose from 12% in 1998 to 18% in 2002 (Table 43 / Figure 18). Design of the survey questions restricts comparing information about payer of preconception care with data on prenatal care or delivery (see Appendix, Methodology). For prenatal care, the distribution by payer appears stable over the five-year average: 89% of women had either Medicaid, insurance, or IHS; 48% had Medicaid; 42% had insurance or HMO; and 7.4% had IHS (Table 44 / Figure 19). For delivery, on average from 1998-2002, 92% had at least one of the three payers: 53% had Medicaid, 41% had insurance, and 5.5% had IHS (Table 45 / Figure 20).

Action in NM

See chapters on prenatal care and on services.

Figure 19

Percent of women with prenatal care paid by Medicaid, by infant's year of birth

- ◆ with any of the 3 payers
- ■ with Medicaid
- ● with insurance for PNC
- ▲ with IHS

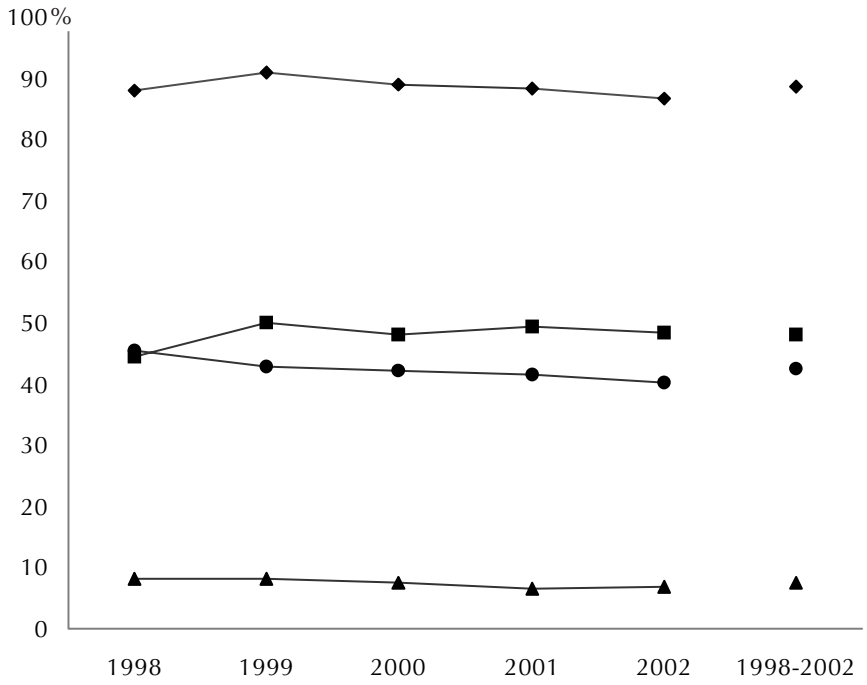


Table 44

% with Medicaid		
Year	**%**	**±**
1998	**44.4**	*3.6*
1999	**49.9**	*2.8*
2000	**48.1**	*2.6*
2001	**49.4**	*2.7*
2002	**48.3**	*2.6*
1998-2002	**48.0**	*1.3*

% with insurance for PNC		
Year	**%**	**±**
1998	**45.3**	*3.5*
1999	**42.9**	*2.8*
2000	**42.3**	*2.5*
2001	**41.5**	*2.6*
2002	**40.3**	*2.5*
1998-2002	**42.4**	*1.3*

% with IHS		
Year	**%**	**±**
1998	**8.3**	*0.7*
1999	**8.1**	*1.1*
2000	**7.4**	*1.4*
2001	**6.5**	*1.0*
2002	**6.9**	*1.2*
1998-2002	**7.4**	*0.5*

% with any of the 3 payers		
Year	**%**	**±**
1998	**88.0**	*2.5*
1999	**90.8**	*1.7*
2000	**89.1**	*1.7*
2001	**88.2**	*1.8*
2002	**86.5**	*1.8*
1998-2002	**88.5**	*0.8*

Resources

New Mexico Medicaid Program:
Human Services Department, Medical Assistance Division at 1-888-997-2583, http://www.state.nm.us/hsd/mad

The New Mexico Prenatal Care Taskforce includes representatives from the community and managed care organizations. Contact: Maternal, Child, Adolescent and Families Program, NM Department of Health, (505) 476-8908.

Albuquerque Area Indian Health Service, 5300 Homestead Road, NE
Albuquerque, NM 87110
Phone: 505-248-4500, http://www.ihs.gov/FacilitiesServices/AreaOffices/Albuquerque.

References

[1] Pregnant women qualify for pregnancy-related services if family income is at or below 185% of poverty. A woman may get family planning services if family income is at/below 185% FPL. If she is disabled, she might qualify for other services under a disability category.
[2] Category 35 covers prenatal, labor, delivery and postpartum care for pregnant women with family incomes under 185% of the federal poverty level who are not otherwise eligible for Medicaid.
[3] Office of New Mexico Vital Records and Health Statistics. Medicaid paid births: 2003 update. Santa Fe, NM: NM Department of Health, 2003.

Figure 20

Percent of women with these payers for delivery

- ◆ any of the 3 payers
- ■ Medicaid
- ● insurance
- ▲ IHS

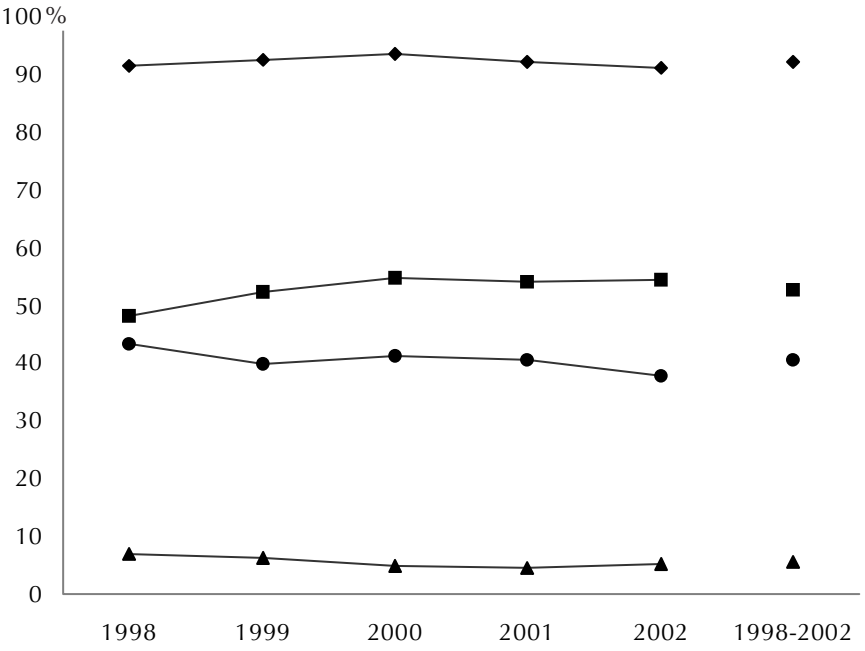


Table 45

% with Medicaid		
Year	**%**	**±**
1998	**48.0**	*3.6*
1999	**52.2**	*2.8*
2000	**54.5**	*2.6*
2001	**53.9**	*2.6*
2002	**54.3**	*2.6*
1998-2002	**52.6**	*1.3*

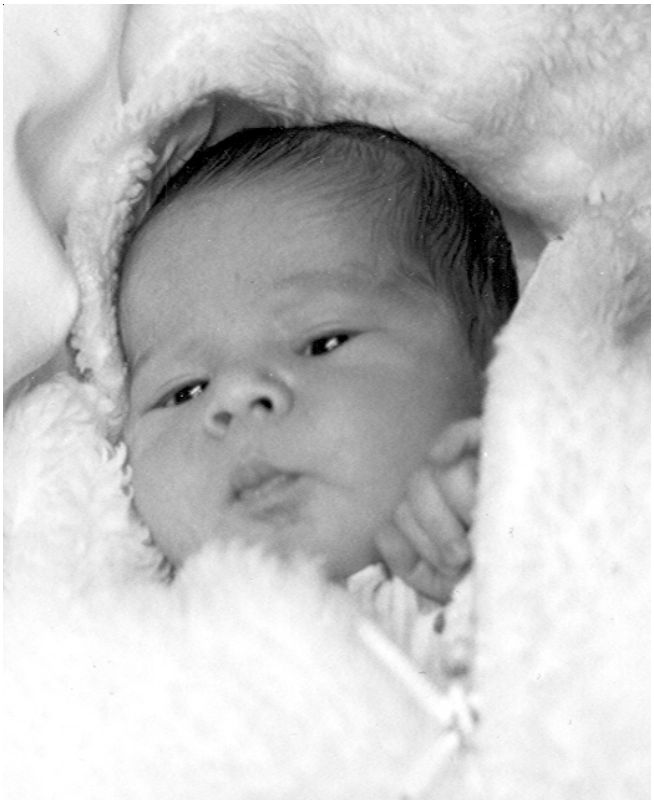
% with insurance		
Year	**%**	**±**
1998	**43.4**	*3.5*
1999	**39.9**	*2.7*
2000	**41.0**	*2.5*
2001	**40.5**	*2.6*
2002	**37.8**	*2.5*
1998-2002	**40.5**	*1.2*

% with IHS		
Year	**%**	**±**
1998	**6.8**	*0.7*
1999	**6.1**	*1.0*
2000	**4.9**	*1.1*
2001	**4.6**	*0.9*
2002	**5.0**	*1.0*
1998-2002	**5.5**	*0.4*

% with any of the 3 payers		
Year	**%**	**±**
1998	**91.3**	*2.1*
1999	**92.5**	*1.5*
2000	**93.5**	*1.3*
2001	**92.2**	*1.5*
2002	**90.9**	*1.5*
1998-2002	**92.1**	*0.7*

Health related services

PRAMS asks about services received during pregnancy or after delivery. This report defined women who could benefit from counseling as those reporting partner abuse or major stressors (see Appendix, Methods).



Public health importance and Action in NM

WIC – The Women, Infants and Children nutrition program (WIC) provides vouchers for healthy foods, nutrition counseling and education and referrals to other services. Clients are nutritionally at-risk infants and children up to age 5, and pregnant or recently delivered women whose income is at or below 185% of the federal poverty level**.** Between 1974 and 2003, the New Mexico WIC Program expanded from 2,144 to 61,000 clients/month**.**

Despite socioeconomic disadvantages, WIC mothers are more likely to begin prenatal care in the first trimester and less likely to bear infants of low birth weight. Moreover, WIC's impact is larger for disadvantaged groups.[1] In a 1992 study, prenatal WIC participation was associated with savings in Medicaid costs during the first 60 days after birth, ranging from $1.77 to $3.13 for every dollar spent.[2] Data from 1996-2001 showed that WIC participation at age 4 decreased the probability that a child was at risk of being overweight.[3]

Figure 21

Percent of women with

- prenatal or
- postpartum WIC services, by year of infant's birth

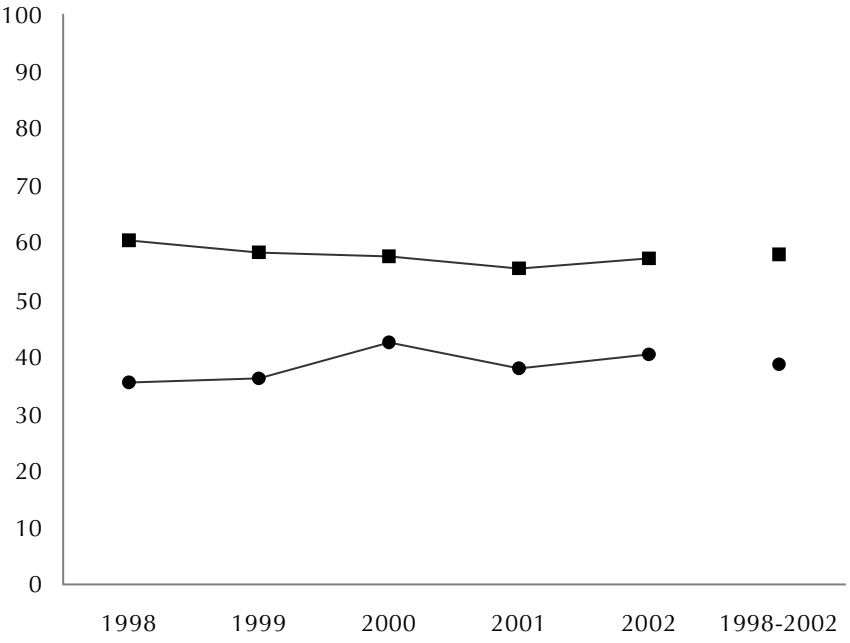


Table 46

% with any prenatal WIC services		
Year	**%**	**±**
1998	**60.5**	*3.4*
1999	**58.1**	*2.7*
2000	**57.6**	*2.5*
2001	**55.4**	*2.6*
2002	**57.1**	*2.6*
1998-2002	**57.7**	*1.3*
% with postpartum WIC classes/groups		
Year	**%**	**±**
1998	**35.5**	*3.4*
1999	**36.2**	*2.7*
2000	**42.3**	*2.6*
2001	**38.0**	*2.6*
2002	**40.2**	*2.5*
1998-2002	**38.4**	*1.2*

The NM WIC Program is the backbone of the statewide Breastfeeding Task Force. In 1991, WIC initiated a project to increase breastfeeding through community task forces, medical and WIC staff, participants and peer counselors. The taskforce issued recommendations for breastfeeding support in hospital, childcare and worksite settings.[4] NM WIC is also doing research on how to teach feeding practices to parents. These efforts may help prevent eating disorders and obesity.

Home visiting

Services vary according to the training of visitors and timing (prenatal or postpartum), duration and frequency of visits. Visitors include nurses, midwives and community health workers from private offices and public agencies. Because of early hospital discharges, these services are especially important. Home visit follow-up after a 24-hour discharge can save about $500 in *net* costs per infant (study in 1996).[5] Comprehensive home visiting programs can improve the home environment or parenting[6] or breastfeeding practices.[7] Some evaluations show benefits such as deferral of subsequent pregnancies,[8] increased maternal employment and prevention of child abuse[9] or decreased duration of welfare use.[10] For low-income families, the cost of home visiting is recovered by reducing overall government spending by $180 per family (study in 1993).[11] NM has few comprehensive programs, but in the border areas, *promotoras* visit pregnant and recently delivered mothers.

Families FIRST

Families FIRST works with Managed Care Organizations and Medicaid. Licensed nurses/social workers provide case management to assess needs and link Medicaid-eligible pregnant women and children with services. Visits may start in the prenatal period and continue until the child is 3 years old. In FY04 (part of 2003 and 2004), the program served 8,994 pregnant women and children.

NM PRAMS findings

In 2002, during the prenatal period, 57% of women had WIC services (Table 46 / Figure 21), 5.3% had home visiting services (Table 47 / Figure 22), 15% percent of women participated in breastfeeding classes or groups (Table 49 / Figure 24), and 18% joined parenting classes or groups (Table 50 / Figure 25). Of those with major stressful experiences, 5% had counseling services (Table 51 / Figure 26).

Figure 22

Percent of women with

- prenatal or
- postpartum home visiting services, by year of infant's birth

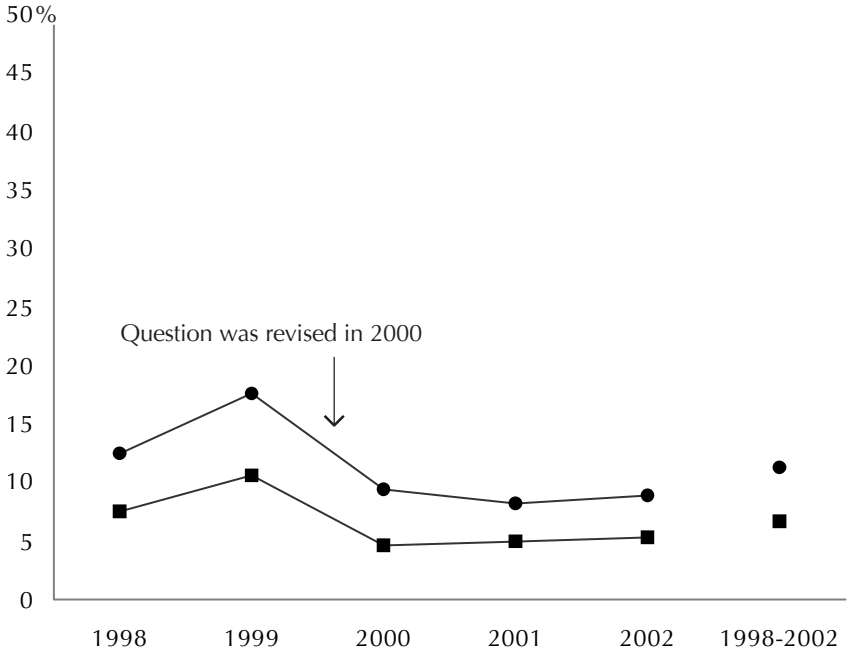


Table 47

% with prenatal home visiting services		
Year	**%**	**±**
1998	**7.6**	*1.9*
1999	**10.5**	*1.7*
2000	**4.6**	*1.0*
2001	**4.9**	*1.1*
2002	**5.3**	*1.2*
1998-2002	**6.6**	*0.6*
% with postpartum home visiting services		
Year	**%**	**±**
1998	**12.5**	*2.2*
1999	**17.6**	*2.1*
2000	**9.4**	*1.5*
2001	**8.2**	*1.4*
2002	**8.9**	*1.5*
1998-2002	**11.3**	*0.8*

Among women with Medicaid as a payer, 13% had prenatal Families FIRST services (Table 48 / Figure 23). Among pregnant teens, 18% had services targeting their age group (Table 52 / Figure 27). These figures and tables also show participation in services during the postpartum period.

