



## Rural and Metropolitan Experiences during Pregnancy: A View from Central North Carolina

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Receiving date: October 16, 2015 Accepted date: October 30, 2015 Published date: November 6, 2015

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### Abstract

**Objectives:** Understanding health behaviors and barriers to care and access among pregnant and postpartum women in central North Carolina. Our seminal study explores the experiences of pregnant and postpartum women to provide recommendations on policy and practice for a comprehensive approach to care for women in rural and metropolitan North Carolina.

**Methods:** We designed a culturally tailored guided interview to assess information-seeking behaviors and barriers to information seeking among pregnant and postpartum women in three central NC counties. Four community-based focus were conducted. We used a local informant and health care worker through health departments and WIC offices to recruit 26 expectant and 2 postpartum women. Interviews were transcribed and analyzed by coding the data into thematic themes.

**Results:** The data were coded manually and emerging themes included pregnancy and postpartum related knowledge and misconceptions and personal, societal, and structural barriers. Lack of access to primary care and transportation were the largest barriers to accessing medical care as well as inadequate medical information from their medical provider.

**Conclusion:** Lack of access to transportation and adequate health care information were of primary concern to pregnant and postpartum women in Central North Carolina. The eight themes that arose in the focus groups are useful and essential in understanding the socioeconomic and barriers to care of women in rural and metropolitan NC.

**Significance:** More research is needed to understand the unique perspective of pregnant and postpartum women in rural North Carolina and how the public health community can reduce disparities and barriers to care. This sample of women's voices in central North Carolina directly informs public health knowledge of the resources needed to improve women's health throughout pregnancy and postpartum.

**Keywords:** Access to care; Postpartum; Primary care; Prenatal care; Rural health

### Introduction

Women's experiences with prenatal and postpartum care can vary widely between rural and metropolitan communities, within regions of the United States, and among minority populations. In North Carolina, these discrepancies lead to unique experiences during pregnancy and in the postpartum period. Problems with access to health care in pregnant women are especially acute among North Carolina's poor, rural, and minority populations [1,2].

North Carolina (NC) still ranks among the 10 worst states in the nation in infant mortality [1]. Large racial disparities persist—the African American infant mortality rate is two times larger than the Caucasian rate [1]. According to 2010 estimates from the United States Department of Agriculture, approximately 30% of North Carolina's population lives in rural areas, compared with 17% nationwide [1]. In rural areas, the geographic availability of physicians and the distance to hospitals pose unique problems for North Carolina's pregnant

population. Almost half of the state's population lives in a county with just one hospital (60 counties), and 17 NC counties without hospitals [2].

According to the 2012 NC Health Professions Data System, almost a third of NC counties (29 counties) did not have a single gynecologist/obstetrician/midwife, and 19% of counties did not have a pediatrician practicing in their county in 2012 [1]. Thus, the availability of postpartum care is severely limited. In 2012, Halifax County, NC there is only a single physician available for every 9,596 individuals according to HRSA [3-5].

In Durham County, 92% of women initiated care during the first three months [6,7]. This pattern is in sharp contrast to NC data, which show only 83% initiated prenatal care during the first trimester. Timing of prenatal care, in addition to whether a woman receives any prenatal care, both impact birth weight. In Durham County, 36% of women with no prenatal care had low or very low birth weight babies [7].

## Methods

Pregnant and postpartum women in Durham, Halifax, and Vance Counties were recruited for participation in four focus groups (Two focus groups were done in Durham, one Spanish-speaking and one English-speaking). One moderator conducted the focus groups over a 2-month time-span. The focus groups oversampled African American/Black women because the disparities for this population are the greatest. Women were encouraged to discuss how they view health, health care in their community, how their relationships impact their health, and pregnancy and infant health. Specific discussion areas included: individual health, preventive health behaviors, health information and advice, relationships, nutrition, stress, provider-patient communication, access to primary care, and general community needs. The North Carolina State Center for Health Statistics data, Carolina Health Professions Data System (HPDS), County-specific Community Health Assessments, CDC, and HRSA data were used to further inform the study.

