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Facilitators of prenatal care access in rural Appalachia

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ABSTRACT

Background: There are many providers and models of prenatal care, some more effective than others. However, quantitative research alone cannot determine the reasons beneficial models of care improve health outcomes. Perspectives of women receiving care from effective clinics can provide valuable insight.
Methods: We surveyed 29 women receiving care at a rural, Appalachian birth center in the United States with low rates of preterm birth. Semi-structured interviews and demographic questionnaires were analyzed using conventional qualitative content analysis of manifest content.
Findings: Insurance was the most common facilitator of prenatal access. Beneficial characteristics of the provider and clinic included: personalized care, unrushed visits, varied appointment times, short waits, and choice in the type and location of care.
Conclusion: There is a connection between compassionate and personalized care and positive birth outcomes. Women were willing to overcome barriers to access care that met their needs. To facilitate access to prenatal care and decrease health disparities, healthcare planners, and policy makers need to ensure all women can afford to access prenatal care and allow women a choice in their care provider. Clinic administrators should create a welcoming clinic environment with minimal wait time. Unrushed, woman-centered prenatal visits can increase access to and motivation for care and are easily integrated into prenatal care with minimal cost.

The World Health Organization (WHO)[1] and the United States Centers for Disease Control and Prevention (CDC)[2] call for increased access to prenatal care to improve perinatal outcomes and decrease health disparities. Early and consistent prenatal care is associated with lower rates of maternal death[3] and preterm birth[4] and increased breast-feeding rates.[4–6] In addition, high-quality prenatal care can improve perinatal outcomes for women with pre-existing medical conditions.[6–8] While a causal link between prenatal care and health outcomes is impossible to establish, the strong association between prenatal care and improved outcomes supports the need for high-quality care in pregnancy for all women.

However, providers of prenatal care do not all have an equal effect on maternal and fetal outcomes. Care provided by nurse-midwives results in fewer preterm births when compared with physician-led care.[9] Birth centers also have positive outcomes when compared with hospitals for low-risk women.[10,11] However, since midwives and birth centers usually provide care to lower-risk women than physicians and hospital-based clinics, women receiving care from midwives and within birth centers may see a variety of provider types depending on their physical or emotional needs.[11] This type of customized, interprofessional care has been shown to be beneficial in improving perinatal outcomes.[12]

While research supports collaborative, interprofessional care in pregnancy, it is not clear what components of these innovative models improve health outcomes. Several causal mechanisms have been proposed including improved maternal communication, health literacy, and greater involvement in care.[9,13,14] While data correlating prenatal care models and perinatal outcomes are useful in demonstrating efficacy, numeric information does not explain the reasons behind the success or address women's perspectives.

The National Committee for Quality Assurance (NCQA) and the Agency for Healthcare Research and Quality (AHRQ) call for all healthcare to be centered around individual needs.[15] However,

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clinicians, administrators, and healthcare planners lack evidence about the desires and needs of women seeking prenatal care, and the voices of women most at risk for poor perinatal outcomes are not well represented in studies of women's experiences of care.[16,17] Women who are marginalized in society due to race, socio-economic status, and/or location are at risk of poor perinatal outcomes for a variety of reasons.[18,19] However, clinics and clinicians need to meet the needs of these women to improve health outcomes. A reduction in health disparities is only possible if prenatal care is accessible to all women, regardless of their income, language, race, or location. Research on women's experience of access is needed to explore how effective models resonate with women's emotional, social, and physical needs. If providers and administrators have more information on successful prenatal care, they can adjust prenatal visits and clinic structures to meet the needs of vulnerable women, consistent with patient-centered care.[15]

Our qualitative descriptive study examined women's access to prenatal care at a rural Appalachian birth center in the United States with low rates of preterm birth. Nurse-midwives have provided prenatal care in this underserved region for over twenty years, using interprofessional collaboration as needed. At the time of the study, the center had a preterm birth rate less than one-fourth the state average,[20] despite the region's persistently high rates of high poverty and poor perinatal outcomes.[21–24] The women's comments about facilitators of care are useful in understanding components of effective care that may improve prenatal outcomes.