During 1998-2002, on average, among women who reported being abused by their partner in the 12 months before or during pregnancy, only 5.4% received prenatal services for protection from family violence;[12] 6.2% of those abused during pregnancy had these services post-partum.[13] Of women who smoked during the 3 months before or during pregnancy, 2.2% attended smoking cessation classes or group,[14] and of those who smoked during the last 3 months of pregnancy or currently, 0.9% had these services.[15]

References

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[7]Morrow AL, Guerrero ML, Shults J, Calva JJ, Lutter C, et al. Efficacy of home-based peer counselling to promote exclusive breastfeeding: a randomised controlled trial. Lancet 1999 Apr 10;353:1226-31.
[8] Kitzman H, Olds DL, Henderson CR Jr, Hanks C, Cole R, Tatelbaum R, McConnochie KM, Sidora K, Luckey DW, Shaver D, Engelhardt K, James D, Barnard K. Effect of prenatal and infancy home visitation by nurses on pregnancy outcomes, childhood injuries and repeated childbearing. A randomized controlled trial. J AMA 1997 Aug 27;278(8):644-52.
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[10] Kitzman H, Olds DL, Sidora K, Henderson CR Jr, Hanks C, Cole R, Luckey DW, BondyJ, Cole K, Glazner J. Enduring effects of nurse home visitation on maternal life course: a 3-year follow-up of a randomized trial. JAMA 2000 Apr 19;283(15):1983-9.
[11] Olds DL, Henderson CR Jr, Phelps C, Kitzman H, Hanks C. Effect of prenatal and infancy nurse home visitation on government spending. Med Care 1993 Feb;31(2):155-74.
[12]95% confidence interval (CI): 3.3%. to 7.4%, no data table.
[13] 95% CI: 3.6%. to 8.8%, no data table.
[14] 95% CI:1.4% to 3.1% , no data table.
[15]95% CI: 0.4 to 1.5%, no data table.

Figure 23

Among women with Medicaid as payer, percent with

- prenatal or
- postpartum Families FIRST services, by year of infant's birth

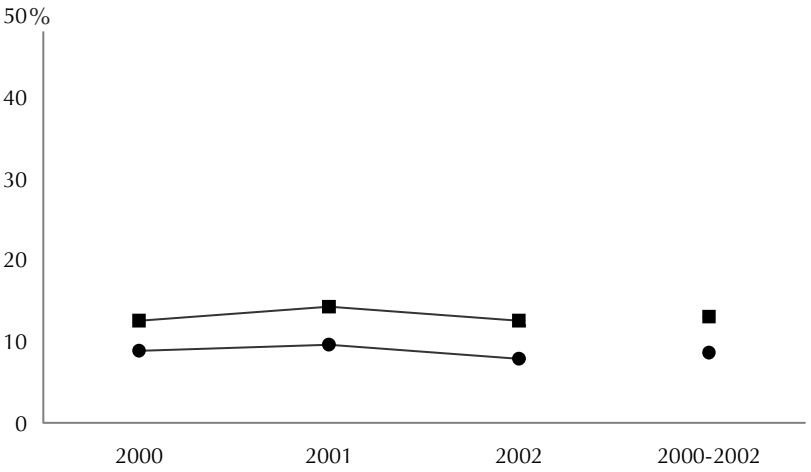

Table 48

% with prenatal FamiliesFirst		
Year	**%**	**±**
2000	**12.5**	*2.5*
2001	**14.1**	*2.3*
2002	**12.6**	*2.3*
2000-2002	**13.1**	*1.3*
% with postpartum FamiliesFirst		
Year	**%**	**±**
2000	**8.8**	*1.9*
2001	**9.6**	*1.9*
2002	**7.8**	*1.7*
2000-2002	**8.7**	*1.1*

Figure 24

Percent of women who participated in

- ■ prenatal or
- ● postpartum breastfeeding classes or groups, by infant's year of birth

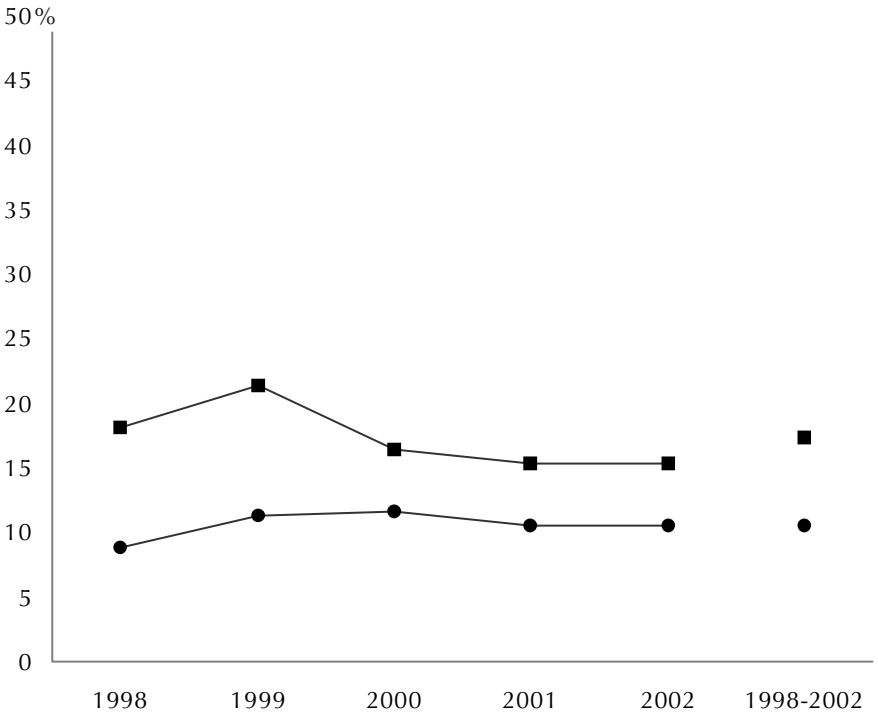

Table 49

% with prenatal classes/groups		
Year	**%**	**±**
1998	**18.2**	*2.7*
1999	**21.3**	*2.2*
2000	**16.5**	*1.9*
2001	**15.3**	*1.8*
2002	**15.4**	*1.8*
1998-2002	**17.3**	*0.9*

% with postpartum classes/groups		
Year	**%**	**±**
1998	**8.9**	*1.9*
1999	**11.3**	*1.7*
2000	**11.6**	*1.6*
2001	**10.5**	*1.6*
2002	**10.5**	*1.6*
1998-2002	**10.6**	*0.8*

Figure 25

Percent of women who participated in

- ■ prenatal or
- ● postpartum parenting classes or groups, by year of infant's birth

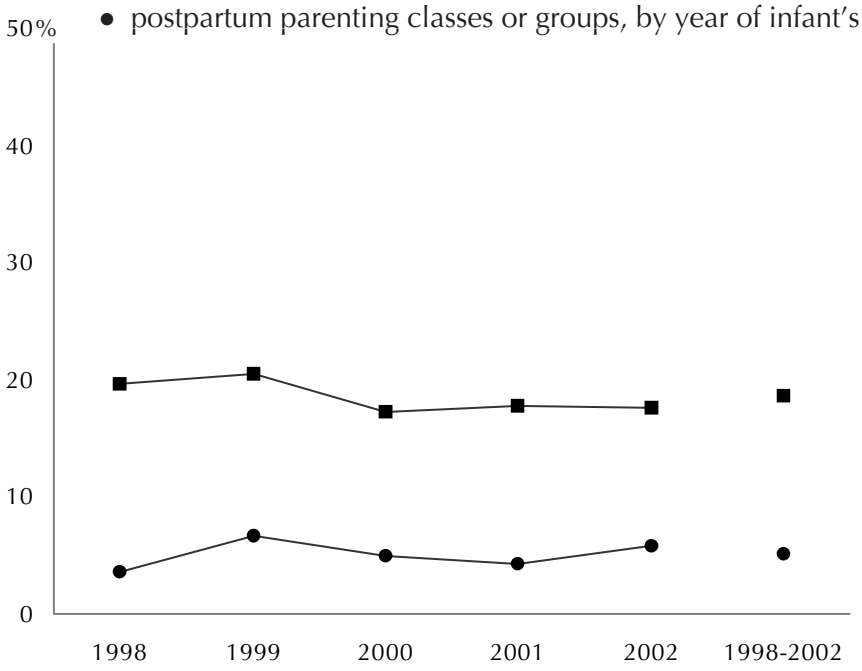

Table 50

% with prenatal parenting classes or groups		
Year	**%**	**±**
1998	**19.6**	*2.8*
1999	**20.4**	*2.2*
2000	**17.2**	*1.9*
2001	**17.8**	*2.0*
2002	**17.6**	*2.0*
1998-2002	**18.5**	*1.0*

% with postpartum parenting classes/groups		
Year	**%**	**±**
1998	**3.6**	*1.3*
1999	**6.6**	*1.4*
2000	**4.9**	*1.1*
2001	**4.3**	*1.0*
2002	**5.8**	*1.2*
1998-2002	**5.1**	*0.5*

Figure 26

Among women who might benefit from counseling, percent with

- prenatal or
- postpartum counseling, by year of infant's birth

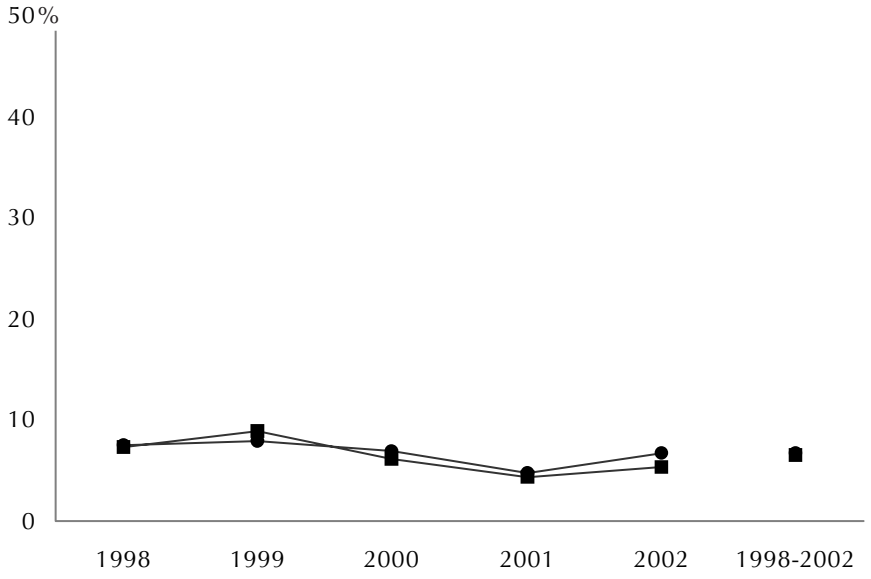

Table 51

% with prenatal counseling services		
Year	**%**	**±**
1998	**7.4**	*3.6*
1999	**9.0**	*1.8*
2000	**6.0**	*1.6*
2001	**4.4**	*1.3*
2002	**5.4**	*1.0*
1998-2002	**6.4**	*0.6*

% with postpartum counseling services		
Year	**%**	**±**
1998	**7.4**	*2.5*
1999	**8.0**	*2.2*
2000	**7.0**	*1.9*
2001	**4.7**	*1.4*
2002	**6.7**	*2.0*
1998-2002	**6.8**	*0.9*

Figure 27

Among pregnant teens, percent with

- prenatal or
- postpartum services for teens, by year of infant's birth

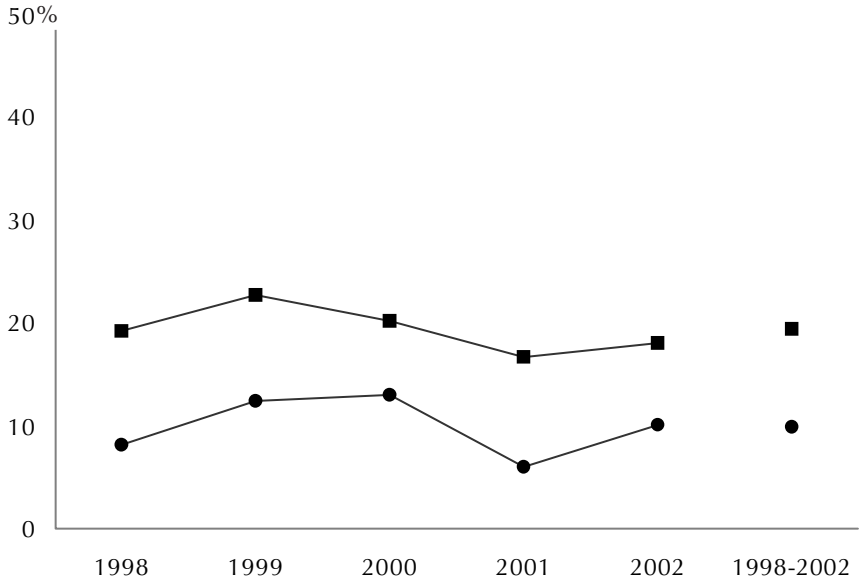

Table 52

% with prenatal services		
Year	**%**	**±**
1998	**19.3**	*6.7*
1999	**22.8**	*5.8*
2000	**20.3**	*5.0*
2001	**16.8**	*4.8*
2002	**18.2**	*5.4*
1998-2002	**19.5**	*2.5*

% with postpartum services		
Year	**%**	**±**
1998	**8.1**	*4.5*
1999	**12.5**	*4.8*
2000	**13.1**	*4.2*
2001	**6.0**	*2.6*
2002	**10.2**	*4.2*
1998-2002	**10.0**	*1.9*

Home visiting services: prenatal

NM PRAMS, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents=3161, population=52072. Sample and weighted numbers, methods and variable definitions are in Appendix.
Map of NM districts on Page 8.

Table 53

By maternal characteristic	Percent of mothers with prenatal home visiting services			
	%	*Lower*	*Upper*
All NM women	**5.1**	*4.3*	*5.9*
Age			
15-17	**11.5**	*6.3*	*16.6*
18-19	**6.7**	*3.9*	*9.4*
20-24	**4.3**	*3.1*	*5.5*
25-34	**4.8**	*3.6*	*6.1*
35 +	**3.4**	*1.5*	*5.3*
Ethnicity			
Non-Hispanic White	**3.3**	*2.1*	*4.4*
Native American	**10.2**	*7.3*	*13.2*
Hispanic White	**4.9**	*3.8*	*6.0*
Education			
Less than high school	**7.7**	*5.8*	*9.7*
High school	**4.9**	*3.6*	*6.3*
More than high school	**3.5**	*2.4*	*4.6*
Marital status			
Married	**3.6**	*2.7*	*4.5*
Not married	**6.9**	*5.6*	*8.3*
Any previous live birth			
No	**5.5**	*4.2*	*6.8*
Yes	**4.9**	*3.9*	*5.9*
Residence			
Central: District 1 urban	**3.5**	*2.2*	*4.8*
Northeast: District 2	**5.1**	*3.4*	*6.7*
Southwest: District 3	**7.1**	*5.0*	*9.1*
Southeast: District 4	**3.7**	*2.3*	*5.2*
Northwest: District 1 rural	**8.8**	*6.3*	*11.3*
Public assistance			
No	**4.5**	*3.7*	*5.4*
Yes	**7.1**	*5.2*	*9.1*
Payer of prenatal care			
IHS w/wo Medicaid/insurance	**11.6**	*7.3*	*15.9*
Medicaid w/wo insurance; no IHS	**5.6**	*4.4*	*6.8*
Insurance only	**2.8**	*1.7*	*4.0*
None	**6.6**	*4.1*	*9.1*

Home visiting services: postpartum

NM PRAMS, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents=3161, population=52072. Sample and weighted numbers, methods and variable definitions are in Appendix.
Map of NM districts on Page 8.

Table 54

By maternal characteristic	Percent of mothers with postpartum home visiting services			
	%	*Lower*	*Upper*
All NM mothers	**8.5**	*7.5*	*9.5*
Age			
15-17	**17.5**	*11.4*	*23.5*
18-19	**11.9**	*8.1*	*15.8*
20-24	**7.9**	*6.1*	*9.8*
25-34	**7.0**	*5.6*	*8.4*
35 +	**7.8**	*4.8*	*10.7*
Ethnicity			
Non-Hispanic White	**6.9**	*5.2*	*8.5*
Native American	**13.2**	*9.9*	*16.5*
Hispanic White	**8.5**	*7.0*	*9.9*
Education			
Less than high school	**11.6**	*9.2*	*13.9*
High school	**8.6**	*6.8*	*10.4*
More than high school	**6.2**	*4.8*	*7.6*
Marital status			
Married	**6.6**	*5.3*	*7.8*
Not married	**10.8**	*9.1*	*12.4*
Any previous live birth			
No	**11.3**	*9.4*	*13.3*
Yes	**6.8**	*5.7*	*8.0*
Residence			
Central: District 1 urban	**7.4**	*5.5*	*9.3*
Northeast: District 2	**11.2**	*8.8*	*13.7*
Southwest: District 3	**10.4**	*8.0*	*12.8*
Southeast: District 4	**4.6**	*3.0*	*6.2*
Northwest: District 1 rural	**10.9**	*8.2*	*13.6*
Public assistance			
No	**7.5**	*6.4*	*8.7*
Yes	**11.7**	*9.2*	*14.2*
Payer of delivery			
IHS w/wo Medicaid/insurance	**14.6**	*9.3*	*20.0*
Medicaid w/wo insurance; no IHS	**9.2**	*7.8*	*10.7*
Insurance only	**6.7**	*5.0*	*8.4*
None	**8.0**	*4.7*	*11.3*

WIC nutrition services during pregnancy

Source: NM PRAMS and Vital Records, from NM residents with in-state birth, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents=3161, referring to population size=52072. Sample and weighted numbers, methods and variable definitions are in Appendix. Map of NM districts on Page 8.

Table 55

By maternal characteristic	Percent of mothers with any prenatal WIC services			
	%	*Lower*	*Upper*
All NM mothers	**56.3**	*54.4*	*58.1*
Age			
15-17	**81.3**	*75.0*	*87.7*
18-19	**78.3**	*73.1*	*83.5*
20-24	**67.5**	*64.3*	*70.7*
25-34	**44.8**	*42.0*	*47.7*
35 +	**35.0**	*29.6*	*40.4*
Ethnicity			
Non-Hispanic White	**34.4**	*31.4*	*37.4*
Native American	**72.9**	*68.3*	*77.5*
Hispanic White	**67.3**	*64.8*	*69.8*
Education			
Less than high school	**77.6**	*74.4*	*80.8*
High school	**64.8**	*61.6*	*68.0*
More than high school	**32.9**	*30.2*	*35.6*
Marital status			
Married	**41.4**	*39.0*	*43.8*
Not married	**73.4**	*70.9*	*76.0*
Any previous live birth			
No	**57.9**	*54.9*	*60.8*
Yes	**55.6**	*53.3*	*58.0*
Residence			
Central: District 1 urban	**46.0**	*42.4*	*49.7*
Northeast: District 2	**53.9**	*50.1*	*57.6*
Southwest: District 3	**67.8**	*64.2*	*71.3*
Southeast: District 4	**68.3**	*64.8*	*71.7*
Northwest: District 1 rural	**60.9**	*56.8*	*65.1*
Public assistance			
No	**48.1**	*46.0*	*50.2*
Yes	**82.8**	*79.8*	*85.8*
Payer of prenatal care			
IHS w/wo Medicaid/insurance	**71.0**	*64.8*	*77.2*
Medicaid w/wo insurance; no IHS	**78.3**	*75.9*	*80.6*
Insurance only	**20.9**	*18.3*	*23.5*
None	**68.1**	*63.2*	*72.9*

Oral health

Prams asks about the care of teeth during pregnancy: whether the mother had a dental problem, went to a dentist or dental clinic or discussed oral hygiene with a dentist or other healthcare worker.

