Central Jersey
New Mother Survey
Data Report

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Purpose

The data from this study will be used to evaluate the effectiveness of current health promotion initiatives and to develop future programming incorporating the emic perspective, the “why” of the woman’s choice.

The purpose of this study is to:

Explore the health decisions and behaviors of new mothers in 4 key areas:
- Preconceptional intake of folic acid
- Initiation of prenatal care
- Breastfeeding
- Infant sleep position

Elicit the new mother’s perspective regarding:
- Prenatal education
- Tobacco and alcohol use

Conceptual Framework

Pender’s Model of Health Decisions
- Pender proposes that an individual bases their health decisions on their own past histories as well as that of their families.
- Additionally every decision has an associated cost and the individual must decide what they are will to expend, time, money or even perceived inconvenience. Finally the decision becomes a behavior that can be positive, enrolling in prenatal care during the first trimester or negative, continuing to smoke during and after pregnancy.

Research Questions

- What is the prevalence of specific infant health promotion strategies adopted by new mothers?
- Is there a difference in prevalence level according to ethnicity?
- What are the sources of information available to the new mother to make infant health decisions?
- What is the decision process that the new mothers use in making their choices regarding infant health promotion?
Instrument

- Adaptation of *A Survey of Mothers in North Dakota 1996 & 1999*
- 19 item pencil & paper questionnaire
- Recruitment tool for qualitative study:
  - Semi-structured telephone interviews

Methodology

- An epidemiological approach has been combined with a qualitative, ethnonursing approach to explore the health decision process of the participating new mothers.
- Participants self-selected participation through completion of the survey and the provision of a phone number for the follow-up interview.

Quantitative Methodology

- Central Jersey New Mother Survey used to collect epidemiological data on the incidence of the targeted health behaviors
- Distributed to new mothers on the postpartum unit
- Convenience sample of new mothers who have have given birth at participating hospitals in the central NJ region.
  - Sample: N = 394

Qualitative Methodology

- Ethnonursing approach to explore the health decision process of the participating new mothers.
  - Convenience sample of new mothers willing to participate in semi-structured telephone interviews, especially of Non-WIC eligible, African-American Mothers
  - Sample: N = 13 mothers
Statistical Analysis
- All survey data was coded into nominal data
- Statistical Program Social Sciences (SPSS)
  - Frequencies
  - Correlations
  - Cross tabs
  - Mann Whitney U Test
- Because the survey information is nominal data the more familiar statistical tests for significance could not be utilized. The Mann Whitney U test is employed when you need to compare to independent samples using nominal data and where an “normal distribution” is not anticipated.

Multi-Center Regional Study

Participant Recruitment

Initial Institutional Review Board (IRB) approval was obtained from Kean University with subsequent approval obtained from the IRB of the individual hospitals agreeing to participate. This resulted in a rolling admission of participants to the overall study. No participants were excluded from the study. Data collection was initiated in late January 2002 and ended in mid-November 2002.

As you will note on the following graph, hospital “two” has the highest number of participants and achieved the goal of enrolling 10 % of the previous year’s births at their hospital.

Institutional Participation

- Data collection conducted at 7 of the region’s 8 birthing hospital
Participant Demographic Profile

Participants had the option to complete or leave blank any of the individual items contained in the survey. Items that were not answered were coded as “9999.” It is important to remember when reviewing the data from this survey that participants self-selected. These data reflect the responses of the women completing the survey and cannot be generalized to all women giving birth in the region.

- Are you Married? Yes: 329 84%  No: 49 12%  Not Indicated: 16 4%

- What is your age? ___________ Years
  Responses to this question were coded into age categories as illustrated below:

  As the above graph clearly illustrates the majority of the new mothers completing the survey were between the ages of 26 and 40, with 25% in the 26-30, 39% in the 31-35 and 14% in the 36-40 age group.
Demographics

- **What is the highest level of education you have completed?**
  - No formal education
  - Some grade school
  - Some high school
    - School/GED
  - Some college
  - College
  - Some graduate work
  - Graduate school

- **What is your annual income?**
  - Under $10,000
  - $10,000—$19,000
  - $20,000—$29,000
  - $30,000—$39,000
  - $40,000—$49,000
  - $50,000 or More
  - Don't know

35% graduated college
18% had completed some college
18% completed graduate school
16% graduated high school or had GED
Participant Race/Ethnicity

Included in the demographic section participants were asked:

**Where were you born?** 76% USA

18 other countries were identified = 17%  
7% did not respond

Additionally, participants were asked:

**What is your race/ethnicity?**

The chart below illustrates their responses.

Due to the predominance of white respondents, all non-white responses were recoded for the purpose of analysis.
Maternal Interviews

The elimination of racial disparities is a major goal of *Healthy People 2010*. If we are to be successful in these efforts we must reach out to individuals and gain insight into their health decisions and behaviors. Eliciting the perspective of new mothers with regard to their health decisions and behaviors, for themselves and for their babies, provides valuable insight into the effectiveness of health promotion initiatives.

