Spanish Childbirth Education

A Program Plan and Evaluation

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Abstract

Organized and structured childbirth education classes have been offered to women in the USA for more than 60 years. This service provides valuable health education for a life experience that is monumental for physical, mental and emotional reasons. Not only does childbirth education prepare women for childbirth, it also assists women with learning about and accessing important health services during the perinatal period. The growing number of Spanish-speaking women in the USA presents a unique challenge with regards to providing childbirth education. Not only do these women need language-appropriate services, but this group also has the highest fertility rate in the nation. These challenges, coupled with the fact that some of these women are undocumented immigrants, have led to a situation where Spanish childbirth education classes are rare and often unavailable outside of urban areas. This paper presents a childbirth education tool that addresses the needs of Spanish-speaking immigrant women in the USA. The following program plan and program evaluation are literature and theory-based and serve as a pilot program to be implemented in a rural community health center.
Introduction

Childbirth in the USA changed drastically in the early 20th century. In 1900, less than five percent of women delivered their babies in a hospital setting; by 1940, more than half of women were delivering in hospitals; and by 1960, over ninety-six percent of births occurred in hospitals (Pappenfort, 1964; Wertz & Wertz, 1977). A new technique called “Twilight Sleep” became popular after World War I and involved administering morphine and scopolamine to decrease women’s pain and memory of childbirth (Tracy & Boyd, 1977). Dr. Joseph De Lee published his obstetrical textbook that was widely-used at the time and presented pregnancy and childbirth as pathological states from which women need protection (De Lee, 1924). He became well-known in the field of obstetrics as he worked to reduce the maternal morbidity and mortality associated with childbirth by advocating for routine use of episiotomy, forceps, and manual extraction of the placenta as preventive measures (De Lee, 1920; Rooks, 1997). Yet during this era of a growing perception of childbirth as a disease state and the growing rate of hospital births, some people became concerned with the degree to which a woman’s role in her own labor and delivery was changing (Dye, 1980; Haire, 2005; Wertz & Wertz, 1977).

Childbirth education in the USA became an organized service in the 1950s and 1960s as women, their partners, and their healthcare providers sought to prepare women for childbirth (ICEA, n.d.). Pioneers in the field were inspired by the writings of Dr. Grantly Dick-Read, author of Natural Childbirth in 1944; Marjorie Karmel, author of Thank you, Dr. Lamaze in 1959; Dr. Robert Bradley, author of Husband-Coached Childbirth in 1965; and Ashley Montagu, author of Life Before Birth in 1965 (Finks, Hill & Clark, 1993; Haire, 1999; Lothian, 2008(1)). These seminal works inspired the first childbirth education classes that were based on an educational philosophy and used a structured curriculum (Lamaze, 2010). Since the 1950s, the
content, format and delivery of childbirth education have changed as educators continue to explore the best way to give women the information they need and seek in preparation for childbirth.

In recent years, women have sought out childbirth education classes less frequently and for different reasons than they had previously; they even view and approach childbirth differently than women did in the mid-20th century (Declercq, Sakala, Corry & Applebaum, 2007; Lothian, 2008(1); Morton & Hsu, 2007). In spite of the changing landscape of childbirth education, most curricula used today share the following common goals: to educate women and their birth partners about the physiological changes of the mother and baby that occur during pregnancy, labor, and delivery; to provide information about coping with the pain and dynamics of childbirth; to prepare women for logistical aspects of birth; and to empower and prepare women in a manner that is most likely to result in satisfaction with the experience (Haire, 1999; Morton & Hsu 2007).

