

Family Health *Dataline*

IN THIS ISSUE:

- In Alaska during 1996-97, 41% of live births were the result of unintended pregnancies.
- All racial, age, and education groups evaluated had high proportions of unintended pregnancies.
- A state or federal insurance source paid completely or in part for 61% of all births and 67% of births resulting from an unintended pregnancy.
- Women who had an unintended pregnancy were more likely to report having experienced domestic violence than women who did not have an unintended pregnancy.
- Whether or not a birth resulted from an unintended pregnancy did not affect infant birth weight, survival, or prenatal or postnatal exposure to cigarette smoke or alcohol.
- Among women who had an unintended pregnancy, 40% indicated that they were using birth control when they became pregnant.

Unintended Pregnancies Resulting in Live Births

Unintended pregnancies and births result in considerable emotional and financial costs to individuals and society (Institute of Medicine, 1995). Yet unintended pregnancies are preventable through multiple approaches. In this issue of the Dataline, we examine unintended pregnancy in Alaska.

Methods

We analyzed 1996-97 data from the Alaska Pregnancy Risk Assessment Monitoring System (PRAMS)**. Numbers presented reflect weighted estimates from PRAMS phase III data.

The PRAMS survey asks women the following question “thinking back to just before you got pregnant, how did you feel about becoming pregnant?” Women who answered a) that they wanted to be pregnant later or b) that they didn’t want to be pregnant then or at any time in the future were considered to have had an unintended pregnancy.

****What is PRAMS?**



PRAMS is a population-based survey of Alaska resident women who have recently delivered a live infant. A systematic, stratified sampling approach is used to select approximately 160 mothers of newborns each month from the state’s live birth records for infants between 2 and 6 months of age.

Questions cover the prenatal and postpartum period. Up to three mailed questionnaires are used to solicit a response. Phone interviews are attempted on women who do not respond by mail. Prevalences reflect statewide estimates for Alaska- resident women delivering a live birth during the specified time period. The overall response rate for birth years 1996-1997 was 75% (2,422 women responded).

To determine the number of infant deaths that occurred among women who completed the PRAMS questionnaire, we linked PRAMS records to records from the Alaska Maternal-Infant Mortality Review (Family Health Dataline, 1996).

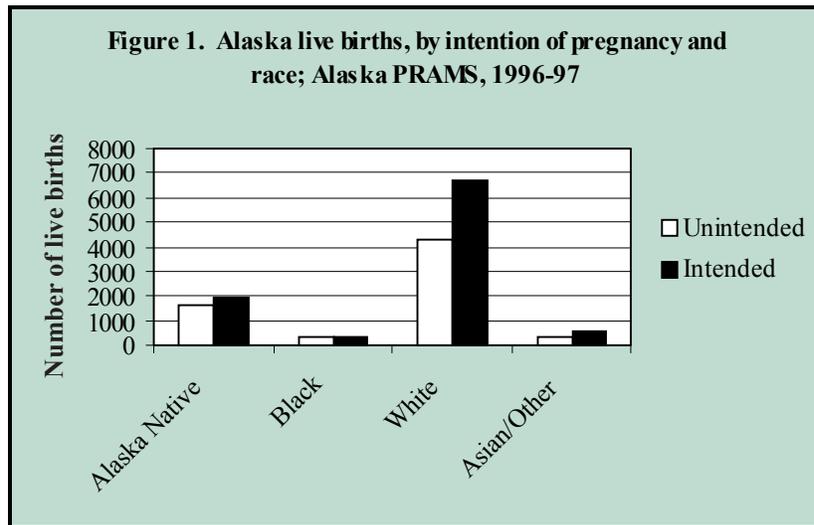
Results

What are the characteristics of women who have unintended pregnancies?

During 1996-97, there were 18,018 live births. Of these, the pregnancy intention status was known for 16,147 of which 6,588 (41%) were the result of an unintended pregnancy.