Public health importance

A pregnant woman's oral health affects the woman, her fetus and infant. In pregnant women, periodontal disease, which affects the gums and adjacent bone, is associated with pre-term and/or low birth-weight delivery.[1,2,3] After delivery, infants or young children may develop cavities from maternal oral bacteria.[4]

All health care providers can promote oral health through oral examinations; advising patients about oral hygiene, diet and smoking cessation; and by making referrals to oral health practitioners.[5] Access to oral health services during pregnancy may be constrained by the American Dental Association recommendations to avoid elective dental care during the first trimester and last half of the third trimester.[6]

In four PRAMS states, among mothers who reported having a dental problem, about one-half did not go for care.[7]

NM PRAMS findings

In 2002, 25% of mothers recalled discussion of oral hygiene during prenatal care (Table 56 / Figure 28), 13% had a dental problem and 33% had dental care (Table 57 / Figure 29). Among women with a dental problem, 56% had dental care (Table 58 / Figure 30). In 2001-2002, women who were more likely to have dental care included those with insurance, without public assistance or with more than high school education. Use of oral health services differed by maternal residence (Table 60).

Action in NM

In 2002, 24 of 33 NM Counties were classified as full or partial dental health professional shortage areas.[8] Senate Joint Memorial 21 offers proposals for improved access to oral health care to guide the New Mexico Oral Health Council, which includes members of the oral health care delivery system, the NM Dental Association and consumers. The Office of Dental Health of the New Mexico Department of Health (NMDOH) educates the public, Head Start staff, and *promotoras* (lay prenatal health workers) about dental care. The office is also working to arrange Medicaid payment for dental care of pregnant women and to integrate oral health activities with other programs, such as case management in Families FIRST.

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[1] Champagne CM, Madianos PN, Lieff S, Murtha AP, Beck JD, Offenbacher S. Periodontal Medicine: emerging concepts in pregnancy outcomes. J Int Acad Periodontol. 2000;2:9-13.
[2] Champagne CM, Madianos PN, Lieff S, Murtha AP, Beck JD, Offenbacher S. Periodontal Medicine: emerging concepts in pregnancy outcomes. J Int Acad Periodontol. 2000;2:9-13.
[3] Jeffcoat MK, Geurs NC, Reddy MS, Cliver SP, Goldenerg RL, Hauth JC. Periodontal infection and preterm birth: results of a prospective study.J Am Dent Assoc. 2001;132:875-80.
[4] Tanzer JM, Livingston J, Thompson AM. The microbiology of primary dental caries in humans. J Dent Educ 2001;65:1028-37.
[5] U.S. Department of Health and Human Services. *Oral Health in America: A Report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000.
[6] American Dental Association. *Women's oral health issues*. Chicago: American Dental Association, 1995.
[7] In NM, 44.7%; in Louisiana, 54.1%; and in Illinois, 54.9%. Gaffield ML, Colley Gilbert B, Malvitz DM, Romaguera P. Oral health during pregnancy: an analysis of information collected by the Pregnancy Risk Assessment Monitoring System. JADA 2001;132:1009-1016.
[8] NM Health Policy Commission. Quick Facts 2003, Health Care in New Mexico. Santa Fe, NM: 2003, p. 55. http://hpc.state.nm.us/Reports/Quickfacts_2003.pdf accessed 2/18/2005.

Figure 28

Percent of women whose prenatal healthcare worker discussed how to care for the teeth and gums, by year of infant's birth

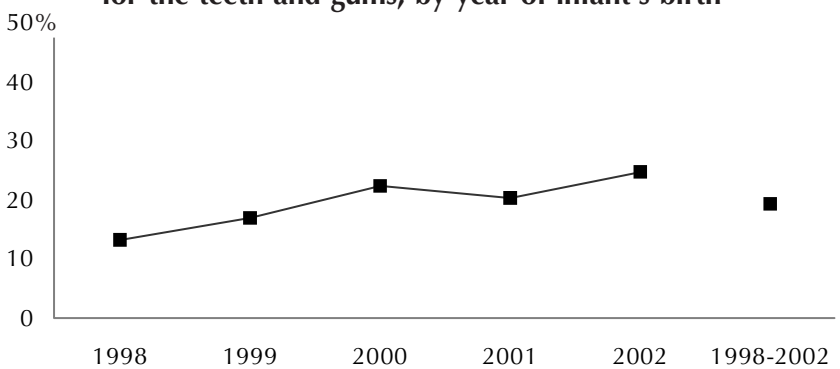


Table 56

% with discussion about teeth and gums		
Year	**%**	**±**
1998	**13.0**	*2.4*
1999	**16.8**	*2.1*
2000	**22.2**	*2.1*
2001	**20.3**	*2.1*
2002	**24.6**	*2.3*
1998-2002	**19.4**	*1.0*

Figure 29

Percent of women who had

- ▲ a dental problem
- ■ dental care, by year of infant's birth

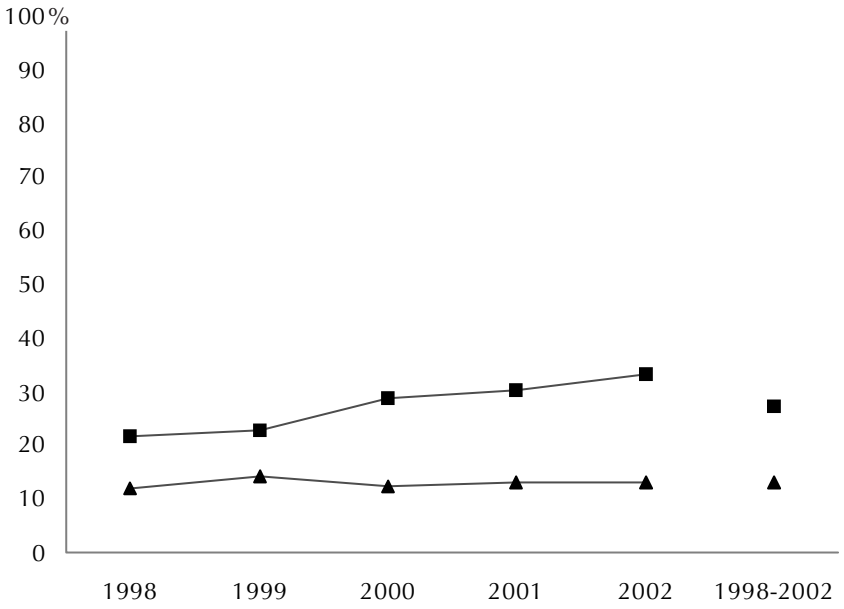


Table 57

% who had a dental problem		
Year	**%**	**±**
1998	**11.9**	*2.3*
1999	**14.2**	*2.0*
2000	**12.3**	*1.7*
2001	**13.2**	*1.8*
2002	**12.9**	*1.8*
1998-2002	**12.9**	*0.9*

% who had dental care		
Year	**%**	**±**
1998	**21.5**	*2.9*
1999	**22.7**	*2.3*
2000	**28.7**	*2.3*
2001	**30.2**	*2.5*
2002	**33.2**	*2.5*
1998-2002	**27.1**	*1.1*

Figure 30

Among women who had a dental problem, percent who had dental care

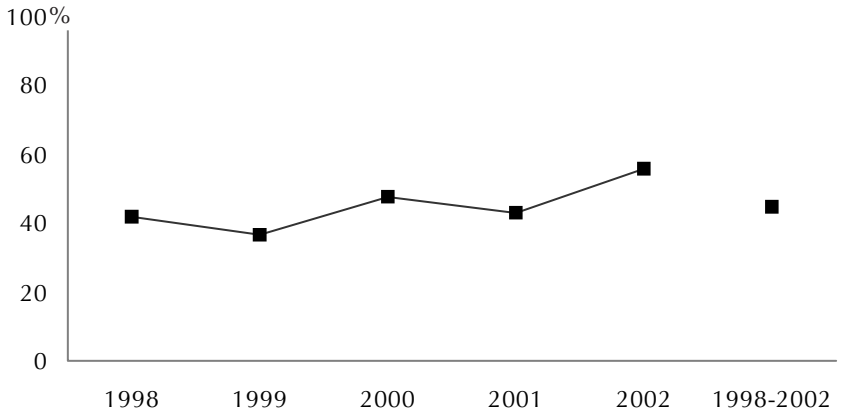


Table 58

Among those with dental problem, % who had dental care		
Year	**%**	**±**
1998	~~**42.0**~~	~~*10.4*~~
1999	**36.4**	*7.2*
2000	**47.6**	*7.3*
2001	**43.1**	*7.3*
2002	**55.9**	*7.2*
1998-2002	**44.9**	*3.6*

Prenatal discussion about oral health

NM PRAMS, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents=3161, population size=52072. Sample and weighted numbers, methods and variable definitions are in Appendix.
Map of NM districts on Page 8.

Table 59

By maternal characteristic	Percent of mothers who recalled that their dentist or healthcare worker talked about care of the teeth and gums			
	%	*Lower*	*Upper*
All NM mothers	**22.5**	*20.9*	*24.0*
Age			
15-17	**29.2**	*22.1*	*36.3*
18-19	**23.9**	*18.8*	*29.1*
20-24	**22.7**	*19.8*	*25.5*
25-34	**20.8**	*18.5*	*23.1*
35 +	**22.5**	*17.7*	*27.3*
Ethnicity			
Non-Hispanic White	**24.2**	*21.4*	*27.0*
Native American	**26.6**	*22.0*	*31.1*
Hispanic White	**20.0**	*17.9*	*22.1*
Education			
Less than high school	**20.5**	*17.6*	*23.5*
High school	**21.4**	*18.7*	*24.1*
More than high school	**25.0**	*22.4*	*27.5*
Marital status			
Married	**22.9**	*20.8*	*25.0*
Not married	**21.9**	*19.6*	*24.3*
Any previous live birth			
No	**25.5**	*22.8*	*28.1*
Yes	**20.7**	*18.7*	*22.6*
Residence			
Central: District 1 urban	**22.3**	*19.3*	*25.3*
Northeast: District 2	**22.8**	*19.7*	*26.0*
Southwest: District 3	**24.6**	*21.3*	*27.9*
Southeast: District 4	**19.5**	*16.6*	*22.4*
Northwest: District 1 rural	**23.4**	*19.7*	*27.0*
Public assistance			
No	**21.5**	*19.8*	*23.2*
Yes	**25.7**	*22.2*	*29.1*
Payer of prenatal care			
IHS w/wo Medicaid/insurance	**30.4**	*24.0*	*36.8*
Medicaid w/wo insurance; no IHS	**20.4**	*18.2*	*22.6*
Insurance only	**26.0**	*23.3*	*28.8*
None	**15.8**	*12.0*	*19.7*

Oral health services during pregnancy

NM PRAMS, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents=3161, population size=52072. Sample and weighted numbers, methods and variable definitions are in Appendix.
Map of NM districts on Page 8.

Table 60

By maternal characteristic	Percent of mothers who went to a dentist or dental clinic during pregnancy			
	%	*Lower*	*Upper*
All NM mothers	**31.7**	*30.0*	*33.4*
Age			
15-17	**30.6**	*23.3*	*37.8*
18-19	**24.5**	*19.3*	*29.7*
20-24	**24.9**	*22.0*	*27.9*
25-34	**35.1**	*32.3*	*37.8*
35 +	**43.3**	*37.7*	*49.0*
Ethnicity			
Non-Hispanic White	**42.7**	*39.5*	*45.9*
Native American	**24.8**	*20.3*	*29.3*
Hispanic White	**25.7**	*23.4*	*28.0*
Education			
Less than high school	**19.5**	*16.5*	*22.5*
High school	**26.3**	*23.4*	*29.2*
More than high school	**45.6**	*42.7*	*48.6*
Marital status			
Married	**37.9**	*35.5*	*40.3*
Not married	**24.5**	*22.1*	*27.0*
Any previous live birth			
No	**34.1**	*31.2*	*37.0*
Yes	**30.2**	*28.0*	*32.4*
Residence			
Central: District 1 urban	**37.0**	*33.5*	*40.5*
Northeast: District 2	**37.0**	*33.4*	*40.6*
Southwest: District 3	**29.6**	*26.2*	*33.1*
Southeast: District 4	**21.3**	*18.3*	*24.3*
Northwest: District 1 rural	**25.5**	*21.8*	*29.2*
Public assistance			
No	**34.0**	*32.0*	*36.0*
Yes	**24.0**	*20.7*	*27.4*
Payer of prenatal care			
IHS w/wo Medicaid/insurance	**27.2**	*21.1*	*33.4*
Medicaid w/wo insurance; no IHS	**22.6**	*20.3*	*24.9*
Insurance only	**50.2**	*47.0*	*53.4*
None	**15.3**	*11.5*	*19.1*

Infant care

In addition to topics reported in this section, NM PRAMS asks about infant's exposure to cigarette smoke (reported in the chapter on tobacco smoking). Not reported, but available, are whether the infant had his or her first immunizations, whom the mother could count on for social support and other questions related to infant care. Most mothers repond to PRAMS three to four months after delivery. This timing precludes gathering information about the latter half of the child's first year.

Starting with year 2004 births, the NM PRAMS survey asks about people who discouraged mothers from breastfeeding, maternal post-partum feelings suggestive of depression, possession of infant car seats and maternal employment or attendance at school.

I don't think women are getting enough encouragement or support to breastfeed. No one tells them it can be very painful and/or difficult at first. No one talks about how to do it in public – how to pump, what normal, early milk flow is. Not just how many wet diapers they should have; what all the health benefits to mom and baby are; how to breastfeed and bottle feed in combination; how to avoid nipple confusion. – PRAMS mom

Breastfeeding

PRAMS asks mothers if they ever breastfed or pumped milk for their new babies and for how many weeks or months. PRAMS also asks mothers who were working or attending school about workplace policies. Breastfeeding duration estimates are limited to nine weeks because mothers receive the survey between 60 and 120 days postpartum. Indirect estimates are available for longer durations.

Public health importance

Breastfeeding offers health benefits to mothers and children as well as financial benefits to families, employers and payers of health care. Based on evidence for these benefits, the American Academy of Pediatrics (AAP) recommends exclusive breastfeeding for the first six months of life.[1]

Breastfeeding protects infants against respiratory and gastrointestinal infections and may enhance their cognitive development.[2] For premature and low birth weight infants, breast milk affords crucial protection against serious illness and death during the neonatal period.[3] In addition, several studies suggest that breastfeeding may be a protective factor against Sudden Infant Death Syndrome (SIDS).[4, 5] Benefits to mothers include reducing the risks of postpartum blood loss, pre-menopausal breast cancer and ovarian cancer.[6] The Healthy People 2010 goal for breastfeeding initiation is 75%, and the goal for six-month continuation is 50%. According to national estimates, 71% of U.S. mothers initiated breastfeeding in 2003, but only 36.2% continued up to six months.[7]

Breastfeeding is practical and cost-effective. Increased breastfeeding could cut annual health care costs by $3.6 billion in the United States. For non-breastfed infants, national health care costs of treating diarrhea, respiratory syncytial virus and otitis media are estimated at over $1 billion each year. Moreover, formula costs twice as much as supplemental food for the breastfeeding mother. According to a 1997 study, providing infant formula to non-breastfeeding mothers costs $2,665,715 (1993 dollars) in annual federal funds.[8] Each breastfed infant enrolled in WIC saved $478 monthly in WIC and Medicaid expenditures (1993 dollars) during the first 6 months of life.[9] In addition, employers in the private sector can increase revenues by supporting breastfeeding or pump

ing (saving breast milk) in the workplace. One company reported a return of almost 3 to 1 on its investment in prenatal classes, access to pumping rooms and conferences with lactation consultants.[10]

Literature regarding breastfeeding promotion reveals that, for low-income women, volunteer peer-counseling is very effective.[11] Women enrolled in WIC experience higher rates of breastfeeding continuation when peer-counseling programs are introduced.[12] Other factors related to breastfeeding initiation or continuation include perceived approval or disapproval by friends and family, sleeping arrangements, ethnicity and education.[13, 14]

NM PRAMS findings

Eighty-two percent of NM mothers initiated breastfeeding in 2002, surpassing the Healthy People 2010 goal of 75%.[15] This means that in 2002, at least 4,000 mothers never started breastfeeding.[16] Only 58% of all mothers continued breastfeeding for nine weeks (Table 63 / Figure 33). Among women who started, 70% continued for at least nine weeks (Table 64 / Figure 34).