Reaching the target population of the qualitative study, Non-WIC eligible African-American women, a vastly under studied group, was a challenge. Due to the extremely small number of respondents providing contact information interviews were initiated with all volunteers. Following ethnonursing methodology, interviews were completed until saturation of responses were achieved. Interviews were completed with:

- **8 African-American**
  - 5 Non-WIC Eligible
  - 3 WIC Recipients
- **5 White Women**
  - 3 Non-WIC Eligible
  - 2 WIC Recipients

For the purpose of this report the qualitative data will immediately follow the quantitative data. It must again be noted that this data is limited to the women who agreed to participate. However, the importance of their responses must be acknowledged and taken into consideration for future health promotion planning.

*The contribution of these women is gratefully acknowledged for sharing of their experiences and suggestions for improvement in current health promotion initiatives.*
Preconceptional Folic Acid Intake

Preconceptional intake of 400 micrograms of folic acid is a health behavior that can protect the fetus from developing devastating birth defects such as anencephaly and spina bifida that start to develop prior to most women even knowing that they are pregnant.

The descriptive data indicates that 53% of the white women took the recommended 400 micrograms of folic acid prior to pregnancy as compared to 37% of the non-white women. 63% of the non-white women reported no folic acid intake compared to 33% of the white women.

Mann Whitney U, $p = .09$

Approaching significance
Folic Acid

Looking at differences by educational level there is almost an inverse proportion with 56% of the college educated women taking folic acid daily compared to 58% of the high school educated women not taking folic acid. This difference is approaching significance at $p = .05$.

Comparison by income has similar findings with 67% of those listing income as <$30,000 not taking folic acid pre-pregnancy while 59% of the women with an income>$30,000 took folic acid as recommended.

Mann Whitney U, $p = .05$

Mann Whitney U, $p = .06$
Qualitative Data

Common themes did emerge when discussing pre-pregnancy intake:

- Knew of benefits for baby
- Message to take folic acid “when planning to have a baby”
- Unplanned pregnancy
- Importance of family (grandmother)

100% of the women interviewed has some knowledge regarding the protective benefits of folic acid for the fetus. Some had been told by their healthcare provider “to take folic acid when planning to get pregnant.” For all but 1 of the women the pregnancy was a surprise. She was in the target population of non-WIC eligible African American women. Her grandmother had read about folic acid and went so far as to buy the multivitamins and gave them to her with the directive, “You want to have a baby? You take these vitamins for at least 3 months first.”

The information obtained is similar to that of Gallop poll [NJ March of Dimes, 2001] with 56% of NJ respondents sited the media as their source of information as compared to 51% nationally. In NJ 17% stated that physicians were the source of folic acid information, as compared to 19% nationally. Additionally 75% of women 18-44 (NJ & Nationally) were aware of folic acid benefits, with 24% of NJ residents knowing it should be taken before pregnancy compared to 16% nationally. Unfortunately as the data indicates, knowledge does not translate into behavior.

Recommendations

- Emphasize overall benefits of multivitamin with Folic Acid as part of “healthy lifestyle” in advertising campaigns.
- Include information regarding Folic Acid in health class curriculum for middle and high school.
- Encourage doctors and midwives to discuss Folic Acid as part of a healthy lifestyle.

If we are to reach the Healthy People 2010 Objective to have 80% of women taking folic acid on a daily basis we need to incorporate the suggestions of these new mothers. Advocate for universal intake of daily folic acid. This will not only offer protection to our unborn babies but research indicates that folic acid intake is associated with protection from colon and breast, as well as Alzheimer’s.
Preconception Health Education

Before you became pregnant did your doctor, midwife or other health care professional discuss any of the following to prepare you for a pregnancy? Check all that apply.

- Maintain a healthy life style  66%
- Do not use tobacco or alcohol  58%
- Take a multi-vitamin with folic acid every day  63%

Initiation of Prenatal Care

- 100% of the women participating in the survey began prenatal care in the 1st trimester.

The 2nd healthy behavior that a woman can adopt to increase her chances of having a healthy baby is enrollment into prenatal care during the first trimester. As noted 100% of the respondents adopted this behavior. However it must be noted that there is a disproportionate number of women who listed income as >$30,000 and have attended college or graduate school. This is due to the high response rate from hospital 2 and their client based coming from one of the wealthiest counties in NJ.
During any of your prenatal visits, did a doctor, nurse or other health care worker talk to you about any of the things listed below? *Check all topics you remember being discussed during your doctor/clinic visits.*

- Talked about how tobacco and alcohol could harm my baby
- Talked about how good breastfeeding is for me and the baby
- Talked about always putting babies on their backs to sleep
- Talked about childbirth and breastfeeding classes
- Talked about my feeling sad or depressed

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### Qualitative Findings

- Main source of information
  - **Written materials from provider**
  - **Books & Media**
- Providers should spend *more time* discussing “women’s health issues”
- “I’ve never read more than I did when I was pregnant.”