Women of all racial groups had a high proportion of unintended pregnancies: 50% of black, 46% of Alaska Native, 39% of white and 35% of Asian women reported that their pregnancy was unintended (Figure 1). Of the 6,588 total births in Alaska that resulted from an unintended pregnancy, 66% occurred among white women.

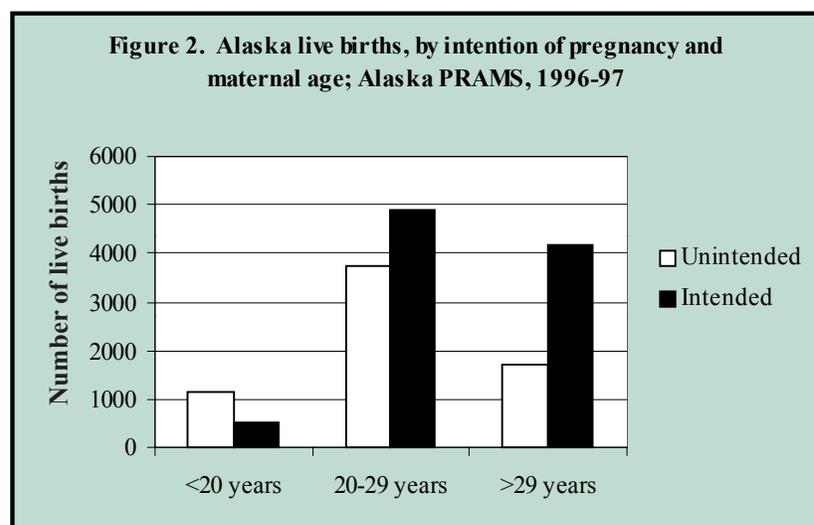
Among women at least 20 years of age, women of all educational levels had a high proportion of unintended pregnancies: 46% of women with less than a 12th grade, 43% with a 12th grade, and 32% with more than a 12th grade education reported that their pregnancy was unintended. Of the 5,385 total Alaska births to women at least 20 years of age that resulted from an unintended pregnancy, 88% occurred among women with at least a 12th grade education and



43% occurred among women with more than a 12th grade education.

Maternal age was highly associated with having an unintended pregnancy: 69% of women under 20 years, 43% of women 20-29 years, and 29% of women over 29 years of age reported that their pregnancy was unintended (Figure 2). Nevertheless, most unintended pregnancies occurred among non-teenage women: of the 6,588 total births in Alaska resulting from an unintended pregnancy, 57% occurred among women 20-29 years of age.

Marital status was highly associated with having an unintended pregnancy: 64% of unmarried and 33% of married women reported that their pregnancy was unintended. Nevertheless, most unintended pregnancies occurred among married women: of the 6,588 total births in Alaska resulting from an unintended pregnancy, 59% occurred among married women.



Recent separation or divorce was highly associated with having an unintended pregnancy: 66% of women who had been separated or divorced during the 12 months before delivery and 38% of those who had not been separated or divorced reported that their pregnancy was unintended. Nevertheless, the great majority (83%) of unintended pregnancies occurred among women who had not been recently divorced or separated.

Who pays for unintended pregnancies?

A disproportionate number of births paid all or in part by Medicaid were the result of an unintended pregnancy: 36% of all births and 44% of births resulting from an unintended pregnancy were paid for by Medicaid. A state or federal insurance source paid completely or in part for 61% of all births and 67% of births resulting from an unintended pregnancy. The Alaska Native Health Service or Native Health Corporation paid for 11% of all unintended births, the smallest proportion of any insurance examined (Table 1).

Table 1. Payment source for all live births and for births resulting from unintended pregnancies.

Delivery payment source	Proportion of all live births in Alaska paid all or in part by payment source* N=18,018	Proportion of live births resulting from an unintended pregnancy paid all or in part by payment source* N=6,588
Medicaid	36%	44%
Private insurance	37%	28%
Self-pay	26%	22%
Military	16%	14%
Alaska Native Health Service or Native Health Corporation	11%	11%

*Because births may be paid for by multiple insurance sources, the figures in these columns add up to more than 100%

What are the acute health effects of unintended pregnancies to the fetus and infant?