Focus groups were chosen to develop a deeper understanding of the underlying difficulties behind the statistics. Durham, Halifax, and Vance Counties were selected to compare the experiences of pregnant and postpartum women in metropolitan (Durham) and rural (Halifax and Vance) communities.

The ethnographic community based focus groups were recruited through local maternal health clinics, Pregnancy Medical Home Care Managers and WIC counselors. Care Managers were used to recruit women because of their role in direct patient care, serving as a liaison between providers and patients [8].

Participants received a gift card valued at \$20 for their time.

## Focus group demographics

Total, 28 were consented to participate. This sample included 9 women in Durham, 16 women in Halifax, and 3 women in Vance. Women ranged in age from 18 to 34 and were English-speaking and Spanish-speaking. Six women were Latina and exclusively Spanish-Speaking. Of the remaining participants, all were English-speaking; 20 were African-American and two were Caucasian. The majority of women were currently pregnant. All pregnant women were in their second or third trimester. Two women were 4-5 weeks postpartum.

## Data analysis

Focus groups were transcribed and analyzed for themes. Eight themes were identified. Themes were compared to the CDC's Pregnancy Surveillance, and County Community Health Assessments, and The State Center for Health Statics county and state-wide data. Comparison between identified-themes and existing statistics confirmed that the focus groups were representative of North Carolina's metropolitan and rural communities, respectively.

## Limitations

A limitation of the study was the relatively small sample size. For this reason, these findings cannot be generalized to the broader community based on this study alone. The methodology is a limitation due to use of structured questionnaire and self-reported data.

## Results

It is important to acknowledge that the number of focus groups in this study was limited. The themes that arose in the focus groups are useful and essential in understanding the socioeconomic and barriers to care of women in rural and metropolitan NC. Eight themes were identified in the focus groups. These themes reveal some of the barriers to providing a comprehensive approach to care of women before and after childbirth.

### Theme 1: Late to enter prenatal care

Many women took pregnancy test at 6-10 weeks. One woman found out via a test administered in the emergency room; three women were informed during routine Pap smear appointments. One woman waited eight weeks to enter care after finding out she was pregnant. Many women took at home pregnancy tests and then followed up with the health department maternal health clinic. Three women were late to prenatal care due to pending Medicaid status for Medicaid for Pregnant Women.

### Theme 2: Communication with provider

Women in Halifax County noted that the doctor they saw at the Health Department was a male and therefore they felt uncomfortable, since "he clearly had never had a baby." Half of participants noted that they did not understand what their doctor was saying at times when explaining health information as he was speaking "doctor." Women discussed where they looked for health information. Some women said they received information about healthy pregnancy from their mother or grandmother, some women noted the Internet, a few women noted "I stay to myself," and a small group noted doctor/health provider. In the rural counties, more women identified family members as sources of information. In Durham, more women noted the Internet or health care providers; although providers were still not in the majority.

### Theme 3: No primary care provider

In Halifax and Vance, 2 of 19 women had a Primary Care Provider (PCP). The majority of women in Halifax discussed coming to Maternal Health Clinic at Halifax Heath Department for 12 week postpartum visit and not checking back in with any other doctor or medical provider after pregnancy. Women in Vance noted that they only have one hospital. They also all have case managers because they are "high risk." One woman with gestational diabetes has difficulty getting to appointments and she does not have a PCP. In Durham, 2 of 9 women had a PCP.

### Theme 4: Lack of transportation

In rural counties (Vance and Halifax), women did not have rides to medical appointments, others to help with rides, or funding for programs. Women noted that they come to the health department for prenatal care because transportation is provided. However, transportation is limited to the health department for prenatal and 12 week postpartum visits. Some women noted that the private clinics with women's health specialists have shorter wait times, but they do not provide transportation. After budget cuts led many health departments to close, many women experience much longer driving distances to receive care. One woman stated that it takes 1 hour to get to her maternal health appointments. Respondents considered problems with transportation as a significant barrier to receiving services for women

and infants. They considered it to have a role in incomplete referrals and a large difference between under/uninsured clients and those with insurance.