In 2001-2002, women with high school education or less had a considerably lower initiation rate than those with more than high school education (75% versus 91%), (Table 65). Only 78% of Hispanic mothers initiated breastfeeding compared with 84% of Native Americans or 85% of non-Hispanic whites. Similar disparities appeared for continuation (Table 66). Married women were more likely to initiate or continue breastfeeding than unmarried women. Although initiation rates did not differ markedly for mothers 15-24 years old, women ages 25 or more appeared more likely to continue. Mothers in Public Health District 4 (southeast NM), were least likely to breastfeed: 71% of mothers initiated breastfeeding and

Breastfeeding behavior among mothers neither working nor in school, birth years 2001-2002 combined

Figure 31

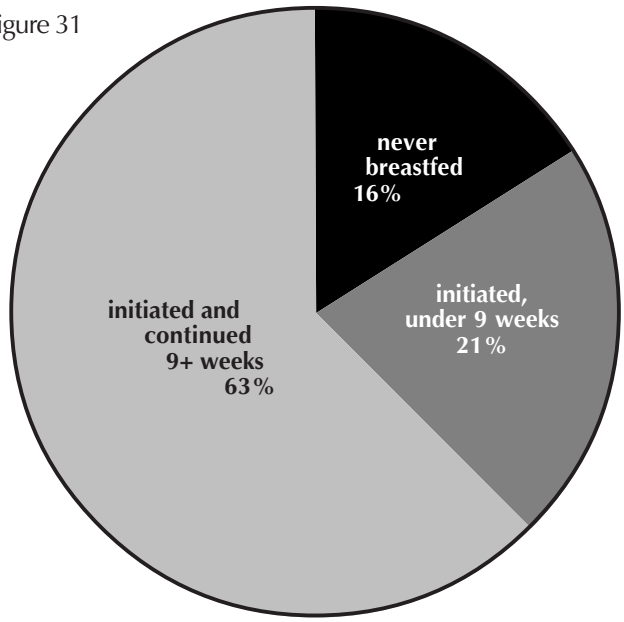


Table 61

Breastfeeding behavior among mothers not working or in school (n=1586)	%	±
Never breastfed	**16.1**	*2.0*
Initiated, under 9 weeks	**21.3**	*2.2*
Initiated & continued 9+ weeks	**62.6**	*2.6*

Breastfeeding behavior among mothers working or in school, birth years 2001-2002 combined

Figure 32

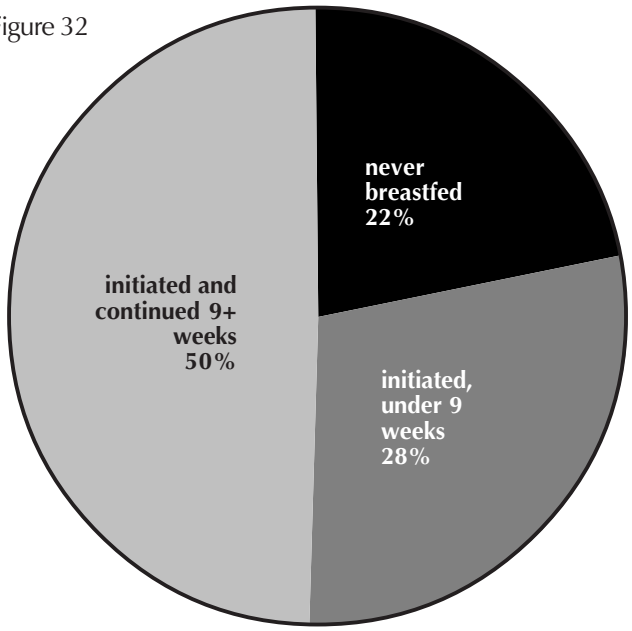


Table 62

Breastfeeding behavior among mothers working or in school (n=1515)	%	±
Never breastfed	**22.1**	*2.3*
Initiated, under 9 weeks	**28.3**	*2.5*
Initiated & continued 9+ weeks	**49.7**	*2.8*

only 56% of those continued for at least nine weeks.

Among WIC participants, 78% initiated breastfeeding compared to 85% of non-WIC mothers. At 9 weeks, among mothers who started breastfeeding, only 64% of WIC participants v. 76% of non-WIC mothers were still breastfeeding.[17] More analysis is required to understand how ethnicity, education and income-level influence these rates.

Breastfeeding in the workplace presents challenges for many New Mexican women. Although initiation of breastfeeding rates were similar, continuation for at least 9 weeks was less likely among women who were working or attending school (50% – Table 62 / Figure 32) than those who were not (63% – Table 61 / Figure 31). For women who were allowed to keep a baby at work, 62% reported breastfeeding for at least nine weeks, but among women not allowed to keep their babies at work, less than 49% continued (Figure 35). Womenwhose employers permitted nursing during break time were more likely to continue breastfeeding than those not permitted (56% v. 50%). Among mothers who were allowed to pump during breaks, 62% continued, compared to 43% of mothers who were not allowed (Figure 37). Clearly, mothers require more support in the workplace if they are to prolong breastfeeding.

Action in NM

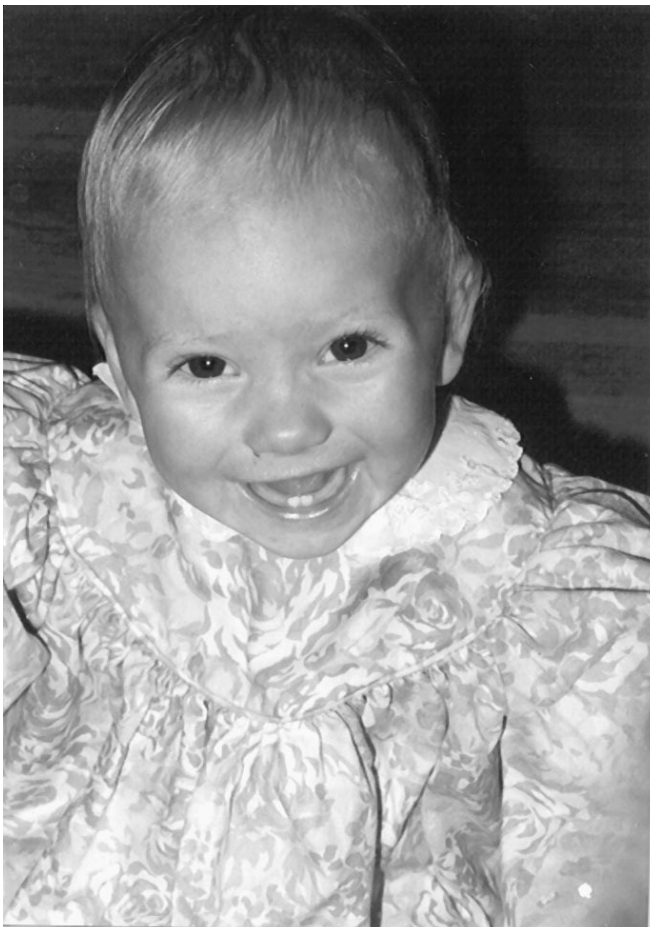
In 1991, WIC initiated a project to increase breastfeeding through community task forces, education of WIC staff and participants and training and use of peer counselors.

The **NM WIC Program** provides all pregnant and breastfeeding women with individual counseling and group facilitated education;

- Offers breast pumps and other supplies to breastfeeding women;
- Provides electric pumps and other specialized equipment to mothers who need them;
- Trains health care professionals and lay counselors in free "Breastfeeding Basics" work shops;
- Runs a Peer Counselor Project, where an experienced WIC breastfeeding mother helps and supports a new breast-feeding WIC client.

The **NM Breastfeeding Task Force**, a committee of the NM Pediatric Society, sponsors:[18]

- Legislation and policies to support breastfeeding in the worksite. In 2000, the NM legislature passed a law making it legal for mothers to breastfeed in public places.[19] The Task Force has developed guidelines and technical assistance for businesses and employers to implement this law.
- The "Just Say No" campaign, which encourages hospitals and clinics not to distribute formula companies' gift packs for new parents
- Focus group research in 1993-1994, which produced practical recommendations for breastfeeding support in hospital, childcare and worksite settings



- Technical assistance to providers and employers to enable breastfeeding practice

The NM WIC Program and the NM Breastfeeding Task Force celebrate World Breastfeeding Week each year with events to promote the benefits of breastfeeding among the WIC clients and the public.

Resources

New Mexico WIC Program 505-476-8812
WIC's Strategic Plan for Breastfeeding Promotion
http://www.health.state.nm.us/phd/wic/BF_Promotion.htm

New Mexico Breastfeeding Task Force
http://www.breastfeedingnewmexico.org

American Academy of Pediatrics
http://www.pediatrics.org/cgi/content/full/115/2/496
recommendations for breastfeeding

References

[1] American Academy of Pediatrics, Section on Breastfeeding. Breastfeeding and the use of human milk. Pediatrics 2005;115:496-506. http://www.pediatrics.org/cgi/content/full/115/2/496 accessed 2/8/2005.
[2] Lawrence RA. A review of medical benefits and contraindications to breastfeeding in the United States. Arlington, VA: National Center for Education in Maternal and Child Health, 1997. http://www.ncemch.org accessed 2/25/2005.
[3] Lucas A, Cole TJ. Breast milk and neonatal NEC. Lancet 1990;336:1519-23.
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[5] Gordon AE, Saadi AT, MacKenzie DA, James VS, Elton RA, Weir DM, Busuttil A, Blackwell CC. The protective effect of breast feeding in relation to sudden infant death syndrome (SIDS): II. The effect of human milk and infant formula prepartations on binding of Clostridium perfringens to epithelial cells. FEMS Immunol Med Mircrobiol,1999 Aug;25:167-73.
[6] References cited in Labbok MH. Health sequelae of breastfeeding for the mother. Clin Perinatol 1999 Jun;26(2):491-503, viii-ix.
[7] CDC. Breastfeeding practices: results from the 2003 National Immunization Survey. Atlanta: Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. http://www.cdc.gov/breastfeeding/NIS_data/ accessed 10/28/2004.
[8] Riordan JM. The cost of not breastfeeding: a commentary. J Hum Lact 1997 Jun;13 (2):93-7.
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[10] Reference in Ball TM, Bennett DM. The economic impact of breastfeeding. Pediatric Clinics of North America 2001: 48:253-263. Savings at Aetna studied by Cohen R, Martek MB, Martek RG: Comparison of maternal absenteeism and infant illness rates among breast-feeding and formula-feeding women in two corporations. Am J Health Promotion 1995; 10:148-153.
[11] Bronner Y, Barber T, Miele L. Breastfeeding peer counseling: rationale for the National WIC Survey. J Hum Lact. 2001 May;17(2):135-9.
[12] Schafer E, Vogel MK, Viegas S, Hausafus C. Volunteer peer counselors increase breastfeeding duration among rural low-incomewomen. Birth. 1998 Jun;25(2):101-6.
[13] Rempel LA. Factors influencing the breastfeeding decisions of long-term breastfeeders. J Hum Lact. 2004 Aug;20(3):306-18.
[14] Ball HL. Breastfeeding, bed-sharing and infant sleep. Birth. 2003 Sep;30(3):181-8.
[15] US Department of Health and Human Services. Healthy People 2010: Conference Edition. Washington, DC: US Department of Health and Human Services, Public Health Services;2000. http://www.healthypeople.gov/document accessed 2/28/2005.
[16] Estimated number was 4,495(± 518).
[17] For initiation of breastfeeding, margin of error (95% CI) was 2.1% for WIC or non-WIC mothers; among mothers who initiated and continued for at least 9 weeks, 95% CI was 2.7% for either group.
[18] L'Esperance C, Giles-Pullen S. Supporting women who choose to breastfeed. NM Perinatal Care News 1999;11(3).
[19] NMSA 1978, Section 28-20-1 (1999).

Figure 33

Percent of new mothers who

- ■ initiated breastfeeding or
- ● continued breastfeeding at least 9 weeks, by year of infant's birth

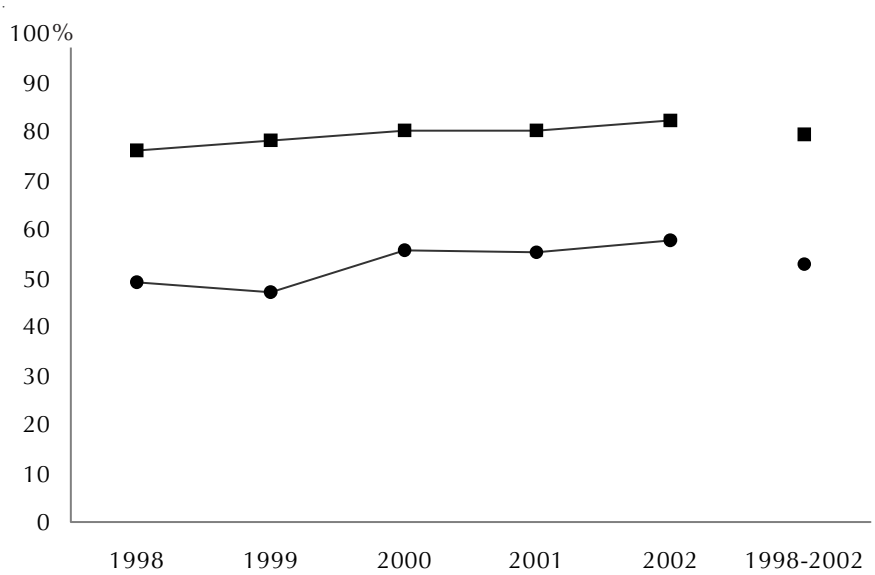


Table 63

% who initiated		
Year	**%**	**±**
1998	**75.8**	*3.2*
1999	**78.1**	*2.4*
2000	**79.9**	*2.1*
2001	**80.1**	*2.2*
2002	**82.0**	*2.1*
1998-2002	**79.2**	*1.1*

% who continued		
Year	**%**	**±**
1998	**49.0**	*3.6*
1999	**47.1**	*2.8*
2000	**55.4**	*2.6*
2001	**55.1**	*2.7*
2002	**57.7**	*2.6*
1998-2002	**52.9**	*1.3*

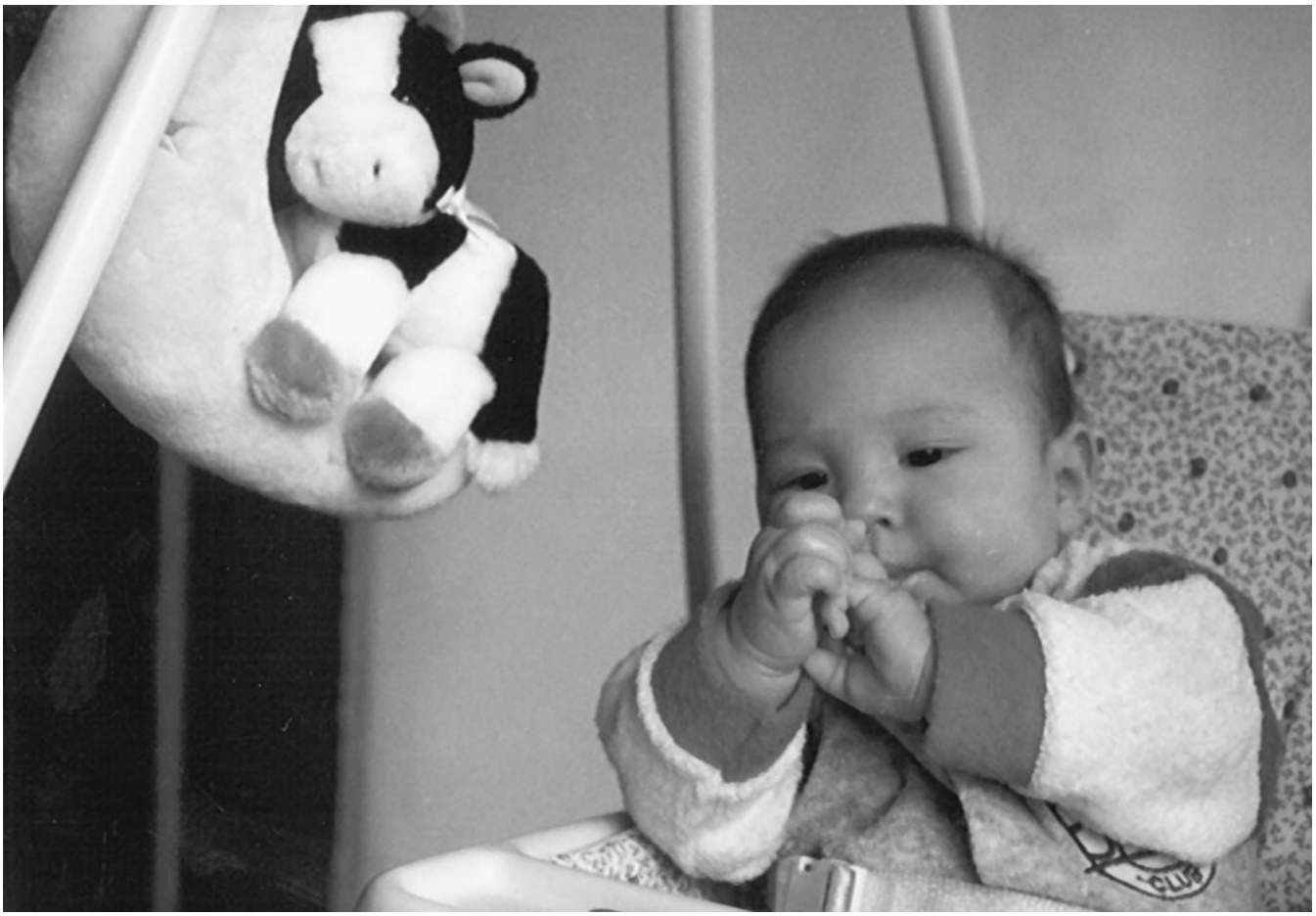


Figure 34

Among new mothers who initiated breastfeeding, percent who continued at least 9 weeks, by year of infant's birth.

Table 64

Among new mothers who initiated breastfeeding, % who continued at least 9 weeks

Year	%	±
1998	**64.6**	*3.9*
1999	**60.3**	*3.1*
2000	**69.4**	*2.7*
2001	**68.8**	*2.8*
2002	**70.4**	*2.7*
1998-2002	**66.8**	*1.4*

Initiation of breastfeeding

NM PRAMS, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents=3161, population size=52072. Sample and weighted numbers, methods and variable definitions are in Appendix.
Map of NM districts on Page 8.

Table 65

By maternal characteristic	Percent of mothers who initiated breastfeeding (0 10 20 30 40 50 60 70 80 90 100)	%	*Lower*	*Upper*
All NM mothers		**81.1**	*79.5*	*82.6*
Age				
15-17		**74.8**	*67.5*	*82.1*
18-19		**78.3**	*73.3*	*83.4*
20-24		**79.5**	*76.6*	*82.3*
25-34		**82.9**	*80.7*	*85.1*
35 +		**85.3**	*81.1*	*89.5*
Ethnicity				
Non-Hispanic White		**84.5**	*82.1*	*87.0*
Native American		**84.2**	*80.3*	*88.0*
Hispanic White		**77.6**	*75.3*	*79.9*
Education				
Less than high school		**74.7**	*71.4*	*78.0*
High school		**75.4**	*72.5*	*78.4*
More than high school		**90.8**	*89.2*	*92.5*
Marital status				
Married		**86.2**	*84.4*	*87.9*
Not married		**75.2**	*72.7*	*77.7*
Any previous live birth				
No		**84.7**	*82.4*	*87.0*
Yes		**79.0**	*77.0*	*81.0*
Residence				
Central: District 1 urban		**81.8**	*78.8*	*84.7*
Northeast: District 2		**86.3**	*83.6*	*89.0*
Southwest: District 3		**81.9**	*78.8*	*84.9*
Southeast: District 4		**70.5**	*67.0*	*74.1*
Northwest: District 1 rural		**84.1**	*80.9*	*87.3*
Public assistance				
No		**84.2**	*82.6*	*85.8*
Yes		**70.9**	*67.3*	*74.6*
Payer of prenatal care				
IHS w/wo Medicaid/insurance		**83.9**	*78.8*	*88.9*
Medicaid w/wo insurance; no IHS		**74.4**	*72.0*	*76.9*
Insurance only		**87.4**	*85.2*	*89.7*
None		**86.1**	*82.2*	*90.0*

Continuation of breastfeeding

NM PRAMS, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents who initiated breastfeeding=2546, population=40230. Sample and weighted numbers, methods and variable definitions are in Appendix. Map of NM districts on Page 8.