This paper presents a program plan and evaluation for providing childbirth education to Spanish-speaking immigrants. Latina immigrants have the highest fertility rates of all sub-populations of women in the USA (United States Department of Health and Human Services (DHHS), 2010). Furthermore, many of these women live in relative disconnect from their mothers, aunts, sisters, and female friends who would normally provide a wealth of childbearing information were they still living in their home countries. Finally, many of these women are uninsured and have limited means to attend private childbirth classes. These three considerations compose the rationale for this program plan and evaluation. The following sections present further discussion of this rationale and background information about the realistic and practical considerations for implementing this program.
The program proposed in this paper is based on the premise that it will use a structured childbirth education curriculum and will be presented during multiple group sessions led by a trained childbirth educator. Some sessions could be implemented during routine prenatal clinic visits; others sessions would be held apart from prenatal clinic visits. Additional materials, including a video and handouts, would supplement the group sessions and provide women with information to review in the privacy of their home and with a birth partner who may not be able to attend the formal classes. This particular program is designed for implementation in county health departments or community health centers.

**Rationale**

Childbirth for a new mother can be an exciting although daunting experience. Yet for a woman who speaks limited English, is unfamiliar with the healthcare system in the USA, and has little interpersonal support nearby, the experience can be especially challenging. First generation Latina immigrants often settle in new communities where they know few if any of the other occupants of that community. Over time, family members may send for others still living in the home country, but this process requires time and may encompass relocation to various parts of the USA. Meanwhile, Latina women experience high pregnancy and fertility rates and also face the challenges of pregnancy and childbirth in a new country with limited resources (CDC, 2009; Hamilton, Martin & Ventura, 2009). A lack of finances generally prohibits this group of women from seeking out educational classes to prepare for childbirth. Furthermore, the invaluable experience and knowledge from their mothers, aunts, sisters and friends may not be immediately available because this primary social network is likely still in the women’s home country or dispersed across the USA (Sherraden & Barrera, 1997). Due to a lack of preparation and
awareness, Latina immigrants face myriad challenges when entering the labor and delivery department of a hospital to deliver their first baby.

As mentioned previously, a second valuable purpose of this proposal lies in the high fertility rate of Latina women. In 2007, Hispanic women gave birth to nearly 25% of live births in the USA compared with non-Hispanic Caucasians (54%) and non-Hispanic African Americans (14%) (DHHS, 2010). This group represents the fastest growing sub-population in the USA and thereby represents an important target for health services. Childbirth education classes typically include information about birth control options after delivery and the importance of a post-partum clinic visit. A program that targets pregnant Latina women would thus provide important information and encouragement to a group of women who would greatly benefit from family planning services and birth spacing.

This program addresses an objective outlined by the Healthy People 2010 initiative that is also being considered for Healthy People 2020: to increase the number of women who receive childbirth classes during pregnancy (DHHS, 2009). Numerous studies have attempted to evaluate the effectiveness of childbirth education and the results are mixed (Koehn, 2002; Schmied, Myors, Wills & Cooke, 2002). Some studies found that childbirth education can increase knowledge about the covered topics and women’s sense of empowerment (Finks, Hill & Clark, 1993; Lee & Holroyd, 2009; Malata, Hauck, Monterosso & McCaul, 2007; McKinney, 2006). Other researchers found that childbirth education does not change birth outcomes or pain experience during labor (Koehn, 2002). Perhaps more importantly, Koehn and O’Meara explain that much of the literature studying the effectiveness of childbirth education uses poorly designed evaluative methods and fails to consider numerous variables and potential confounders (2002; 1993). In spite of a lack of conclusive evidence regarding the effects of childbirth
education, key justifications for providing such education remain. As healthcare providers, part of our obligation is to provide patient education and promote patient self-efficacy and empowerment (Lee & Holroyd, 2009; Lothian, 2008). Moreover, ongoing improvement of childbirth curricula and program implementation in conjunction with a carefully designed evaluation may allow for more definitive conclusions about the effects of childbirth education.
Background

Existing Health Data

There is a paucity of data on the health of Latin American women who have immigrated to the USA. Some data that have been collected show that a few health indicators such as rates of obesity, physical activity, and tobacco use are actually better among first-generation immigrants than among subsequent generations (Kandula, Kersey & Lurie, 2004). Yet this information is limited in its depth and ability to reveal access to important services that can affect one’s ability to adapt to living and raising a family in a foreign country. In particular, there is a lack of studies regarding the adequacy of prenatal education services for Latina women. One published study of Mexican women in Los Angeles included data regarding attendance of childbirth education classes. Among women who had a vaginal delivery, 87% had not attended classes; among those with a cesarean delivery, 78% had not attended classes (Cummins, Scrimshaw & Engle, 2007). Also lacking are studies regarding the psychological effects of undergoing pregnancy and childbirth in a stressful living situation and with a limited support system.