Infants who died during the first year of life were less likely to have been born as the result of an unintended pregnancy than infants who survived: among infants who died before one year of age, 28% were born as the result of an unintended pregnancy while 41% of infants who survived were born as the result of an unintended pregnancy (the weighted percent of missing responses to the PRAMS question on pregnancy intention was 20% for mothers whose infants died and 10% for mothers whose infants survived).

An infant’s birth weight was not associated with whether or not the infant resulted from an unintended pregnancy: 40% of low birth weight infants and 41% of normal birth weight infants resulted from an unintended pregnancy.

Compared to births among women who did not smoke, infants born to women who smoked tobacco during the third trimester of pregnancy were more likely to have resulted from an unintended pregnancy but the difference was not great: among women who smoked, 48% of infant births resulted from an unintended pregnancy while 39% of births to women who did not smoke resulted from an unintended pregnancy.

A mother’s history of drinking alcohol during the third trimester was not associated with whether or not her infant was born as the result of an unintended pregnancy: 42% of infants born to mothers who drank alcohol and 41% of infants born to mothers who did not drink alcohol resulted from an unintended pregnancy.

What is the relationship between unintended pregnancy and maternal experience of violence?

Women who reported experiencing physical abuse immediately before or during pregnancy were more likely to have an unintended pregnancy: 55% of women who reported being physically abused during the 12 months before delivery or during pregnancy and 39% of women who did not report being

abused had an unintended pregnancy. Of the 6,588 total births in Alaska resulting from an unintended pregnancy, 9% occurred among women who reported being physically abused during pregnancy.

Women who reported having been raped during pregnancy or since delivery were more likely than other women to have an unintended pregnancy (53% vs. 41%), but this difference was not significant at the 95% confidence level.

Why did unintended pregnancies occur?

Among women who had an unintended pregnancy, 40% indicated that they were using birth control when they became pregnant. PRAMS was not able to ascertain the reasons why birth control failed for these women.

Among women who had an unintended pregnancy and who were not using birth control, the reasons given for not using birth control (allowing for multiple responses per woman) included: 27% did not think that they could get pregnant; 23% did not want to use birth control; 20% had side effects from birth control; 14% did not think that they would have sex; and 13% had a husband or partner who did not want to use birth control.

Discussion

We found that unintended pregnancies resulting in live births in Alaska had few acute identifiable health effects to the infant. By contrast, women who had unintended pregnancies were more likely than other women to be the victims of physical and sexual abuse, including rape. Moreover, the most significant effects of unintended pregnancies may be long term and PRAMS includes data only for events that occur by the time that the survey is returned. For example, other studies have found that children born following a mistimed or unwanted pregnancy had abnormal development (Institute of Medicine, 1995), an effect that might not be apparent for years following delivery.

In addition to health effects, unintended pregnancies, including those that result in a live birth, cause a significant financial burden to society. Using 1994 rates, women in the U.S. will have an average of 1.4 unin-

tended pregnancies each by age 45 years (Henshaw, 1998). Similar to other states (CDC, 1999), we found that over half of unintended births are paid for by a govern-

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ment source. A large number of births were also paid for by private insurance, costs that are eventually distributed to others in the form of higher insurance premiums. Elective abortions, an outcome of unintended pregnancies that PRAMS is unable to evaluate, also cause a large societal financial burden.

Finally, unintended pregnancies and the births that result from them are a concern because they often occur among women less equipped to appropriately raise a child, such as women who are young, uneducated, and unmarried. For example, there is a strong association between mother's age at first birth and poverty (Institute of Medicine, 1995). Furthermore, children raised by single mothers are less likely to have high educational achievement and are more likely to have encounters with the criminal justice system than children raised by two parents (Institute of Medicine, 1995).

For these reasons, decreasing unintended pregnancies has become a high public health priority. Unfortunately, there is no easy group to target for intervention programs. As the data presented here demonstrate, unintended pregnancies occur among all demographic groups regardless of education, age, marital status, or race. Consequently, while some focused interventions may target specific groups such as teenagers, a comprehensive approach must reach the majority of Alaskan women of childbearing age.