1. Theoretical framework

Critical realism was the theoretical basis for the study[25] as it acknowledges the dynamic interplay between a person or people and the structures created by those people. Critical realism has been an effective framework for the study of healthcare access,[26–28] and is an ideal basis for the study of prenatal care access as there are maternal, structural, and societal/cultural aspects involved in a woman's ability to access prenatal care.[29] For instance, aspects of the woman and the clinic interact to affect the woman's decisions.[29] Beliefs about the body, pregnancy, and personal responsibility stem from societal constructs and influence individuals' decisions, resulting in health consequences. The larger society can also affect decisions though provision of health insurance, availability of affordable transportation, and flexibility of work schedules.

2. Methods

2.1. Study design

The goal of the research was to explore the experience of women receiving care at the exemplar birth center to identify facilitators. Since the focus was on the women's perspective, a qualitative descriptive design was used.[30,31] Institutional review board approval was obtained from the University of Tennessee, Knoxville. Three types of data were used to explore the women's experience of access, interviews, demographic questionnaires, and field notes. Data were analyzed using conventional (inductive) qualitative content analysis of manifest content.[32,33]

Semi-structured interviews were the primary data source. The primary author asked five main questions during the interviews; each question could include prompts for more information. The first question, "What helps you get prenatal care?" was followed up with, "Has this changed over the time you have been pregnant?" The second major question was, "Are you getting what you want out of prenatal care?" Participants were then asked, "What do you want to get from prenatal care?" The woman was then asked about her decision between individual and group format prenatal care. The final question, "Is there anything else you would like to tell me about your ability to get prenatal care?" was designed to allow the opportunity for unstructured comments.

The primary author conducted the interviews. All interviews, except one, were conducted at the center during clinic hours. One interview was conducted at a local library per participant request. Oral and written consents were obtained prior to the interview. Family members were allowed in the interview room and occasionally participated in the discussion, but their comments were not included in the analysis as they had not given consent to participate.

A structured questionnaire was used to obtain demographic information and determine if the woman was in a group at-risk for poor prenatal care utilization; this information was used to deepen the researchers' understanding of facilitators of care. The questionnaire was developed by the research team based on the current literature on prenatal care access[17] and then edited by a nurse-midwife with research experience with women in Appalachia. To avoid prompting the discussion, the questionnaire was administered at the end of the interview. Each questionnaire was numerically linked with the appropriate interview. The primary author dictated field notes using the method described by Patton following each interview,[34] information from the field notes was added to final transcripts to contextualize the women's verbal comments.

2.2. Study location

The study was conducted at a birth center in the state of Tennessee in the United States. The birth center is located in a region of the United States known as Appalachia, defined by its proximity to a large mountain chain that runs down the Eastern side of the Country (see Fig. 1). Historically, this region has been known for high rates of poverty and poor health outcomes, and this rural county is consistent with the trends of the larger Appalachian region.[24,36] One-third of county land is designated as national forest,[37] and 20% of the population lives below the poverty line, a higher rate than surrounding urban counties.[38]

Thirty-two percent of the center's pregnant clients lived within the county. Forty-seven percent of the women lived in a contiguous county; many adjacent counties did not have an obstetric provider.[39] Nineteen percent of the center's pregnant clients crossed at least two county lines for prenatal care. Since the center was the only free-standing birth center in a 50-mile radius, women traveling long distances were often seeking birth center care.

In 2011, the center had a 2.8% preterm birth rate for established pregnant clients compared with the state average of 12.8%.[20] In addition, the birth center had a low cesarean birth rate (5.2% for those admitted in labor) when compared with a state average of 24.2% for women without a previous cesarean.[35] The birth center, accredited by the Commission for the Accreditation of Birth Centers, employed three nurse-midwives to provide antepartum, intrapartum, and postpartum care. The center offered a range of appointments times. The clinic was open Monday through Friday, opening at eight in the morning three days of the week and offering appointments until seven in the evening one night a week. All women who called for an appointment were seen for an initial visit, regardless of their insurance status or medical history.

At the initial appointment, women were provided with information about the state's Medicaid-replacement programs, known as TennCare and CoverKids. These state insurance programs were available to women with low-incomes. At the time of the study, prenatal care was available at no cost to qualifying women with TennCare and CoverKids. However, the