More data and studies are needed to better evaluate the quality and availability of prenatal education services for Latina women. In the meantime, data regarding other health issues and other populations can reasonably be applied to these health questions to form some hypotheses. Many first-generation Latina women in the USA are undocumented immigrants or immigrants who have entered the country with a visa allowing for work during a restricted period of time. In a time of great need for health care reform in order for the USA to better meet the health needs of its citizens, there exist very limited health services for first-generation immigrants. Therefore, health services for immigrants are often limited to basic services such as prenatal care, well child
visits, immunizations, and emergency services, but very limited health education services. First-generation immigrants from Latin America are more likely to be of lower socio-economic status (SES) than people born in the USA (Pew Hispanic Center, 2008). Therefore, studying the prenatal education needs of other women in the USA who are also of lower SES may be useful.

Both qualitative and quantitative data are needed to directly address the question of whether current prenatal education services are meeting the needs of Latina women. Data from qualitative efforts such as focus groups and interviews with women from this population will provide valuable direction for creating a curriculum that speaks to the needs and cultural preferences of Latina women. Evaluation results from a program such as what is described in this paper will also provide useful data regarding this question.

**Strategies to Address Political Challenges**

When reviewing the context in which this program plan will be implemented, an important political component to consider is the current, national debate regarding undocumented immigrants. Some recipients of this program will be undocumented immigrants, and a number of people in this country object to undocumented immigrants receiving public services. Yet county health departments and community health centers have continued to provide prenatal care for women without documentation of legal immigration status in recognition of the health and financial risks incurred when women do not receive prenatal care. A strategy to deal with potential political objections of providing services for these women is to dovetail this program’s implementation with the current prenatal services already provided for undocumented immigrants at public clinics.
Strategies to Address Logistical Challenges

One challenge to providing full-scale childbirth education to Spanish-speaking women is a lack of bilingual staff members at health departments and community clinics. The few bilingual staff members who are available at a given clinic are often stretched thin to provide interpreting for an array of other programs like prenatal and well child clinics; the Women, Infants and Children program; diabetes education services; and home visits with maternity care coordinators and children service coordinators. Some Spanish childbirth education may be provided through individual home visits or prenatal clinic visits. Yet teaching in these settings is grossly restricted by time and lacks the standard, in-depth coverage of material allowed for in formal childbirth education, such as with established programs like the Lamaze or Bradley Method® curricula. To meet the challenge of limited bilingual staff, this program plan will be delivered in part in a video format to allow for more feasible implementation. Many rural health clinics already use videos to provide health education on other topics and will likely possess a TV-VCR. Yet the availability of a DVD player for group health education must be ascertained before the final DVD product of this educational program is created. Supplemental Spanish materials will also serve to more easily reach the target audience. For example, as an alternative to delivering limited childbirth education information during individual home visits that are also dedicated to discussion of other health topics, one staff member can use four 90 minute sessions to provide in-depth childbirth education to a group of five to ten Latina women.
Strategies to Address Cultural Challenges

The acceptability of this program among recipients will rely on the program’s cultural appropriateness and its acceptance among community leaders. To generate acceptance among community leaders, a valuable strategy is to identify and meet with these leaders as plans are being made for the program’s implementation. The following avenues may allow for identifying Latina community leaders: approach professional Spanish interpreters at local offices such as the county health department, meet with a health liaison from the state program El Pueblo, inquire with the parent-teacher association at community schools, and talk with the owners of Latino stores (tiendas) or restaurants. By meeting these women to describe the goals of this program, one can request these leaders’ assistance with the implementation process. Specifically, these women can provide insight into the design of handouts, content, and format of the video tool and the structure of the educational sessions.