Table 66

By maternal characteristic	Among mothers who initiated breastfeeding, percent who continued at least 9 weeks	%	*Lower*	*Upper*
	0 10 20 30 40 50 60 70 80 90 100			
All NM mothers		**69.6**	*67.6*	*71.5*
Age				
15-17		~~**50.4**~~	~~*41.4*~~	~~*59.4*~~
18-19		**65.1**	*58.4*	*71.7*
20-24		**62.8**	*59.1*	*66.5*
25-34		**76.3**	*73.6*	*79.1*
35 +		**75.6**	*70.1*	*81.1*
Ethnicity				
Non-Hispanic White		**73.8**	*70.7*	*76.9*
Native American		**71.0**	*65.8*	*76.2*
Hispanic White		**66.0**	*63.0*	*68.9*
Education				
Less than high school		**62.4**	*58.2*	*66.7*
High school		**62.9**	*59.3*	*66.6*
More than high school		**78.0**	*75.4*	*80.7*
Marital status				
Married		**75.3**	*72.9*	*77.6*
Not married		**62.1**	*58.9*	*65.3*
Any previous live birth				
No		**68.1**	*65.0*	*71.2*
Yes		**71.0**	*68.4*	*73.5*
Residence				
Central: District 1 urban		**72.8**	*69.1*	*76.5*
Northeast: District 2		**76.8**	*73.3*	*80.4*
Southwest: District 3		**68.0**	*63.9*	*72.1*
Southeast: District 4		**55.6**	*51.1*	*60.1*
Northwest: District 1 rural		**68.2**	*63.8*	*72.7*
Public assistance				
No		**71.7**	*69.6*	*73.8*
Yes		**61.5**	*57.0*	*66.1*
Payer of delivery				
IHS w/wo Medicaid/insurance		**73.4**	*65.9*	*80.8*
Medicaid w/wo insurance; no IHS		**63.3**	*60.4*	*66.2*
Insurance only		**76.4**	*73.5*	*79.4*
None		**73.7**	*67.0*	*80.3*

Breastfeeding and workplace policies

Among women who were working or attending school, percent who never breastfed, breastfed fewer than 9 weeks or breastfed at least 9 weeks, by workplace policy.

Source: NM PRAMS and Vital Records, from NM residents with in-state birth, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval. Data available for 2231 of 4776 respondents. Sample and weighted numbers, methods and variable definitions are in Appendix.

Table 67

Workplace policy	Never breastfed		Breastfed fewer than 9 weeks		Breastfed at least 9 weeks	
	%	±	%	±	%	±
Keeping baby at work is						
Allowed	**19.1**	*4.5*	**19.0**	*4.4*	**61.8**	*5.5*
Not allowed	**22.2**	*2.0*	**29.1**	*2.2*	**48.7**	*2.4*
Using break time to nurse is						
Allowed	**19.2**	*3.4*	**24.9**	*3.7*	**55.9**	*4.2*
Not allowed	**22.4**	*2.2*	**28.5**	*2.3*	**49.1**	*2.6*
Using break time to pump is						
Allowed	**14.7**	*2.4*	**23.9**	*2.8*	**61.5**	*3.2*
Not allowed	**27.0**	*2.6*	**30.5**	*2.7*	**42.5**	*2.9*
It is hard to pump or breastfeed						
No	**22.4**	*2.0*	**27.9**	*2.2*	**49.7**	*2.4*
Yes	**17.5**	*4.1*	**26.9**	*4.6*	**55.7**	*5.2*

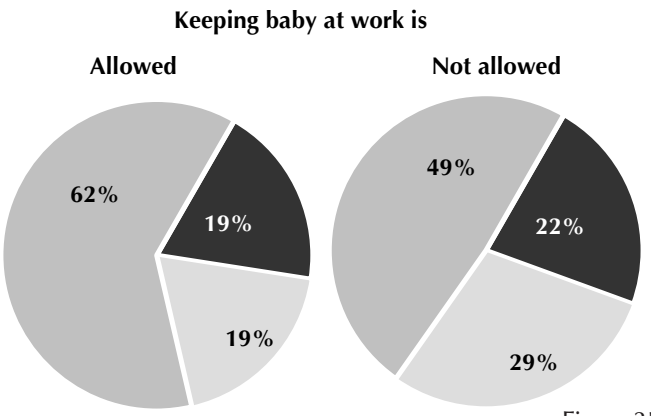


Figure 35

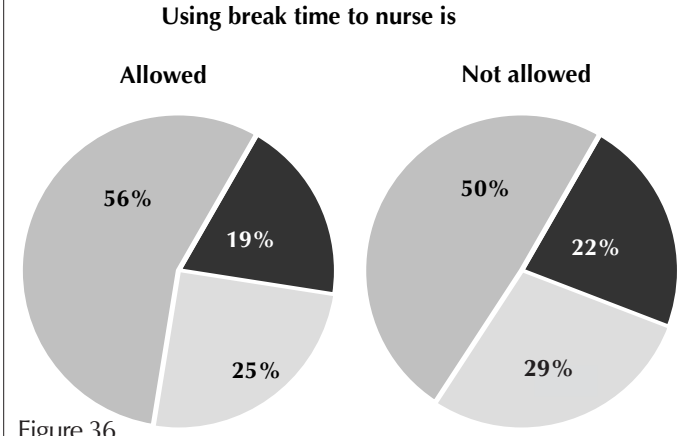


Figure 36

Figure 37

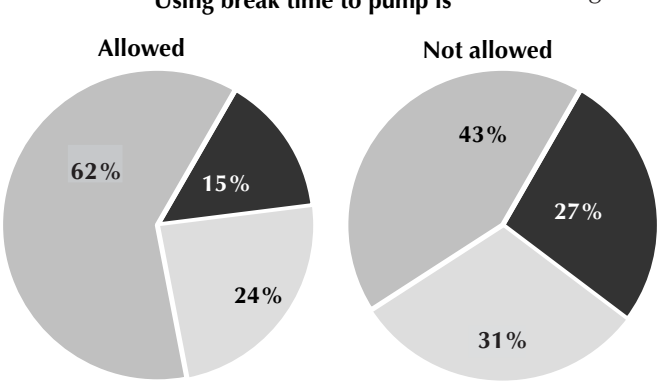
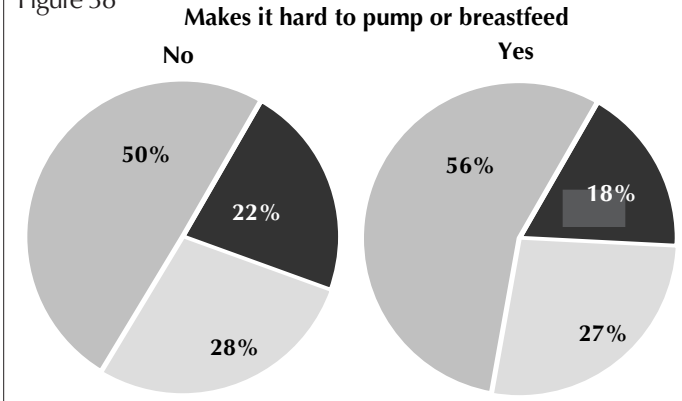


Figure 38



See Table 67 column labels for each section's category.

Infant sleep

PRAMS asks mothers how they put their baby down to sleep most of the time.

Public health importance

SIDS is the 3rd leading cause of all infant death (under 1 year of age) for both NM and US. It was the leading cause of death for the postneonatal period (28 days to under 1 year of age) in NM.[1, 2] In NM, SIDS rates decreased from 161.5 per 100,000 births in 1994 to 54.1 in 2002. For infants who sleep prone (on the stomach), the risk of Sudden Infant Death Syndrome (SIDS) is 3.5 to 9.3 times higher than for infants who sleep on their back, and the side position is also riskier than the back. Maternal smoking, with a 3.3 to 6.0-fold odds of SIDS, is also a major risk factor. Bed sharing is thought to increase the risk of SIDS only if the mother is a smoker. Other modifiable environmental risk factors include soft bedding or over-heating.[3]

Since the back position was recommended in 1992, prone sleeping among US infants decreased from 70% to about 25% in 1996.[4] The rate of SIDS in the US declined from 103.0 in 1994 to 57.1 per 100,000 births in 2002.[5] Among nine PRAMS states, 41.5% to 75.6% of mothers usually placed their infants to sleep on their backs.[6] The Healthy People 2010 objective is to increase the percentage of healthy full-term infants who are put down to sleep on their backs to 70% and to reduce deaths from sudden infant death syndrome (SIDS) to 0.25 deaths per 1,000 live births.

NM PRAMS findings

From 1998 to 2001, use of the back position increased from 45% to 66% (Table 68 / Figure 39). From 2001 to 2002, there was little change. In 2002, approximately 9,000 infants were *not* sleeping on their backs.[7] Mothers with higher education (73% with more than high school v. 66% with high school or 53% with less than high school education) or Native American ethnicity (79% v. 69% of non-Hispanic white or 59% of Hispanics) were more likely to place their infants on their backs (Table 69). The back position was less likely among infants with exposure to tobacco smoke (58% ± 6.4% v 66% ± 1.9% of unexposed – no table).

Action in NM

Past SIDS prevention efforts included TV commercials and letters to grandparents. Current outreach includes educating parents and other caregivers about "back to sleep" and safe sleeping environments. Potential channels for education are hospital discharge protocols, daycare associations and senior citizen centers.

Resources

For SIDS: Grief Services Program, Office of the Medical Investigator, (505) 272-3053.

References

[1] Matthews TJ, Menacker F, MacDorman MF. Infant mortality statistics from the 2002 period linked birth/infant death data set. National Vital Statistics Reports, v.53 no.10. Hyattsville, MD: National Center for Health Statistics, 2004.

Figure 39

Percent of mothers who place their infant on the back to sleep, by year of infant's birth

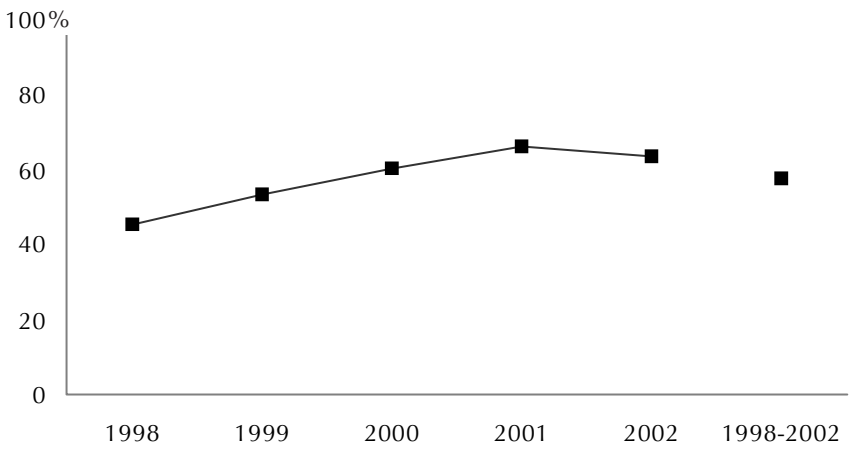


Table 68

% placing infant on back		
Year	**%**	**±**
1998	**45.3**	*3.6*
1999	**53.6**	*2.9*
2000	**60.2**	*2.6*
2001	**66.3**	*2.5*
2002	**63.9**	*2.5*
1998-2002	**57.8**	*1.3*

[2] Office of Vital Records and Health Statistics. Santa Fe, NM: New Mexico Department of Health, 2005.
[3] AAP Task Force on infant positioning and SIDS. Positioning and SIDS. Changing concepts of Sudden Infant Death Syndrome: implications for infant sleeping environment and sleep position. Pediatrics 2000:105:650-6.
[4] Ottolini MC, Davis E, Patel K, Sachs HC, Gershon NB, Moon RY. Prone Infant sleeping despite the "Back to Sleep" campaign. Arch Pediatr Adolesc Med 1999 153;512-517. References 3-7.
[5] Although "Back to Sleep" has been an effective campaign, part of the decrease in reported SIDS deaths may be due to the more specific definition of SIDS.
[6] Year 2000 births. Williams LM, Morrow B, Beck LF, Barfield W, D'Angelo D, Helms K, Johnson CH, Lipscomb LE, Whitehead N. PRAMS 2000 Surveillance Report. Atlanta, GA: Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, 2005.
[7] Estimated number 9,062, 95% confidence interval 8,485 to 9,710, no table.

A detailed list of references is available upon request.

Infant's sleep position

NM PRAMS, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents=3161, population=52072. Sample and weighted numbers, methods and variable definitions are in Appendix.
Map of NM districts on Page 8.

Table 69

By maternal characteristic	Percent of mothers who usually place their infant to sleep on the back (0 10 20 30 40 50 60 70 80 90 100)	%	Lower	Upper
All NM mothers		**65.1**	*63.3*	*66.9*
Age				
15-17		~~**57.3**~~	~~*49.5*~~	~~*65.2*~~
18-19		**64.6**	*58.8*	*70.4*
20-24		**61.1**	*57.8*	*64.5*
25-34		**68.0**	*65.3*	*70.7*
35 +		**69.3**	*63.9*	*74.7*
Ethnicity				
Non-Hispanic White		**69.4**	*66.5*	*72.4*
Native American		**78.6**	*74.2*	*82.9*
Hispanic White		**59.3**	*56.7*	*62.0*
Education				
Less than high school		**52.7**	*49.0*	*56.5*
High school		**66.2**	*63.0*	*69.3*
More than high school		**73.2**	*70.6*	*75.8*
Marital status				
Married		**66.7**	*64.4*	*69.1*
Not married		**63.1**	*60.4*	*65.9*
Any previous live birth				
No		**67.9**	*65.0*	*70.7*
Yes		**63.5**	*61.2*	*65.8*
Residence				
Central: District 1 urban		**70.4**	*67.0*	*73.9*
Northeast: District 2		**70.8**	*67.3*	*74.3*
Southwest: District 3		**51.9**	*48.0*	*55.9*
Southeast: District 4		**52.5**	*48.7*	*56.3*
Northwest: District 1 rural		**73.1**	*69.2*	*77.0*
Public assistance				
No		**66.4**	*64.4*	*68.5*
Yes		**60.8**	*57.0*	*64.6*
Payer of delivery				
IHS w/wo Medicaid/insurance		**75.0**	*68.0*	*82.1*
Medicaid w/wo insurance; no IHS		**60.7**	*58.2*	*63.2*
Insurance only		**73.7**	*70.9*	*76.5*
None		**50.6**	*43.7*	*57.5*

Because mothers may not count the newborn and 2-4 day visit, the estimates below omit those visits for all ages, increasing the rate of compliance.

Well-child care

PRAMS asks, "How many times has your baby been to a doctor or nurse for a well-baby checkup?" To define an adequate number of well-child (or well-baby) visits, NM PRAMS adjusts the American Academy of Pediatrics recommendations according to the infant's age at the time of survey response (see Appendix, Methodology).

Public health importance

Well-child visits are preventive screening checkups for children ages newborn through 21 years. The American Academy of Pediatricians (AAP) recommends six visits between the newborn and 12-month checkups. In addition to immunization, infant visits provide opportunities to identify developmental delays or birth defects, discuss parenting and develop good communication between parents and providers. In 2002, 18% of the nation's uninsured and 12% of insured infants (0-12 months) did not receive any well-child checkups.[1] Parental dissatisfaction with these services and doubts about their usefulness are obstacles for well-child schedules: a recent study found that children attend less than one-half of recommended visits even when financial barriers do not exist.[2]

NM PRAMS findings

In 2002, 77% of new mothers said their infants had an adequate number of visits. The rate may be declining (Table 70 / Figure 40). By 2002, approximately 5,700 mothers reported fewer than the suggested number of visits.[3] In 2001-2002, mothers with insurance coverage (86%) were more likely to report compliance than those with either Medicaid (74%) or no health care coverage (74%); see Table 71. Only 63% of Native American mothers reported an appropriate number of visits. Well-child care utilization appeared more likely in the northeast than the southwest or northwest.

Action in NM

Following federal legislation in 1997, New Mexico passed the Child Health Act authorizing the SCHIP (State Children's Health Insurance Plan) program to provide Medicaid services to children whose family income falls in the range of 186 to 235% of the federal poverty level. Medicaid and SCHIP cover well-child visits. Medicaid reports that 14,060 infant clients received at least one well-child check-up in 2002. An additional 136 infants attended at least one visit through SCHIP. The New Mexico Women Infant and Children (WIC) program tracks well-baby visits and immunization schedules for its clients (nutritionally at-risk infants whose parents' income falls at or below 185% of the federal poverty level).

Resources

NM WIC Program, Family Health Bureau, Public Health Division, NM Department of Health. 2040 S. Pacheco Santa Fe, NM 87505, 1-800-280-1618.

Figure 40

Percent of new mothers whose infant had an adequate number of well-child visits, by year of infant's birth. (See Appendix, Methodology for definition.)