### **Theme 5: Language barriers in rural counties**

Language barriers emerged for Spanish-speaking women only in Halifax and Vance Counties. Rural county participants discussed frustrations and difficulties they had participating in treatment when services were offered in English only. The Halifax health department lost funding for an interpreter and currently has a blue phone for interpretation. One participant brings her 4th grade daughter to appointments. One participant felt left alone and alienated during her previous birth without a Spanish speaking staff or an interpreter.

### **Theme 6: Support systems**

Many women noted a lack of support system, especially in the rural counties of Vance and Halifax. Women discussed staying to themselves, relying on God, or talking to their boyfriends. Many women said they feel very alone in their pregnancy. They also noted that it is difficult living in a rural area because transportation is very difficult.

### **Theme 7: Breastfeeding**

Participants in all counties discussed breastfeeding and formula feeding with providers early in pregnancy. The majority of rural participants stated they had already decided they did not want to breastfeed. Conversely, Durham participants were more likely to state that they wanted to breastfeed. Women in Halifax County stated that the closest WIC was a forty five minute drive and difficult to access. Vance and Durham County WIC offices are located within their health department.

### **Theme 8: Gestational weight gain and body mass index (BMI)**

Women in all counties did not discuss gestational weight gain or BMI with a medical professional. In the Spanish-speaking group in Durham, none of the women knew their BMI. Women discussed receiving mixed-messages about "eating for two." Six women noted that they were confused about the amount of weight they should gain during pregnancy. Only one woman in the Durham English focus group reported being told that she was gaining too much weight. When asked if their provider recommended certain types of exercise, women responded, "No."

## **Discussion**

The focus groups in these three specific counties in NC surveyed demonstrated the vast barriers in care and their unique experiences while pregnant in specific counties in North Carolina. Low-income women were surveyed in these focus groups to gain an understanding of their voices which are so often left out of our public health program decisions as well as policies.

Lacking a PCP is the largest barrier to care for women in all three counties. The focus groups revealed the role of transportation in obtaining and utilizing a medical home. The Halifax Health Department has already responded to the need for transportation for pregnant women, by providing a free van to take them to maternal

health appointments at the Health Department. However, this service is not available to take women to Rural Health Group, the only federally qualified health center in Halifax, and WIC does not fund transportation.

The Rural Health Group is also home to Halifax's WIC office, in which all Halifax participants from focus group are enrolled. This provides an ideal opportunity for referrals from the WIC office to the Rural Health Group [4].

Even in Durham County, which has one federally qualified health center and a free clinic as well as an extensive public transportation system, women are not obtaining a medical home. This has implications for follow-up postpartum for mothers; women may be lost to care after pregnancy. Currently, Medicaid for Pregnant Women is covered until 12 weeks postpartum. While women are active in our medical system during pregnancy, it is imperative that the medical system refer women to Primary Care.

Half of participants noted that they did not understand what their doctor was saying at times when explaining health information. Women did not feel confident in the decisions they were making during pregnancy and postpartum. One mother was given advice postpartum from five different providers regarding how to treat her son's infantile colic. She felt very confused by the many messages she was receiving from providers. Throughout pregnancy and postpartum the medical community must ensure uniform messaging, information, and healthy literacy so women are getting evidenced-based information that they can easily understand and implement.

Providers are not discussing weight during pregnancy, ideal weight gain, exercise or BMI. Women are not getting necessary information from their medical provider to make informed decisions regarding healthy weight gain for their pregnancy. The lack of conversation of ACOG guidelines for healthy gestational weight gain during pregnancy is necessary to achieve best pregnancy outcomes [9]. Research suggests that excessive weight gain during pregnancy have negative health implications for mom and baby that can last a lifetime [10]. Findings from small qualitative studies that provide patients' perspectives on the quality of patient-provider communication related to healthy weight gain suggest that patients receive mixed messaging, inconsistent information and voice a need for more, consistent advice on healthy weight gain [11].

The purpose of these community-based focus groups was to better understand the experiences of pregnant and postpartum women and to provide recommendations on policy and practice for a comprehensive approach to care of women after childbirth. While increasing the number of obstetricians, midwives and pediatricians is a long-term goal, this study sought intermediate goals which could realize improved postpartum care for rural and urban women in NC, while access to obstetric and pediatric care is still limited.

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