Another strategy to increase cultural appropriateness is to video-record interviews with Latina women with childbirth experience. An additional strategy is to invite experienced Latina mothers to serve as guest speakers during the childbirth classes. Also, consultation with professional childbirth educators who have experience teaching Latina women may be helpful. These strategies will increase the likelihood of interest, acceptance, and utilization of this new program.

Target Community

This program has been designed for implementation as a pilot project at the Dare County Department of Public Health (DCDPH), in the Outer Banks of North Carolina. The Maternal Health Program is a large focus of this health department, and approximately 25-33% of the
clients served are first-generation immigrants from countries in Latin America. As it relies heavily on state funds and Medicaid reimbursement, this health department is limited in its ability to provide formal education classes for women in preparation for childbirth. This program plan would be implemented by staff from the Maternal Health Program at the DCDPH. Although this site is targeted due to the author’s familiarity with Dare County, this program plan and evaluation could ideally be adapted for use in other community health centers serving Latina women, particularly those located in semi-rural areas with an immigrant population similar to that of Dare County (largely first-generation).

Dare County is home to approximately 39,000 residents and hosts an additional 7 million tourists who visit the popular beaches annually (Outer Banks Chamber of Commerce, 2010). The land area of Dare County provides an unusual geographic challenge that makes the efficient use of community resources very important. The Outer Banks comprise a long, narrow chain of barrier islands that extend from the Virginia-North Carolina state line southward for over 100 miles until it meets the next county. Some residents must travel 90-120 minutes to access prenatal care services at the county seat in Manteo where the health department is located. The Outer Banks Hospital in Nags Head is rather centrally located along the north-south strip of islands and recently opened in 2002. The hospital has 21 beds and provides services for about 400 births annually (The Outer Banks Hospital: About Us, nd). The nearest level one and two trauma centers are 90-120 minutes away in Norfolk, VA and Greenville, NC, respectively.
**Target Audience**

A number of Latino immigrants have moved to the Outer Banks over the years seeking jobs in construction, landscaping and the service industry associated with tourism. Many Latina women find work in housekeeping services, restaurants, and the local crabbing industry. Other Latina women in the area do not work outside of the home, but rather they moved to the area when a spouse or partner found work in the Outer Banks.

Limited English proficiency is a risk factor for entering labor without adequate childbirth education. In eastern North Carolina, population densities are relatively low and there are few medium-sized cities in the region; furthermore, group childbirth classes in Spanish are rare, if not nonexistent (Bureau). Within Dare County, English-speaking women can access childbirth classes from a handful of educators either at an OB-GYN private practice or through private childbirth education businesses. Yet no formal childbirth education classes in Spanish are offered in the county. Not only does the rural atmosphere of eastern North Carolina make access to Spanish childbirth classes more difficult, but Latinas in this region are more likely to be isolated geographically from female friends and relatives who may otherwise be able to offer advice and education regarding childbirth.

Thus, pregnant Latina women in Dare County are the target audience for this educational program. These women will be accessed primarily through their participation in prenatal healthcare services offered through the DCDPH Maternal Health Program. Specifically, staff members will inform and recruit potential program participants. Furthermore, fliers and brochures can be mailed to the other prenatal providers in the area with a request that they share the information with their Spanish-speaking patients.
Literature Review

Introduction

The purpose of this literature review was to explore research involving the quality and efficacy of existing childbirth education programs. Following the search strategy, each paper selected from the literature is presented with a description of the program, evaluation design, and results from the study. After a description of the papers, I present a critical review of each paper. In conducting this critical review, I considered the research question, study design, study group selection, measurement tools, and interpretation of the results. Finally, I apply the results from this literature review to the program plan and evaluation in this master’s paper.