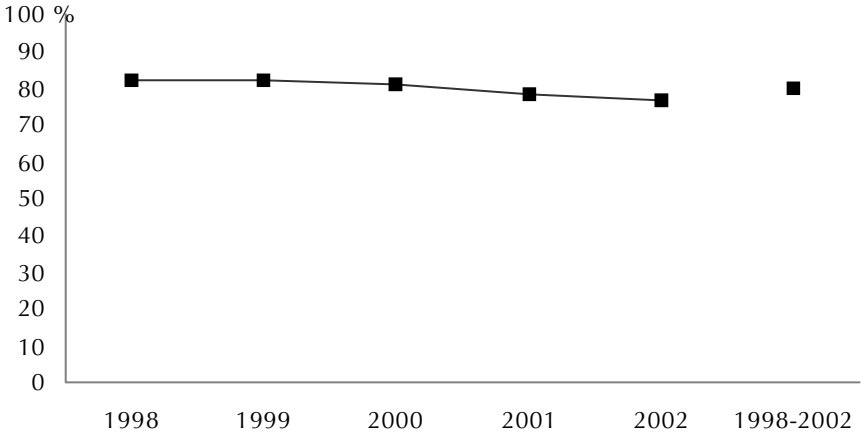


Table 70

% whose infant had adequate number of well-child visits		
Year	**%**	**±**
1998	**82.3**	**2.8**
1999	**82.0**	**2.2**
2000	**81.1**	**2.1**
2001	**78.3**	**2.3**
2002	**76.5**	**2.3**
1998-2002	**80.1**	**1.0**

New Mexico SCHIP, NM Medicaid Office in the Medical Assistance Division, Department of Human Services, PO Box 2348, Santa Fe, NM 87504, 1-888-997-2583.

American Academy of Pediatrics, http://www.aap.org/
National Health Interview Survey (NHIS) and National Survey of Early Childhood Health (NSECH), http://www.childstats.gov/

References

[1] The Urban Institute. Key Findings from the 2002 National Health Interview Survey, Access to care among uninsured and insured children: well-child checkups, usual source of care and unmet needs. Washington, DC: The Urban Institute, 2003.
2 Schor EL. Rethinking well-child care. Pediatrics 2004;114;210-16. http://www.pediatrics.org accessed on 2/1/2005.
[3] Estimated 5,709, 95% confidence interval ± 568, no data table.

A detailed list is available upon request.

Well-child visits

NM PRAMS, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Data available for only 2812 of 3161 respondents, population=46093 of 52072. Sample and weighted numbers, methods and variable definitions are in Appendix. Map of NM districts on Page 8.

Table 71

By maternal characteristic	Percent of mothers whose infant had an appropriate number of well-child visits (0 10 20 30 40 50 60 70 80 90 100)	%	Lower	Upper
All NM mothers		**77.4**	*75.8*	*79.0*
Age				
15-17		**76.7**	*69.8*	*83.6*
18-19		**76.3**	*70.8*	*81.7*
20-24		**74.6**	*71.5*	*77.6*
25-34		**78.9**	*76.5*	*81.3*
35 +		**81.0**	*76.3*	*85.6*
Ethnicity				
Non-Hispanic White		**80.3**	*77.6*	*82.9*
Native American		**63.1**	*58.0*	*68.3*
Hispanic White		**78.3**	*76.0*	*80.6*
Education				
Less than high school		**70.9**	*67.4*	*74.5*
High school		**76.4**	*73.6*	*79.3*
More than high school		**82.5**	*80.2*	*84.8*
Marital status				
Married		**81.0**	*79.0*	*83.0*
Not married		**73.1**	*70.5*	*75.7*
Any previous live birth				
No		**80.7**	*78.2*	*83.2*
Yes		**75.0**	*72.8*	*77.1*
Residence				
Central: District 1 urban		**80.4**	*77.3*	*83.4*
Northeast: District 2		**83.5**	*80.7*	*86.4*
Southwest: District 3		**75.9**	*72.4*	*79.4*
Southeast: District 4		**81.1**	*78.1*	*84.2*
Northwest: District 1 rural		**61.9**	*57.6*	*66.3*
Public assistance				
No		**79.9**	*78.2*	*81.7*
Yes		**69.3**	*65.6*	*73.0*
Payer of delivery				
IHS w/wo Medicaid/insurance		~~**54.7**~~	~~*46.7*~~	~~*62.8*~~
Medicaid w/wo insurance; no IHS		**74.1**	*71.8*	*76.5*
Insurance only		**86.1**	*83.8*	*88.5*
None		**74.2**	*67.9*	*80.4*

Food sufficiency

PRAMS asks, "During the past 12 months, which one of the following statements best describes the food eaten by you and your family?" Response options are: (1) Enough food to eat (2) Sometimes not enough food to eat (3) Often not enough food to eat.

Food security means more than mere sufficiency. In addition, it means that food is nutritious, and one does not have to scavenge, steal or worry about their supply.[1]

Public health importance

In 2003, 11.2% of all Americans experienced food insecurity. The Healthy People 2010 goal is to increase food security to 94%.[2] As expected, food insecurity correlates with poverty.[3] Among women, insecurity is also paradoxically associated with overweight/obesity and nutrient depletion.[4] Biomedical research links nutrient deficiencies to poor pregnancy outcomes such as miscarriage, prematurity, intrauterine growth restriction and infection. [5, 6]

NM PRAMS findings

In 2002, 86% of new mothers reported that their families had enough to eat (Table 72 / Figure 41). Seventy-three percent of women with no payer of delivery compared to 97% of women with insurance reported food sufficiency (Table 73). Seventy-nine percent of women with less than high school education had enough to eat versus 93% of women with more than high school education. Non-Hispanic white women (93%) were more likely to report that their families had enough to eat than Hispanics (83%) or Native Americans (82%). Twenty percent of those receiving public assistance did not have enough to eat.

Action in NM

NMDOH Public Health offices refer eligible people for food stamps to local Income Support Division offices.

The NM Human Services Department is working to expand food stamp enrollment.

NM WIC offers nutritional support and supplementation to families of prenatal, pregnant and post-partum clients whose family income is at or below 185% of federal poverty level. In 2003, the program added farmer's market certificates for fresh vegetables and fruits.

Resources

NM DOH Public Health Offices:
District 1, Santa Fe: 505-827-3560
District 2, Espanola: 505-753-2794
District 3, Las Cruces: 505-528-5156
District 4, Lovington: 505-396-2853

Figure 41

Percent of mothers who said their family had enough food to eat, by year of infant's birth

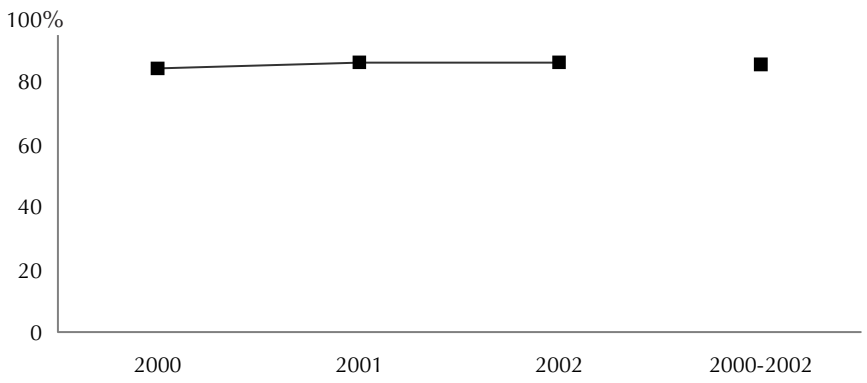


Table 72

% whose family had enough food		
Year	**%**	**±**
2000	**84.1**	*1.9*
2001	**86.0**	*1.9*
2002	**86.0**	*1.8*
2000-2002	**85.4**	*1.1*

References

[1] Original definitions from the Life Sciences Research Office can be found in: Andersen, SA ed. Core indicators of nutritional state for difficult to sample populations. J Nutr 1990;120:1557S-1600S.
[2] US Department of Health and Human Services. Healthy People 2010 Conference Edition. Washington DC: January 2000. http://www.healthypeople.gov
[3] Sullivan AF, Choiv E. Hunger and food insecurity in the fifty states: 1998-2000. Waltham, MD: Food Security Institute, Center on Hunger and Poverty, Heller Graduate School for Social Policy and Management, Brandeis University, 2002. http://www.centeronhunger.org/FSI/research.htm accessed on 2/24/2005.
[4] Townsend M, Peerson J, Love B, Aschrwebweg C, and Murphy S. Food insecurity is positively related to overweight in women. J Nutr 2001;131:1738-1745.
[5]Bhutta ZA, Jackson AA, Lumbiganov P, eds. Nutrition as a preventive strategy against adverse maternal pregnancy outcomes. J Nutr 2003;133:1589S-91S.
[6] Jackson AA, Robinson SM. Dietary guidelines for pregnancy: a review of current evidence. Public Health Nutr 2001;4:625-30.

Food sufficiency

NM PRAMS, years 2001-2002. "Lower" and "Upper" refer to the error margin of the 95% confidence interval; a strikethrough indicates a large margin and the need to use the data with caution. Number of respondents=3161, population=52072. Sample and weighted numbers, methods and variable definitions are in Appendix.
Map of NM districts on Page 8.

Table 73

By maternal characteristic	Percent of mothers whose family had enough to eat during the past 12 months	%	*Lower*	*Upper*
All NM mothers		**86.0**	*84.7*	*87.3*
Age				
15-17		**81.8**	*75.6*	*88.0*
18-19		**81.1**	*76.2*	*86.1*
20-24		**83.9**	*81.4*	*86.4*
25-34		**88.9**	*87.1*	*90.7*
35 +		**88.0**	*84.3*	*91.6*
Ethnicity				
Non-Hispanic White		**92.5**	*90.7*	*94.2*
Native American		**82.6**	*78.9*	*86.3*
Hispanic White		**82.1**	*80.1*	*84.2*
Education				
Less than high school		**79.0**	*76.0*	*82.0*
High school		**84.1**	*81.6*	*86.5*
More than high school		**93.1**	*91.6*	*94.5*
Marital status				
Married		**90.1**	*88.7*	*91.6*
Not married		**81.3**	*79.1*	*83.5*
Any previous live birth				
No		**87.6**	*85.6*	*89.7*
Yes		**85.0**	*83.3*	*86.7*
Residence				
Central: District 1 urban		**87.9**	*85.4*	*90.3*
Northeast: District 2		**87.5**	*85.0*	*90.0*
Southwest: District 3		**81.9**	*78.9*	*85.0*
Southeast: District 4		**86.4**	*83.8*	*89.0*
Northwest: District 1 rural		**83.9**	*80.8*	*87.0*
Public assistance				
No		**87.9**	*86.5*	*89.3*
Yes		**79.9**	*76.8*	*83.1*
Payer of delivery				
IHS w/wo Medicaid/insurance		**82.3**	*76.6*	*88.1*
Medicaid w/wo insurance; no IHS		**81.4**	*79.4*	*83.4*
Insurance only		**96.6**	*95.4*	*97.8*
None		**73.4**	*67.5*	*79.3*

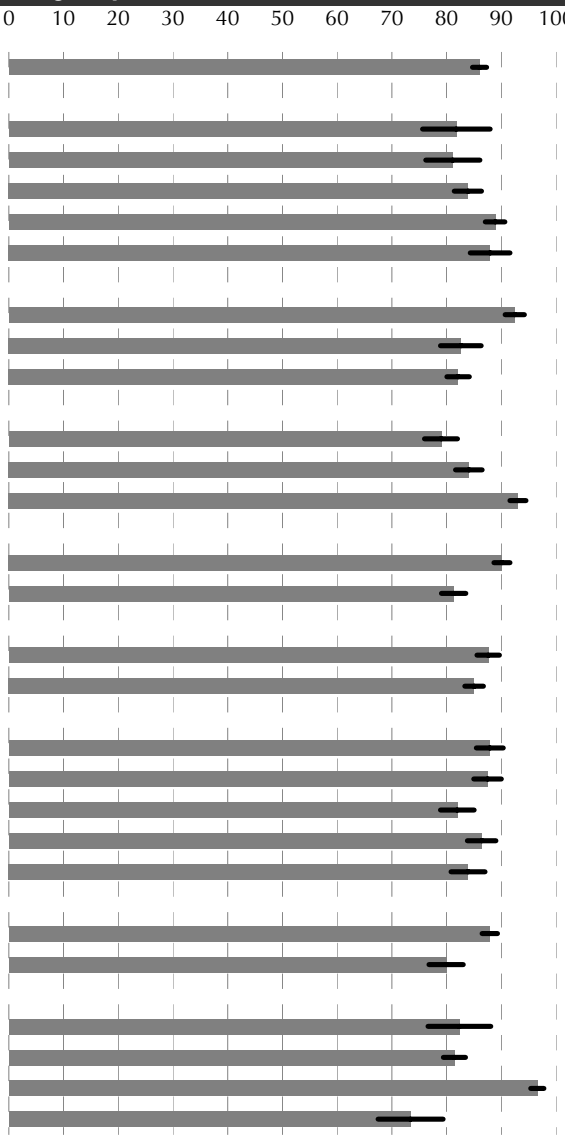


Table 74

Question Number	Indicators and related targets - Listed in the order of this report[1]	Healthy People 2010objective	MCHB[2]	NMDOH
21	Folic acid awareness	16-6		
3	Daily multivitamin use	16-6	x	
10, 11	Unintended pregnancy	9-1, 1-3f	x	
10, 11	Intended pregnancy	9-1	x	
BC[3]	Teen pregnancies	9-7	x	priority area
	Abstinence among teens	9-9		
	Teen pregnancy prevention and protection from STDs	9-10	x	
63 (6)	Prenatal and postpartum services targeting teens			
12	Contraceptive use/non-use among unintended pregnancies	9-3		
57	Contraceptive use after delivery			
13	Reasons for not using contraception (prescription coverage)	9-13		
29, 30a	Drinking alcohol in the 3 months before pregnancy		x	
30b	Frequent or binge drinking in the 3 months before pregnancy	26-11		
31a	Drinking any alcohol during the last 3 months of pregnancy	16-17a	x	
31b	Binge drinking during the last 3 months of pregnancy	16-17b		
25, 26	Smoking in the 3 months before pregnancy		x	
27	Smoking during the last 3 months of pregnancy	16-17c	x	
28	Current smoking			
27, 63	Smoking cessation during pregnancy	27-6		
50	Infant exposure to tobacco smoke	27-9		
33a	Physical abuse by partner in the 12 months before pregnancy	15-34	x	
34a	Physical abuse by partner during pregnancy	15-34	x	
5, 6, 8	Excessive body weight: BMI=Weight in kg/height in cm2	19-2, 19-3	x	priority area
23f	Pre-existing or gestational diabetes	5-2, 5-8		
BC, 15	Late or no prenatal care: CDC PRAMS based on respondent's self-report			
15	Early and adequate prenatal care	16-6	x	
17	Reasons for late prenatal care	1-6		
20	Topics discussed with prenatal health care worker			
1,2	Payer of preconception health care	1-1		
19	Payer of prenatal care		x	
41	Payer of delivery			
22, 63 (3)	WIC nutrition services during pregnancy			
63	Home visiting and other health services during pregnancy		x	
64, 66	Post-partum health services		x	
62	Prenatal oral health discussion			
62	Dental problem	21-1		
62	Dental visit	21-10		
46	Initiation of breastfeeding	16-19a	x	
47, 48	Breastfeeding continuation, defined as breastfeeding at least 9 weeks	16-19b		
69	Breastfeeding and pumping-related workplace and school policies			
51	Infant sleep position	16-13		
	Deaths from Sudden Infant Death Syndrome (SIDS)	16-1h		
54, 55, 56	Well-child care visits		x	
70	Food Insecurity. For PRAMS, survey data is for food sufficiency only.	19-18		

Footnotes

[1] Indicators without a question number are not reported from PRAMS survey data.
[2] MCHB stands for Maternal Child Health Benchmark based on federal Title V Block Grant measures.
[3] Derived from Birth Certificate information

Sample numbers, response rates and weighted estimates (population) for NM PRAMS births by year of infant's birth

NM residents with in-state birth from July 1997 - December 2002
Average for 1998 - 2002 (as in multiyear tables of this report)
Symbol ± refers to limits of 95% confidence interval

Table 75

Year of infant's birth	Number sampled	Number Responding	Percent responding	*Estimated number*	±
1997	1273	864	67.9	**13009**	192
1998	2584	1713	66.3	**26019**	366
1999	2115	1519	71.8	**25917**	188
2000	2210	1615	73.1	**25821**	224
2001	2265	1599	70.6	**25835**	251
2002	2243	1562	69.6	**26237**	158
1998-2002	12690	8872	69.9	**142838**	587

Response rates

Unweighted response rates (the number of respondents divided by the original number sampled) are presented in the table above and on the next page. Women were counted as a respondent if they answered at least 75% of the survey questions. PRAMS strives for a weighted response rate of 70% for statewide and stratum-specific analysis. Weighted response rates, which generally differ from the unweighted by less than one percentage point, are available on request.

Low response rates may lead to biased estimates. To help interpret multiyear data (1998-2002), the table above shows response rates for each year of infant's birth; rates were lowest in 1997 and 1998. For birth year 2001-2002 tables, the facing page shows response rates for women with various characteristics. Response was less likely among women with younger age, lower educational level, Native American or African American ethnicity, single marital status, residence in northwestern NM or an infant weighing 1500 to 2499 grams. Data were not reported for subgroups with fewer than 50 respondents.

Item non-response, which means that the woman did not respond to a particular question, is another potential source of bias. In addition, data may be missing from birth certificates. For years 2001-2002 combined, data were lacking for at least 5% of respondents for these variables (parentheses contain percentage of respondents without data): adequacy of prenatal care utilization based on birth certificate (5.8%), breastfeeding behavior (6.9%) and adequate number of well-child visits (11.0%).

Estimated (weighted) numbers

These are provided as a denominator for readers interested in estimating counts. Weighted numbers for each survey item in the report are available on request.

Sample numbers, response rates and weighted estimates (population) for NM PRAMS births By maternal characteristic or infant's birth weight.

NM residents with in-state birth from January 2001 - December 2002. Symbol ± refers to limits of 95% confidence interval. * Data not reported in detailed tables because there were fewer than 50 respondents.