Prevention

Other than sterilization, there are four avenues for preventing unintended pregnancies or unintended births. Abstinence will prevent 100% of pregnancies among those who reliably practice this approach. There is however, a lack of data on whether or not programs promoting abstinence work and if they do work, which approach is best. Even if abstinence programs are found to be well-suited for preventing unintended pregnancies among some subgroups, such as teenagers, these programs will remain of limited use: it is unlikely that abstinence will be adopted by older and married women, and these women have the majority of unintended pregnancies that occur in Alaska.

Various routine contraceptive methods – such as condoms, oral contraceptive pills, implants, injections, and intrauterine devices – are highly effective if used properly. Previous PRAMS analysis demonstrated that the preferred methods of post-pregnancy contraception for Alaska women were oral contraceptive pills (33% of respondents) and condoms (32%). In part to support the use of routine contraception as a means of preventing unintended pregnancies, various state legislatures have enacted legislation requiring insurance companies to reimburse for contraception. Such legislation does not exist currently in Alaska.

Unfortunately, lapses in the use of contraception, even when it is available, have often led to an unintended pregnancy. As the current analysis found, most unintended pregnancies occurred among women who were using some form of contraception. While the relative role of contraceptive education programs among some groups may be debated (Kaufman et al, 1998), this information suggests that greater availability of contraceptives should be coupled with increased education on their use.

Emergency contraception – i.e., the use of a drug or device to prevent pregnancy after intercourse – is a potential option for women who have unprotected sex (Skolnick, 1997). Most emergency contraception involves taking high dose estrogen with or without progesterone within 72 hours of unprotected intercourse. Properly administered emergency contraception can reduce pregnancy by at least 75% (Trussell et al, 1996) with minimal risk to the patient. Because this efficacy is lower than that of properly administered routine contraception, emergency contraception should not be used for routine pregnancy prevention. The primary limitation of emergency contraception is the need to obtain a drug prescription on an emergency basis. To address this issue, physicians, nurse practitioners, and physician assistants may elect to provide a prescription for, or a sample of, emergency contraception to women of childbearing age at each health care encounter. Women would then be able to fill this prescription whenever the need arose. In Alaska, where many people live in communities that do not have practicing

physicians, increasing access will need to involve a variety of health care providers including public health nurses and other health providers.

Elective abortion is the final legal option when the above approaches have failed and currently approximately half of unintended pregnancies nationally terminate in abortion (Forrest, 1994). Following a review of the literature, the Institute of Medicine has stated that legal abortions performed by licensed physicians result in few side effects to the women who have them (Institute of Medicine, 1995). Nevertheless, abortions are considerably more expensive and, in the U.S., politically and socially divisive than the first three options presented. Moreover, abortions prevent unintended births but not unintended pregnancies.

This study had several limitations. First, the number of live births occurring in 1996-97 was reported as 18,018. This number is the number of live births represented by the weighted PRAMS Phase III data which did not include a full year of 1996 live birth data. Second, we stated that among infants who died before one year of age, 28% were born as the result of an unintended pregnancy. This information was based on less than 30 infant deaths and may be an unstable proportion.

Recommendations

1. The health community should support passage of legislation in Alaska requiring insurance companies to provide reimbursement for contraception.
2. State and local agencies and private groups should develop, promote and evaluate appropriate interventions to prevent unintended pregnancies, including abstinence education, routine

- contraception, voluntary surgical sterilization options, and emergency contraception programs.
3. Further research is warranted to determine if abstinence programs work for specific high-risk groups (such as teenagers) and, if so, which programs work best.
4. Community interventions to prevent unintended pregnancies should be directed towards all persons of childbearing age,

- regardless of gender.
5. Public health officials and the health care community should develop mechanisms to increase the awareness and availability of emergency contraception for health care providers and the public.
6. Persons wishing more information on the availability of emergency contraception services in Alaska should call 1-888-NOT-2-LATE.

Contributed by Brad Gessner, MD MPH.

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