Search Strategy

To perform a systematic search of the literature, I developed a search strategy with the guidance of professional research librarians at the University of North Carolina’s Health Sciences Library. The following three databases were searched: PubMed, CINAHL, and Google Scholar. While PubMed contained some relevant studies, CINAHL allowed for inclusion of many papers from the nursing field, which has a strong and rich focus on childbirth education. Google Scholar was also used to include papers from sociological perspectives.

The search term used was “childbirth education.” Although childbirth education programs have been implemented for decades, only fairly recently has evaluation of these programs become more common due to the increasing trend to create more evidence-based literature and requests by program funders to evaluate programs’ effectiveness. Furthermore, one of the results, “Childbirth Education Outcomes: An Integrative Review of the Literature,”
provided a comprehensive review of this subject matter from 1995-2001 (Koehn, 2002). Therefore, a discussion of that paper and the studies it reviewed are included in this discussion. The reference lists of pertinent articles were also reviewed. This search strategy yielded 297 results, five of which were relevant to the purpose of this review. Other papers were excluded because they focused on specific aspects of childbirth education, or they discussed the topic in general.

A Published Review of the Literature 1995-2001

Koehn conducted a critical review of the literature on outcomes reported in studies on childbirth education (2002). The purpose of her review was to review existing evaluations with the understanding that the methods and outcomes of any evaluative approach must be able to demonstrate the degree of contribution made by childbirth education. To conduct this review, Koehn searched five electronic databases of health research from 1995-2001. The review process included a study of the hypotheses, objectives, outcomes, theoretical frameworks, samples, settings, methodologies, measurement tools, analyses, and results. Koehn explains how many researchers evaluate childbirth education using the Donabedian model with a scope limited to the course structure, implementation, and outcomes. Furthermore, she emphasizes that none of the studies she reviewed consider other variables like the childbirth educator’s qualifications, the class setting, or the healthcare providers’ philosophies to labor and delivery. (Koehn, 2002).

In spite of a large volume of research that has been both qualitative and quantitative in nature, Koehn found no evidence that researchers use results from either method to enhance future research with the complementary method (2002). For example, no study appears to take qualitative results from the field to develop a quantitative measurement tool. A variety of
measurement tools have been used to evaluate childbirth education programs and no tool has been identified as a popular measurement tool. Koehn reported that ten studies used quantitative methods that were primarily descriptive in nature; many used convenience sampling; and all studies but those by Smedley and Sims-Jones et al. had a rather small sample size (Bechelmayr, 1995; Beger & Beaman, 1996; Handfield & Bell as cited in Koehn, 2002; Hart, 1995; Jackson, 1995; Johnston-Robledo, 1998; Sims-Jones, 1998; Smedley, 1999; Spiby et al. 1999; Koehn, 2002). All three qualitative studies in this review provided detailed descriptions of the research methods and included a discussion of validity and reliability (Hallgren et al., 1995; Stamler, 1998; Thassri et al., 2000). Of note, Thassri et al. employed a mixed-methods strategy involving a questionnaire and interviews (2000). Koehn identified the five following categories of outcomes from these qualitative papers: “health promotion behaviors, influences on self-care, perceptions related to birth, class curriculum and impact on coping” (p. 13, Koehn, 2002).

Three papers focused on health promotion behavior as an outcome and reported positive behavioral changes that included any or a combination of the following: self-actualization, health responsibility, exercise, nutritional support, interpersonal support, communication with partner, stress management, relaxation, confidence for labor and birth, preparation for labor and birth, breastfeeding, and postpartum period (Koehn, 2002; Jackson, 1995; Sims-Jones, 1998; Thassri et al., 2000). While Jackson and Sims-Jones et al. reported a significant change in nutrition-related behaviors, Thassri et al. did not (1995; 1998; 2000). Jackson and Sims-Jones et al. also reported an improvement in stress management, exercise, self-actualization, and interpersonal support (1995; 1998). Thassri et al. found that women were more likely to successfully breastfeed and report that they were better prepared for the post-partum period (2000). Koehn noted that sample size in the Jackson study was problematic and the study’s design did not account for participants'
engagement in healthy behaviors before attending the classes (2002). Overall, these studies that focused on behavioral outcomes lacked consistency and a systematic approach, making comparison and critical analysis difficult (Koehn, 2002).