Table 76

Maternal characteristic or Infant's birth weight	Number sampled	Number of respondents	Percent responding	*Estimated number*	*± estimated number*
All mothers	4508	3161	70.1	***52072***	*296*
Age (years)					
15-17	284	185	65.1	***2979***	*456*
18-19	465	306	65.8	***5197***	*604*
20-24	1464	993	67.8	***15997***	*908*
25-34	1831	1326	72.4	***22020***	*948*
35 +	447	340	76.1	***5668***	*604*
Unknown	17	11	64.7	*	*
Educational level					
Less than high school	1253	787	62.8	***13755***	*899*
High school	1547	1041	67.3	***17363***	*946*
More than high school	1588	1260	79.4	***19637***	*873*
Unknown	120	73	60.8	***1316***	*322*
Ethnicity/race					
Non-Hispanic White	1411	1070	75.8	***17571***	*895*
Native American	652	395	60.6	***6538***	*540*
Hispanic White	2304	1605	69.7	***26516***	*990*
African American *	81	48	59.3	*	*
Other/unknown *	60	44	72.9	*	*
Marital status					
Married	2319	1745	75.3	***27876***	*903*
Not married	2189	1416	64.7	***24196***	*1052*
Previous live births					
None	1708	1244	72.8	***20100***	*953*
One or more	2773	1900	68.5	***31529***	*978*
Unknown	27	17	63.0	*	*
Residence					
Central (District One, urban)	899	647	72.0	***20862***	*225*
Northeast (District 2)	898	648	72.2	***6792***	*111*
Southwest (District 3)	879	623	70.9	***8728***	*109*
Southeast (District 4)	946	654	69.1	***7810***	*83*
Northwest (District One, rural)	886	589	66.5	***7881***	*132*
Infant's birth weight (grams)					
400 - 1499	40	28	70.0	*	*
1500-2499	288	194	67.4	***48296***	*565*
2500 and over	4173	2934	70.3	***3676***	*501*
Unknown	7	5	71.4	*	*

Methodology

In the text and tables, "±" (plus or minus) refers to the limits of the 95% confidence interval (95% CI, also labeled "Lower" and "Upper" in detailed tables).

Definition of variables

Unless stated, all variables are derived from the PRAMS survey questionnaire. If there is no note below, please refer to the original survey question.

Dependent variables

These follow the order of the Table of Contents.

Intention of pregnancy – PRAMS asks mothers how they felt about being pregnant at the time of conception. Response options are that they wanted to be pregnant: 1) sooner, 2) later (mistimed), 3) then, or 4) not then or at any time (unwanted). Intended includes sooner or then. Unintended includes mistimed and unwanted. PRAMS estimates do not include all pregnancies, but only those ending with live birth. (This definition is used by CDC PRAMS and is described by the Committee on Unintended Pregnancy, Institute of Medicine, National Academy of Sciences. *The best intentions: unintended pregnancy and the well-being of children and families.* Washington, DC: National Academy Press, 1995. Because the National Survey of Family Growth uses live births + abortions, slightly different questions from PRAMS and may be asked as late as 5 years after birth, estimates may differ from PRAMS.)

I could only get services for pregnancy, not birth control following my pregnancy. My doctor gave me a prescription for birth control pills, but it was not covered, and I could not get them. – PRAMS mom

Alcohol use – Frequent drinking, seven or more drinks in one week or binge drinking, is based on the definition from the Centers for Disease Control and Prevention. Alcohol use among women of childbearing age – United States 1991-1999. MMWR 2002;51:273-6. Binge drinking is defined as 5 or more alcoholic beverages on one occasion.

Cigarette smoking – If the woman said she did not know how many cigarettes she smoked, she was coded as a smoker.

Weight problem – The NMDOH Chronic Disease Epidemiology Program offered this solution to the discrepancy between BMI cut-offs for adults and for children (under 20 years of age). This report uses "weight problem" instead of obesity to classify mothers under 20 years of age.

First, Body Mass Index (BMI) is calculated from the weight (kg) divided by height squared (m^2), which the survey requests. For adults over 20 years old, BMI is categorized as underweight if less than 18.5; normal if 18.5 to 24.9; overweight if 25.0 to 29.9; and obese if 30.0 or more (National Heart, Lung, and Blood Institute. *Clinical Guidelines on the Identification, Evaluation and Treatment of Overweight and Obesity in Adults: The Evidence Report.* Washington, DC: Government Printing Office; 1998.) BMI cutoffs are available from www.cdc.gov/nccdphp/dnpa/bmi/bmi-adult.htm. For children under 20 years of age, gender and age-specific charts (BMI-for-age) define underweight as BMI-for-age at or below the fifth percentile; normal as 5th to below 85th percentile; at risk for overweight as 85th to below 95th percentile; and overweight as 95th percentile or more. BMI-for-age definitions and charts are available at http://www.cdc.gov/nccdphp/dnpa/bmi/bmi-for-age.htm. Both URLs were accessed 2/24/2005. The Institute of Medicine uses different cutoffs for BMI (Institute of Medicine, Committee on Nutritional Status during Pregnancy and Lactation. *Nutrition during Pregnancy.* Part 1: Weight Gain. Washington DC: National Academy Press, 1990).

After BMI is calculated, adults who are obese or overweight, or children who are overweight or at risk for overweight, are defined as having a "weight problem."

Diabetes – For years 2000-2004, this includes pre-existing as well as gestational diabetes. For years 1997-1999, data are available for gestational diabetes only.

Payer of preconception care – The survey asks separate questions to determine whether the woman had Medicaid or insurance. One variable for preconception payer was created with categories for respondents who had 1) Medicaid, 2) insurance but not Medicaid, 3) Indian Health Service (IHS) for prenatal care, 4) none of the above. Unlike payer of prenatal care or delivery, IHS was coded last because it was imputed.

Payer of prenatal care – After consultation with advisors from Medicaid and the NM Prenatal Care Taskforce, the variables for payer of prenatal care and delivery were created. For the question about payer of prenatal care, the respondent chose as many of six options as applied to her care. Three options specified a third-party payer. One variable was created with categories for women who had 1) Indian Health Service with or without other payers, 2) Medicaid with or without insurance, 3) insurance only, 4) none of the payers.

Payer of delivery – This was coded like payer of prenatal care.

It is a great concern of mine that many young women in New Mexico do not receive adequate sex education. Without adequate sex education, teen pregnancy and STD transmission is an absolute guarantee. – PRAMS mom

Well-child visits – Adequate number of visits was based on recommendations from the American Academy of Pediatrics (Committee on Practice and Ambulatory Medicine. Recommendations for Preventive Pediatric Health Care. *Pediatrics* 2000;105;645-646). For this report, the newborn and one-week visits were not required for the number of visits to qualify as adequate.

Maternal characteristics

(independent and subpopulation variables)

Birth certificates from NM Vital Records and Health Statistics provided data on maternal age, ethnicity/race, educational level, residence, previous live birth, marital status, month of entry into prenatal care and number of prenatal visits.

Maternal residence – County of residence and zip codes recoded to District One, urban=Bernalillo, Torrance, Valencia, and zip codes for Bernalillo city and Rio Rancho; District One, rural = McKinley, Sandoval (excluding zip codes for Bernalillo city and Rio Rancho), San Juan, Cibola; District Two = Colfax, Harding, Los Alamos, Mora, Rio Arriba, San Miguel, Santa Fe, Taos, Union; District Three = Catron, Dona Ana, Grant, Hidalgo, Luna, Otero, Sierra, Socorro; District Four = Chaves, Curry, De Baca, Eddy, Guadalupe, Lea, Lincoln, Quay, Roosevelt .

Income from aid – "Income from aid" refers to the response option for the question, "What were the sources of your household's income during the past 12 months?" One option was "Aid such as Temporary Assistance for Needy Families, welfare, public assistance, general assistance, food stamps or Supplemental Security Income". This variable is a proxy for low income, but poverty levels vary for the different services.

Variables: changes between phases

This section defines variables created from survey variables and highlights survey changes between Phase 3 (birth years 1997-1999) and Phase 4 (birth years 2000-2003). These changes may account for differences in multiyear comparisons. When data from all PRAMS states were combined, statistically significant differences were noted for most prenatal discussion topics, cigarette smoking, drinking alcohol during the 3 months before pregnancy and breastfeeding. (Beck L, Morrow B. Impact of questionnaire changes on observed prevalence of prenatal counseling. Poster presented at Society for Epidemiologic Research, June 2003.)

Awareness of folic acid benefits – Phase 3 PRAMS asked, "Have you ever heard or read that taking the vitamin folic acid (folate) can help prevent some birth defects?" (Yes/No). In Phase 4, the question was, "Some health experts recommend taking folic acid for which one of the following reasons? Check one answer". Responses were: "1) To make strong bones, 2) To prevent birth defects, 3) To prevent high blood pressure, 4) I don't know." For Phase 4, the mothers who checked option 2 were compared with those who checked 1, 3 or 4.

Intention of pregnancy – For Phase 3, "Don't' know" was a valid response option. Phase 4 did not offer this option. In Phase 3, "Don't know" responses were omitted from the analysis of this variable.

Contraception at conception – Phase 4 added the filter question, "When you got pregnant with your new baby, were you tying to become pregnant?" (Yes/No). Women responding "yes" were instructed to skip the question about whether they used contraception at conception.

Details are available on the Centers for Disease Control and Prevention (CDC) website, http://www.cdc.gov/nccdphp/drh/srv_prams.htm and in the CDC PRAMS 1999 Surveillance Report. (Beck LF, Johnson CH, Morrow B, Lipscomb LE, Gaffield ME, Colley Gilbert B, Rogers M, Whitehead N. PRAMS 1999 Surveillance Report. Atlanta, GA: Division of Reproductive Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, 2003). The NM PRAMS protocol describes modifications to CDC procedures.

I am only 17 years old and so is my fiance. Social services said that we don't qualify for food stamps because he is not 18 years old yet. The only help we have gotten is the Medicaid for the baby. His job is iffy, and we don't always have enough food to eat. Can you help? Also, my baby is six months old and has outgrown her car seat. Where can I get help with this? – PRAMS mom

Population and sample

The NM PRAMS population of "all" NM mothers refers to New Mexico resident mothers giving live birth in NM, excluding those who delivered out-of-state or gave their infant for adoption and including only one infant from multiple births. Mainly because of exclusions, the NM PRAMS population size (26,237 in birth year 2002) is smaller than the 27,708 live births reported by NM Vital Records and Health Statistics. There were 1,039 out-of-state births. (New Mexico Selected Health Statistics Annual Report for 2002. Santa Fe, NM: Public Health Division, NM Department of Health, 2004).

In year 2001 sample, there were 1,599 mothers; in 2002, there were 1,592. Each month, a stratified sample is drawn from the current birth certificate file at NM Vital Records and Health Statistics. For year 1997-1999 births, NM PRAMS over-sampled Native Americans and mothers with low birth weight infants. For year 2000, we over-sampled low-birth weight infants. For years 2001 onward, the goal of the sampling strategy was to allocate equally to five geographic areas (described on the map after the acknowledgements and maternal residence variable above). For the last two months of 2002 and first five months of 2003, Navajo mothers residing on the reservation were dropped from the study after the sample was drawn. The number of Navajo women dropped in 2002 was two, and in 2003, it was 26. This will limit generalization of findings to NM residents with birth in 2003.

Collection of data

The primary data collection method is a mail survey sent up to three times and followed by attempts to interview non-responders by telephone. The mailings start 2-6 months after the infant's birth, and telephone follow-up ends 90 days after the first mailing. Mothers are also given the option of completing the survey by telephone. The mail packets include a cover letter, the questionnaire booklet, a self-addressed return envelope with postage, a question and answer sheet about PRAMS, a list of community resources for families of newborns, incentives (sent to all sampled mothers) and an offer of a reward (sent to all respondents). For each batch, the reward is a $100 store certificate for two mothers who complete the survey. NM PRAMS sends its data without personal identifiers to CDC for editing, weighting and creation of an annual file.

Response rates

For year 2001-2002 births, the overall response rate was 70%. A table in the appendix of this report shows response rates for mothers with various characteristics.

The PRAMS questionnaire

For July 1997 through December 1999 births, NM used the phase 3 questionnaire developed by CDC in 1994. For January 2000 births onward, the Phase 4 questionnaire was used. Numerous individuals within and outside of CDC identified topics for the CDC core questions. For the state-specific NM questions, consultants, including the NM Steering committee, helped select topics. Questions were then pre-tested and revised.

The questionnaire consisted of two parts: a core portion that was the same for all states and a state-specific portion

that was tailored to each state's needs. Topics in the core questions covered barriers to and content of prenatal care, obstetric history, maternal use of alcohol and cigarettes, nutrition, economic status, maternal stress and early infant development and health status. The CDC provided Spanish translations, and both the English and Spanish questionnaires were adapted for telephone interviewers.

Sampling & weighting procedures

A stratified systematic sample of approximately 180 new mothers is drawn every month from a frame of eligible birth certificates. Linkage of sampled mothers and birth certificate data, including demographics and medical risk factors, provides the basis for calculating weights. Survey results are generalized to the state's population of live births by using weights, which may be interpreted as the number of women in the population that each respondent represents. For each mother in the sample, CDC PRAMS first calculates three weights:

1. The initial sampling weights are the reciprocal of the sampling fraction applied to the stratum.
2. Non-response weights compensate for lower response rates from women having certain demographic characteristics (such as being unmarried or of lower education) and are based on multivariate analysis. The assumption is that non-respondents would have provided similar answers, on average, to respondents' answers for that stratum and adjustment category. Categories with lower response rates have higher non-response weights.
3. The frame non-coverage weights are derived by comparing frame files for a year of births to the calendar year birth tape that states provided to CDC. The main reason for omission is late processing.

The sampling, non-response and non-coverage weights are multiplied to yield an analysis weight for each respondent.

Cleaning & editing

This is done in three stages: 1) by NM Vital Records before the sample is drawn, 2) CDC PRAMS after birth certificate and 3) survey data are submitted and NM PRAMS. In the last stage, coded survey responses may be revised based on write-in responses and comments. This may produce estimates that differ slightly from the CDC's.

Analysis of data

For cigarette smoking trends and adequacy of prenatal care utilization (APNCU) multivariate analyses, Stata version 8 (College Station, TX) survey commands were used, and significance tests included linear contrasts. The rest of this report was prepared with SUDAAN version 7.5.4A (Research Triangle Park, NC); comparisons were based upon chi-square tests or overlap of confidence intervals. The latter approach may be overly conservative. (Schenker N, Gentleman JF. On judging the significance of differences by examing the overlap between confidence intervals. Am Stat 2001;55:182-6.)

I know several women who smoked the duration of their pregnancies, which sometimes resulted in serious problems for the child. Maybe if more time was spent counseling women with smoking/drug and alcohol problems, more women would understand the risks involved. – PRAMS mom

Potential sources of bias

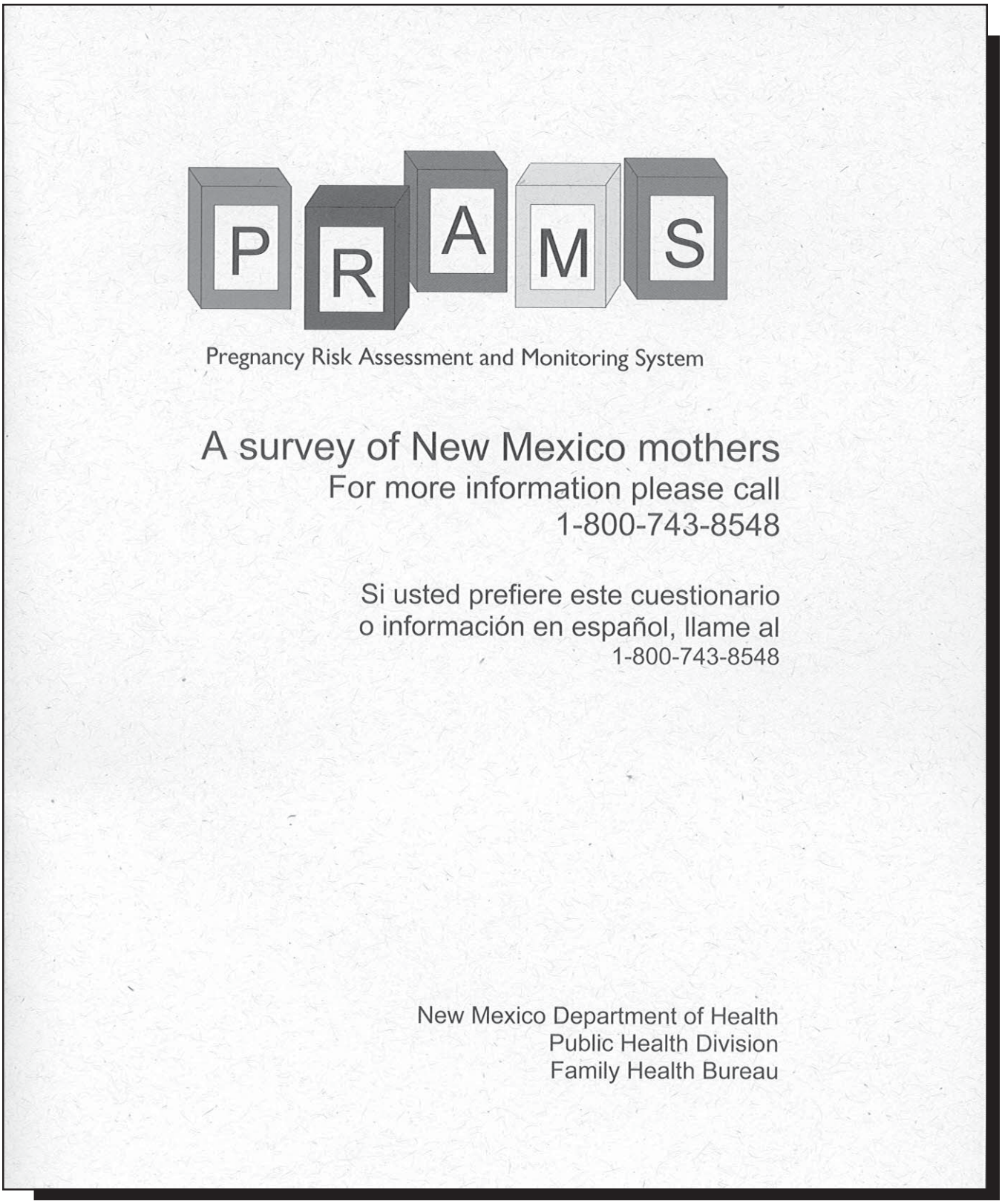
Relying on mail or telephone for surveys leads to self-selecting. Bias may result from non-response, especially when response rates fall below 70% for that stratum or domain. (A domain is a subgroup that is not necessarily the sampling stratum). The appendix shows stratum- and domain-specific response rates. Other potential sources of bias include omitting observations with missing values, lack of control for important confounders or analysis by domains.

Suppressed or unstable data

Estimates were not reported for groups with fewer than 50 mothers. To warn readers of unstable estimates, we included error bars in the charts and use strikethroughs in the tables. Our criteria for strike-throughs were a confidence interval spanning more than 15 percentage points or a relative error (stan-dard error divided by point estimate) greater than 0.30.

Erratum in tables with bars – In tables with bars, "number of respondents=3161" means that at least 95% of the 3,161 women answered that question.

Phase Four: Birth years 2001-2002
Although the cover below is an exact replica, the actual survey is formatted differently.