The women themselves addressed this lack of education by providers by commenting that most discussions were brief, if held at all, and that providers should take a more proactive role by encouraging women to adopt these healthy behaviors, not only for the good of their baby but also for themselves.
The provision of breastmilk during the infant's first year is the 3rd healthy behavior that a woman may choose for herself and her baby. The benefits of breastfeeding for both the mother and the baby are becoming more well known. Unfortunately we still live in a formula feeding society that views these 2 methods of infant feeding as equal, but they are not. The Healthy People 2010 target is to achieve parity at 75% of all women breastfeeding their infants at discharge. As this slide indicates, 76% of white women are breastfeeding their infants, exceeding the target. However, only 69% of the non-white women are breastfeeding their newborns.

Women were asked to indicate, who if anyone influenced their feeding choice. It is interesting to note that of the 105 women who responded 27% wrote in “myself.” This is compared to 17% listing the father of the baby and 14% listing the provider as having the most influence on the feeding decision.
Barriers to Breastfeeding

Similar to the findings of “Does Race Matter” published in the August 2001 issue of Pediatrics, the majority of the women indicated that they simply preferred “not to breastfeeding.” 2% of the women not breastfeeding indicated that they were going to return to work or school, 1% thought that they did not have enough. Additionally, another 2% responded that they had tried but were unsuccessful, however they did not indicate this was due to a lack of support on the part of the hospital staff.

Qualitative Data

- Benefits for baby
- Family support
- “My own decision”
- Little, if any, discussion with provider
- “Not for me”
- Too Much Time

In discussing their feeding choice all 5 Non-WIC eligible African-American women wanted to breast feed their infants. Four were successfully breastfeeding their babies at the time of the interview, 2-6 weeks postpartum. The one woman was not able to breastfeed her baby for medical reason but had breast fed her first child. All women felt supported in their decision by their families and friends and knew at least one other woman who breast fed their babies.

Two of the African American women receiving WIC were breastfeeding their babies, they both said they had been encouraged to do so by both their providers and the WIC staff. One woman not breastfeeding commented that she had seen her friend breastfeeding and stated, “that baby just drained her dry on one side then the other.. it’s not for me. They just want to eat all the time.” In discussing the second woman’s choice she said it took longer and the “baby wants you 24/7, they just want to eat all the time and I'm going back to school and I work. Both of these woman stated that they knew breastfeeding was “best for the baby.”

These findings are in keeping with Pender’s health decision model. The women were not willing to expend the cost, what they perceived as “more time,” and the loss of a positive self image." The converse being true for the women who are breastfeeding.
Recommendations

While the breastfeeding rates are improving the belief still exists in the general public's view that breast milk and formula are equivalent. Women must be provided with consistent, accurate information. Realizing that some breastfeeding is better than none, a kinder gentler approach is needed when assisting and supporting women who are breastfeeding. And finally, women need to be informed of the benefits of breastfeeding for themselves as well as being the best form of nourishment for their babies.

- Continue efforts to support woman’s choice through education.
- Provide factual information regarding “naturalness” of breastfeeding.
- Don’t make breastfeeding an all or none issue.
- Encourage providers to discuss benefits for mother as well as baby.

Back to Sleep

“Back to Sleep” has had a dramatic effect on the overall rate of Sudden Infant Death Syndrome. However when broken out by race, a disproportionate number of black babies still die from SIDS. As this slide dramatically points out, the “Back to Sleep” message has been adopted by 50% of the non-white mothers responding to the survey.
17.8% of the total cases chose the side position. All indicated they had been told to do this by a MD or RN while 31% indicated they chose this position to prevent sudden infant death syndrome.

Qualitative Data

- Aware that it is best to put infant to sleep on the back.
- Doctor/nurse “Told me side or back.”
- Afraid baby will choke.

 Discussions with all of the women who participated in the interview process clearly indicate a need for clear and consistent information, especially with regard to the back to sleep message. The women also stated that there was a need to re-educate grandparents with regard to infant sleep position. Additionally, there was confusion with regard to “belly time,” as a component to normal growth and development for babies.

Recommendations

- Reinforce “Universality” of back to sleep
- Clear need for consistent information
Several additional health behavior topics were included in the survey. Question 9 asked the woman to indicate alcohol consumption during the last trimester. What is significant about this question is the fact that the women actively chose not to answer it at all which may indicate the need on the part of the women not to disclose because it is such a value laden topic.

- Alcohol consumption last trimester:
  - 55% “None”
  - 20% < 1 drink per week
  - 38% Did Not Answer the Question

- Smoking During Pregnancy:
  - 82% “Didn’t Smoke”
  - 7% Stopped
  - 2% “Tried to Stop”

4% Smoking Now

One must remember that these women started to smoke again prior to hospital discharge.
Health Policy Implications

- Preconceptional health messages must be given to all women of childbearing age in the context of general health promotion
  - Folic Acid: From Flintstones to Multivitamins
  - Back to Sleep
  - Maternal and Child Benefits of Breastfeeding

- Integrate into curriculum beginning at the 5th grade level

- Health providers must become more active in providing comprehensive and accurate information

- We should ensure that high quality, culturally and linguistically appropriate client information is readily available