Two studies focused on the outcome of “self-care” as it relates to breastfeeding, coping with pain, and enabling and preparing for the birth experience (p. 16, Koehn, 2002; Handfield & Bell as cited in Koehn, 2002; Stamler, 1998). Researchers found a positive association between childbirth education and decisions related to pain medication (Handfield & Bell as cited in Koehn, 2002), and between childbirth education and preparing for a normal, vaginal birth (Stamler, 1998). Notably, women did not believe that childbirth education classes prepared them for a difficult vaginal delivery or a cesarean section (Stamler, 1998). Koehn recognized that Handsfield and Bell were the only researchers from her review who discussed the complexity of evaluating childbirth education because other services and interactions during the perinatal period often influence the same outcomes (Koehn, 2002; Handfield & Bell as cited in Koehn, 2002). Similar to her assessment of studies on the other outcomes, Koehn emphasized that the studies on outcomes related to self-care lack consistent categories of definitions of self-care and a systematic approach for the evaluation (2002).

The third category of outcomes identified by Koehn was “perceptions related to birth.” Johnston-Robledo reported that after attending childbirth classes, women of different socio-economic backgrounds did not report different degrees of control during labor or perceived preparedness for birth (1998). Hart found that women and their spouses reported little change in their perceptions of or assistance with the childbirth process (1995). Other studies reported that women felt confident after attending classes (Hallgren et al., 1995; Spiby et al., 1999). Koehn summarized that the flaws from these studies included a lack of well-studied instruments to
conduct the evaluation, a failure to measure women’s confidence at multiple time points during
the intervention, and a failure to study the specific coping tools and strategies that women used
during birth (2002).

Few studies focused on evaluating the content of childbirth education classes (Koehn, 2002). Smedley found that participants were generally satisfied with the curriculum and only
requested more focus on parenting (1999). Another study found that the educators and the
participants placed different degrees of value on topics covered in the classes (Beger and
Beaman, 1996). Only Bechelmayr studied the effects of classes on coping and found that women
reported less anxiety after attending classes (1995).

Koehn recommends improved quality and standardization in the evaluation of childbirth
education classes (2002). Specifically, she calls for theory-based evaluations, alternatives to
convenience sampling that allow for high sample sizes, measurement tools with high validity and
reliability, consideration of other variables that affect childbirth outcomes and a greater number
of studies conducted within single countries and healthcare systems (2002).

The Development and Evaluation of a Program in Malawi

Malata, Hauck, Monterosso, and McCaul offer a detailed description of the development
and evaluation processes of a childbirth education program for women in Malawi (2007).
Initially, Malata et al. studied the literature and conducted focus groups with midwives to
determine what information and methodologies should be used to design the childbirth education
program itself. Additionally, the researchers interviewed ten experienced midwives who held
leadership positions in the country. Material from this qualitative research was analyzed for
themes and significant statements were identified to highlight those themes. While pregnant
women themselves were not also interviewed, this process amounted to a degree of community-based participatory research. (Malata et al., 2007).

During the next phase of the study, the program design phase, Malata et al. used the results from the literature search, focus groups and interviews to develop a childbirth education program composed of objectives, curriculum content, a schedule for implementation, and a list of potential teaching methods (2007). The program was then reviewed by experienced midwives who provided feedback. Next, a small group of experienced midwives underwent training to implement the program. The researchers also developed a measurement tool in the form of a questionnaire based on the content of the new childbirth education curriculum. The questionnaire was tested for clarity and content validity with a pilot study using ten pregnant women. The instrument was further validated through critical review by experts in midwifery. After this validation, a group of midwives were trained in the use of the evaluation tool, including proper administration of the tool to women with low literacy levels. (Malata et al., 2007).