The actual survey is formatted differently from this document, in which the response options are condensed. Skip patterns refer to page numbers in the original format, not to page numbers in this appendix.

First, we would like to ask a few questions about you and the time before you became pregnant with your new baby. Please check the box next to your answer.

1. Just before you got pregnant, did you have health insurance? (Do not count Medicaid.) *No/Yes*

2. Just before you got pregnant, were you on Medicaid? *No/Yes*

3. In the month before you got pregnant with your new baby, how many times a week did you take a multivitamin (a pill that contains many different vitamins and minerals)?
   (1) *I didn't take a multivitamin at all (2) 1 to 3 times a week (3) 4 to 6 times a week (4) Every day of the week*

4. What is your date of birth? *Month ___ Day ___ Year ___*

5. Just before you got pregnant, how much did you weigh? *Pounds OR Kilos*

6. How tall are you without shoes? *___Feet and ___inches OR ___centimeters*

7. Before your new baby, did you ever have any other babies who were born alive? *No: Go to Question 10 / Yes*

8. Did the baby born just before your new one weigh 5 pounds, 8 ounces (2.5 kilos) or less at birth? *No/Yes*

9. Was the baby just before your new one born more than 3 weeks before its due date? *No/Yes*

10. Thinking back to just before you got pregnant, how did you feel about becoming pregnant? Check one answer.
    (1) I wanted to be pregnant sooner (2) I wanted to be pregnant later (3) I wanted to be pregnant then
    (4) I didn't want to be pregnant then or at any time in the future

11. When you got pregnant with your new baby, were you trying to become pregnant? *No/Yes: Go to Page 2, Question 14.*

12. When you got pregnant with your new baby, were you or your husband or partner doing anything to keep from getting pregnant? (Some things people do to keep from getting pregnant include not having sex at certain times [rhythm], and using birth control methods such as the pill, Norplant®, shots [Depo-Provera®], condoms, diaphragm, foam, IUD, having their tubes tied, or their partner having a vasectomy.) *No / Yes: Go to Question 14*

13. What were your or your husband's or partner's reasons for not doing anything to keep from getting pregnant? Check all that apply.
    (1) I didn't mind if I got pregnant (2) I thought I could not get pregnant at that time (3) I had side effects from the birth control method I was using (4) I had problems getting birth control when I needed it (5) I thought my partner or I was sterile (could not get pregnant at all) (6)My husband or partner did not want to use anything (7) Other - Please tell us:____

The next questions are about the prenatal care you received during your most recent pregnancy. Prenatal care includes visits to a doctor, nurse, or other health care worker before your baby was born to get checkups and advice about pregnancy. (It may help to look at a calendar when you answer these questions.)

14. How many weeks or months pregnant were you when you were sure you were pregnant? (For example, you had a pregnancy test or a doctor or nurse said you were pregnant.) *(1) ___Months OR (2) ___Weeks (3) I don't remember*

15. How many weeks or months pregnant were you when you had your first visit for prenatal care? (Do not count a visit that was only for a pregnancy test or only for WIC[the Special Supplemental Nutrition Program for Women, Infants, and Children].) *(1) ___Months OR ___Weeks (3) I didn't go for prenatal care*

16. Did you get prenatal care as early in your pregnancy as you wanted?
No / Yes: Go to Question 18 / I didn't want prenatal care

17. Did any of these things keep you from getting prenatal care as early as you wanted? Check all that apply
(1) I couldn't get an appointment earlier in my pregnancy (2) I didn't have enough money or insurance to pay for my visits (3) I didn't know that I was pregnant (4) I had no way to get to the clinic or doctor's office (5) The doctor or my health plan would not start care earlier (6) I did not have my Medicaid card (7) I had no one to take care of my children (8) I had too many other things going on (9) Other - Please tell us: _____

If you did not go for prenatal care, go to Page 4, Question 21.

18. Where did you go most of the time for your prenatal visits? Don't include visits for WIC. Check one answer.
(1) Hospital clinic (2) Health department clinic (3) Private doctor's office or HMO clinic (4) Indian Health Service (PHS) (5) Community clinic (7) Other - Please tell us: _____

19. How was your prenatal care paid for? Check all that apply.
() Medicaid () Personal income (cash, check, or credit card) () Health insurance or HMO () Indian Health Service (PHS) () City or County Indigent Fund () Other - Please tell us: _____

20. During any of your prenatal care visits, did a doctor, nurse, or other health care worker talk with you about any of the things listed below? Please count only discussions, not literature or videos. For each item, circle Y (Yes) if someone talked with you about it or circle N (No) if no one talked with you about it.

a.	*How smoking during pregnancy could affect your baby*	*N*	*Y*
b.	*Breast feeding your baby*	*N*	*Y*
c.	*How drinking alcohol during pregnancy could affect your baby*	*N*	*Y*
d.	*Using a seat belt during your pregnancy*	*N*	*Y*
e.	*Birth control methods to use after your pregnancy*	*N*	*Y*
f.	*Medicines that are safe to take during your pregnancy*	*N*	*Y*
g.	*How using illegal drugs could affect your baby*	*N*	*Y*
h.	*Doing tests to screen for birth defects or diseases that run in your family*	*N*	*Y*
i.	*What to do if your labor starts early*	*N*	*Y*
j.	*Getting your blood tested for HIV (the virus that causes AIDS)*	*N*	*Y*
k.	*Physical abuse to women by their husbands or partners*	*N*	*Y*

21. Some health experts recommend taking folic acid for which one of the following reasons? Check one answer.
(1) To make strong bones (2) To prevent birth defects (3) To prevent high blood pressure (4) I don't know

The next questions are pregnancy and things that might have happened during your pregnancy.

22. During your pregnancy, were you on WIC (Women, Infants, and Children's Nutrition Program)? *No / Yes*

23. Did you have any of these problems during your pregnancy?
For each item, circle Y (Yes) if you had the problem or circle N (No) if you did not.

a.	*Labor pains more than 3 weeks before your baby was due (preterm or early labor)*	*N*	*Y*
b.	*High blood pressure (including preeclampsia or toxemia) or retained water (edema)*	*N*	*Y*
c.	*Vaginal bleeding*	*N*	*Y*
d.	*Problems with the placenta (such as abruptio placentae, placenta previa)*	*N*	*Y*
e.	*Severe nausea, vomiting, or dehydration*	*N*	*Y*
f.	*High blood sugar (diabetes)*	*N*	*Y*
g.	*Kidney or bladder (urinary tract) infection*	*N*	*Y*
h.	*Water broke more than 3 weeks before your baby was due (premature rupture of membranes, PROM)*	*N*	*Y*
i.	*Cervix had to be sewn shut (incompetent cervix, cerclage)*	*N*	*Y*
j.	*You were hurt in a car accident*	*N*	*Y*

If you did not have any of these problems, go to Question 25.

24. Did you do any of the following things because of these problem(s)? Check all that apply. *() I went to the hospital or emergency room and stayed less than 1 day () I went to the hospital and stayed 1 to 7 days () I went to the hospital and stayed more than 7 days () I stayed in bed at home more than 2 days because of my doctor's or nurse's advice*

The next questions are about smoking cigarettes and drinking alcohol.

25. Have you smoked at least 100 cigarettes in the past 2 years? (A pack has 20 cigarettes.) *No: Go to Question 29 / Yes*

26. In the 3 months before you got pregnant, how many cigarettes or packs of cigarettes did you smoke on an average day? (A pack has 20 cigarettes.)
() __Cigarettes OR __ Packs (2) Less than 1 cigarette a day (3) I didn't smoke (4) I don't know

27. In the last 3 months of your pregnancy, how many cigarettes or packs of cigarettes did you smoke on an average day?
() __Cigarettes OR __ Packs (2) Less than 1 cigarette a day (3) I didn't smoke (4) I don't know

28. How many cigarettes or packs of cigarettes do you smoke on an average day now?
() __Cigarettes OR __ Packs (2) Less than 1 cigarette a day (3) I didn't smoke (4) I don't know

29. Have you had any alcoholic drinks in the past 2 years?
(A drink is 1 glass of wine, wine cooler, can or bottle of beer, shot of liquor, or mixed drink.)
No: Go to Page 6, Question 32 / Yes

30a. During the 3 months before you got pregnant, how many alcoholic drinks did you have in an average week?
(1) I didn't drink then (2) Less than 1 drink a week (3) 1 to 3 drinks a week (4) 4 to 6 drinks a week (5) 7 to 13 drinks a week (6) 14 drinks or more a week (7) I don't know

30b. During the 3 months before you got pregnant, how many times did you drink 5 alcoholic drinks or more in one sitting?
(1) ___ Times (2) I didn't drink then (3) I don't know

31a. During the last 3 months of your pregnancy, how many alcoholic drinks did you have in an average week?
(1) I didn't drink then (2) Less than 1 drink a week (3) 1 to 3 drinks a week (4) 4 to 6 drinks a week (5) 7 to 13 drinks a week (6) 14 drinks or more a week (7) I don't know

31b. During the last 3 months of your pregnancy, how many times did you drink 5 alcoholic drinks or more in one sitting?
(1) ___ Times (2) I didn't drink then (3) I don't know

Pregnancy can be a difficult time for some women. These questions are about things that may have happened before and during your most recent pregnancy.

32. This question is about things that may have happened during the 12 months before your new baby was born. For each item, circle Y (Yes) if it happened to you or circle N (No) if it did not. (It may help to use the calendar.)

		No	*Yes*
a.	*A close family member was very sick and had to go into the hospital*	*N*	*Y*
b.	*You got separated or divorced from your husband or partner*	*N*	*Y*
c.	*You moved to a new address*	*N*	*Y*
d.	*You were homeless*	*N*	*Y*
e.	*Your husband or partner lost his job*	*N*	*Y*
f.	*You lost your job even though you wanted to go on working*	*N*	*Y*
g.	*You argued with your husband or partner more than usual*	*N*	*Y*
h.	*Your husband or partner said he did not want you to be pregnant*	*N*	*Y*
i.	*You had a lot of bills you could not pay*	*N*	*Y*
j.	*You were in a physical fight*	*N*	*Y*

k.	*You or your husband or partner went to jail*	*N*	*Y*
l.	*Someone very close to you had a bad problem with drinking or drugs*	*N*	*Y*
m.	*Someone very close to you died*	*N*	*Y*
	Other Please tell us: _____		

33a. During the 12 months before you got pregnant, did your husband or partner push, hit, slap, kick, choke, or physically hurt you in any other way? *No / Yes*

33b. During the 12 months before you got pregnant, did anyone else physically hurt you in any way? *No / Yes*

34a. During your most recent pregnancy, did your husband or partner physically hurt you in any other way? *No / Yes*

34b. During your most recent pregnancy, did anyone else physically hurt you in any way? *No / Yes*

The next questions are about your labor and delivery. It may help to look at the calendar when you answer these questions.

35. When was your baby due? *Month ___ Day ___ Year ___*

36. When did you go into the hospital to have your baby?
(1) Month ___ Day ___ Year ___ (2) *I did not have my baby in a hospital*

37. When was your baby born? *Month ___ Day ___ Year ___*

38. When were you discharged from the hospital after your baby was born? (It may help to use the calendar.)
(2) Month ___ Day ___ Year ___ (2) *I did not have my baby in a hospital*

39. After your baby was born, was he or she put in an intensive care unit? *(1) No (2) Yes (3) I don't know*

40. After your baby was born, how long did he or she stay in the hospital?
(1) Less than 24 hours (Less than 1 day) (2) 24–48 hours (1–2 days) (3) 3 days (4) 4 days (5) 5 days (6) 6 days or more
(7) My baby was not born in a hospital (8) My baby is still in the hospital

41. How was your delivery paid for? Check all that apply.
(1) Medicaid (2) Personal income (cash, check, or credit card) (3) Health insurance or HMO (4) Indian Health Service (PHS)
(5) City or County Indigent Fund (6) Other - Please tell us:____

The next questions are about the time since your new baby was born.

42. What is today's date? *Month ___ Day ___ Year ___*

43. Is your baby alive now? *No / Yes: Go to Question 45*

44. When did your baby die? *Month ___ Day ___ Year ___* Go to Question 57

45. Is your baby living with you now? *No: Go to Question 57 / Yes*

46. Did you ever breastfeed or pump breast milk to feed your new baby after delivery? *No: Go to Question 50 / Yes*

47. Are you still breastfeeding or feeding pumped milk to your new baby? *No / Yes: Go to Question 49*

48. How many weeks did you breastfeed or pump milk to feed your baby?

(1) ___ Weeks (2) Less than 1 week

49. How old was your baby the first time you fed him or her anything besides breast milk?
(Include formula, baby food, juice, cow's milk, water, sugar water, or anything else you fed your baby.)
(1) __Weeks OR __Months (2) My baby was less than one week old
(3) I have not fed my baby anything besides breast milk

If your baby is still in the hospital, go to Question 57.

50. About how many hours a day, on average, is your new baby in the same room with someone who is smoking?
(1) ___ Hours (2) Less than one hour a day (3) My baby is never in the same room with someone who is smoking

51. How do you most often lay your baby down to sleep now? Check one answer
(1) On his or her side (2) On his or her back (3) On his or her stomach

52. Was your baby seen by a doctor, nurse, or other health care provider in the first week after he or she left the hospital?
No: Go to Question 54 / Yes

53. Was your new baby seen at home or at a health care facility?
(1) At home (2) At a doctor's office, clinic, or other health care facility

54. Has your baby had a well-baby checkup? *No: Go to Question 57 / Yes*

55. How many times has your baby been to a doctor or nurse for a well-baby checkup? It may help to use the calendar.
___Times

56. Where do you usually take your baby for routine well-baby checkups? Check one answer
() Hospital clinic() Health department clinic () Private doctor's office or HMO clinic () Indian Health Service (PHS)
() Community clinic () Other - Please tell us:_____
➢ In 2002, there was an additional question regarding immunizations.

57. Are you or your husband or partner doing anything now to keep from getting pregnant? Some things people do to keep from getting pregnant include having their tubes tied or their partner having a vasectomy, using birth control methods like the pill, Norplant®, shots [Depo-Provera®], condoms, diaphragm, foam, IUD, and not having sex at certain times [rhythm].)
No / Yes: Go to Page 10, Question 59

58. What are your or your husband's or partner's reasons for not doing anything to keep from getting pregnant now?
() I am not having sex () I want to get pregnant () I don't want to use birth control () My husband or partner doesn't want to use anything () I don't think I can get pregnant (sterile) () I can't pay for birth control () I am pregnant now () Other - Please tell us: ____

The next questions are about your family and the place where you live.

59. Which rooms are in the house, apartment, trailer, or hogan where you live? Check all that apply
__Living room __Separate dining room __Kitchen __Bathroom(s) __Recreation room, den, or family room
__Finished basement __Bedrooms __ How many?

60. Counting yourself, how many people live in your house, apartment, trailer, or hogan?
__ Adults (people aged 18 years or older) __Babies, children, or teenagers (people aged 17 years or younger)

61. What were the sources of your household's income during the past 12 months? Check all that apply
() Paycheck or money from a job () Aid such as Temporary Assistance for Needy Families, welfare, public assistance, general assistance, food stamps, or Supplemental Security Income () Unemployment benefits () Child support or alimony () Social security, workers' compensation, veteran benefits, or pensions () Money from a business, fees, dividends, or rental income

() Money from family or friends () Other - Please tell us:____

➢ In 2002, added question: "During prenatal care, what was the name of your health insurance?"

62. This question is about the care of your teeth during your most recent pregnancy. Check all that apply
(2) I had a dental problem (2) I went to a dentist or dental clinic (3) A dentist or other health care worker talked with me about how to care for my teeth and gums (4) I did not go for dental care

63. During your pregnancy, did you participate in any of these services? Check all that apply
(1) Breastfeeding class or support group (2) Parenting class or support group (3) WIC class or discussion group about nutrition (4) Counseling about a personal or family problem(5) Home visiting services (6) Program for pregnant or parenting teenagers (7) Families FIRST (8) Program for protection from family violence (9) Program to stop using drugs or alcohol (10) A class or support group to stop smoking (11) I did not participate in any of the above

64. Since your delivery, did you participate in any of these services? Check all that apply
[Same response options as for question 63]

65. Since your delivery, whom can you count on for support or help?
Include those on whom you often rely for housekeeping, child care, money, or help with problems. Check all that apply
(1) My husband or partner (2) A relative, friend, or neighbor (3) A paid sitter or nanny (4) Day-care center staff (5) Someone else (6) Please tell us who:___ (7) No one

66. Since your delivery, did you see a doctor, nurse, or midwife for yourself for any of these reasons? Check all that apply
(1) I received a routine checkup (6 weeks postpartum, after delivery) (2) I received care for a health problem (3) I received a birth control method (4) I did not see anyone

67. What is the name of your health insurance?
(1) Cimarron (2) Lovelace (3) Presbyterian (4) Blue Cross/Blue Shield (5) Indian Health Service (PHS) () Military coverage (6) I don't have health insurance (7) I don't know(8) Other - Please tell us:___

➢ A filter question was added in 2002, "Are you currently in school or working outside the home?"

68. Which of the following things were you doing in the past month? Check all that apply
(1) Being a homemaker (2) Unemployed (3) Seasonal farm or construction work (4) Working or going to school full-time (5) Working or going to school part-time (6) Other - Please tell us:___

69. At your workplace or school, what happens when a mother wants to breastfeed? Check all that apply
(1) She can keep her baby and the baby can breastfeed as needed (2) She can use break time to breastfeed the baby (3) She can use break time to pump milk (4) It is hard to use breaks or find a place to pump or breastfeed (5) She is not allowed to breastfeed the baby at work (6) I am not working or going to school (7) I don't know

➢ In 2002, a question was added regarding health related services during pregnancy: "Were you ever unfairly treated in getting services?"

70. During the past 12 months, which one of the following statements best describes the food eaten by you and your family? Check one answer
(1) Enough food to eat (2) Sometimes not enough food to eat (3) Often not enough food to eat

71. During the 12 months before you delivered, what was your family's income, before deductions and taxes? Include ANY income or money you could use. Please give us your best guess. All information will be kept private. Answer only one
___$ Every week / ___$ Every two weeks / ___$ Every month

➢ In 2002, this question was added, "Not counting your new baby, how many people including yourself, depended on this income?"

Thanks for answering our questions!
Your answers will help us work to make New Mexico mothers and babies healthier.Please use this space for any additional comments you would like to make about the health of mothers and babies in New Mexico.