Finally, the childbirth education program was implemented and evaluated over the course of six weeks in conjunction with weekly prenatal clinic visits. The small group of trained midwives presented the childbirth education curriculum in group sessions. They also offered to meet with women privately to address personal concerns and used that opportunity to also reiterate material from the curriculum. (Malata et al., 2007).

For the evaluation, Malata et al. employed a quasi-experimental design using a comparison group and administered the previously described questionnaire. The paper describes recruitment of the intervention and comparison groups, as well as inclusion and exclusion criteria. The comparison group comprised pregnant women who received childbirth education
according to the standard of care for that region. The standard of care was unstructured, unplanned presentations that lacked content organization and were delivered by midwives to large groups of women attending prenatal clinic appointments. (Malata et al., 2007).

The primary outcome measured by the evaluation was a short-term outcome, the level of childbirth knowledge in participants. The questionnaire was administered to the intervention and comparison groups as a pretest during the prenatal intake visit and a second time after women received six weeks of only clinical care. At that time, women in the intervention group began the childbirth education program that lasted six weeks. After completion of the program, the questionnaire was again administered. The questionnaire’s structure and scoring process allowed for stratified analysis of knowledge attainment from the three main components of the childbirth education program: general pregnancy education, labor and birth education, and postnatal education. Although each section was not covered by the same number of questions, the mean score for each section was calculated to then determine a woman’s final score. Analysis of the results showed no difference in the baseline scores of knowledge attainment in the intervention and comparison groups. Additionally, there was no difference in the pretest and posttest scores of women in the comparison group. Yet pretest and posttest scores of women in the intervention group showed statistically significant increases in all three sections of the childbirth education curriculum. (Malata et al., 2007).

Results from this evaluation were somewhat limited by the lack of randomization of the two groups. Yet the two groups of women were similar in age, marital status, religion, educational level and occupation status. The two groups of women differed in parity status; more women in the intervention group had a prior pregnancy. This distinction could contribute to type I error because prior pregnancy experience may lead to a greater retention of childbirth
education, but regression analysis failed to show an effect for this variable or any other potential confounder. (Malata et al., 2007).

**An Outcomes-Based Evaluation of a Program in the USA**

Finks, Hill, and Clark conducted an outcomes-based evaluation of a childbirth education series held at a local hospital in Ohio (1993). Women and their birth partners attended weekly classes that spanned six weeks and were flexibly scheduled according to the needs of participants. Interestingly, a range of classes were offered at this hospital and included classes that focused on cesarean deliveries, prenatal care, comprehensive childbirth education, and a condensed review of childbirth. The comprehensive course was reviewed in this paper, but no additional information about the course content or format was provided by the authors. (Finks, et al. 1993).

The primary outcome measured in this evaluation was the level of perceived maternal knowledge. The authors chose to measure perceived maternal knowledge because doing so would make “it possible to address the consumer’s satisfaction, concerns and desires” (p. 71, Finks, et al. 1993). The authors based their evaluation on a model designed by the American Nurse’s Association for quality assurance processes. The model incorporates seven steps in a continuous cycle to address the interplay among patient outcomes, the program structure, and program implementation. Based on this framework, Finks et al. designed a questionnaire with Likert scale responses for 41 statements that related to the content in the childbirth education classes. The categories of the 41 statements corresponded to the following four categories of course content: “pregnancy,” “birth process,” “maternal recovery,” and “infant/family” (p. 75, Finks et al. 1993). No further description of the development of these questions was included.
The final portion of the questionnaire included questions to collect demographic and pregnancy-related information, and two open-ended questions to request suggestions for course improvement. (Finks, et al. 1993).

Prior to administering the questionnaire, the researchers performed a pilot study with the tool on childbirth and nursing professionals. The questionnaires were then mailed to study participants after they attended the childbirth education six-week course. The timing of completion of the childbirth education course, administration of the questionnaire, and actual childbirth was not included in this paper. The authors reported a high return rate (51%) of the mailed questionnaires. The questionnaires were scored by simply determining the sum of all answer choices that participants selected on the Likert scale. (Finks, et al. 1993).

Results showed that topics that received greater emphasis during the course were scored higher by participants, an indication of better perceived knowledge attainment of those topics. Individual instructor identity was the variable associated with the greatest degree of variation among participant reports of perceived knowledge attainment. The authors interpreted this result to indicate that greater skill and ease with teaching on the behalf of the instructor was associated with increased perceived learning. Based on this result, the authors recommend high quality training of all childbirth educators to increase the likelihood of participant learning and course satisfaction. In response to the open-ended questions, participants identified subject areas from the course that were particularly useful and those that needed more emphasis. Finks et al. discussed that one limitation of this evaluation was the omission of gravida and parity data from the demographic section of the questionnaire. (Finks, et al. 1993).
A Mixed-Method Evaluation of a Program in Hong Kong

Lee and Holroyd utilized a mixed-method strategy to evaluate a childbirth education in Hong Kong (2009). The authors provided a limited description of the childbirth education class, which took place during one three-hour session and was taught by midwives. Content included descriptions of labor, mechanisms for coping with pain, the hospitalization process, and involvement of the birth partner. Teaching methods incorporated a didactic format, video, demonstrations, discussion, and a tour of the hospital. (Lee & Holroyd, 2009).

The authors chose to focus on participant satisfaction and the perceived effect of childbirth education on labor after finding that previous research on childbirth education provided little focus on these questions. To address these two issues, Lee and Holroyd designed a mixed-method study based on Donadedian’s model for evaluating healthcare programs. Phase one of the evaluation consisted of a questionnaire that was distributed to a random sample of 40 women who had attended the class. The primary outcome of phase one was participant satisfaction with the class. During phase two, six women were interviewed. The primary outcome for this qualitative aspect of the evaluation was perceived effect of the childbirth education class. (Lee & Holroyd, 2009).

The questionnaire utilized a Likert scale response format to measure satisfaction with the class and to collect demographic details. Questionnaires were administered immediately after the class session. The interview component of the evaluation was conducted with six women within two days after childbirth. The interview process was based on a guide that has been validated and was developed to explore women’s perception of the effect the childbirth education class had on their birth experience. After thematic analysis of the interview results, interviewees were invited.
to review and confirm researcher interpretations of the interview material. (Lee & Holroyd, 2009).

Results from the questionnaire indicated that participants were overall satisfied with the childbirth education course. Women were particularly satisfied with the instructor performance but were least satisfied with logistical aspects including the scheduling, duration, and size of the classes. Results from the interviews included the following themes with respect to the perceived effect of the classes: “learning about labor,” “contributing to a smooth labor process,” and “coping with uncertainty and handling anxiety” (p. 364, Lee & Holroyd, 2009). Notably, all women who were interviewed had uncomplicated, non-medicated vaginal deliveries. Particularly helpful components of the course that these women identified included a practice session for breathing and relaxation, a tour of the labor ward, correction of misperceptions and misinformation about labor from friends, and understanding the midwife’s instructions during labor because of what was explained during the class session. Regarding dissatisfaction with the course logistics, women reported that attending the class on a weekday evening was challenging due to feelings of exhaustion and inattention after working and coordinating arrangements for childcare. (Lee & Holroyd, 2009).

Overall, results from the Lee and Holroyd evaluation showed that most participants believed that their anxiety levels decreased after gaining information from the childbirth education class. Yet some participants reported increased anxiety levels after learning about potential childbirth complications. The number of women reporting this outcome was not statistically significant, but the authors reported that this potential outcome bears further exploration. The authors reported that the exclusion of birth partners in the interview process was a weakness of the study design. (Lee & Holroyd, 2009).
An Evaluation of the Bradley Method® in the USA

McKinney conducted a qualitative evaluation of the Bradley Method® of childbirth education (2006). The Bradley Method® emphasizes that involvement of a birth partner and avoidance of medications during labor result in better birth outcomes for women and their newborns (www.bradleybirth.com, 2009). The women in McKinney’s study had participated in childbirth education by using the Bradley Method® for one or more pregnancies; some women who participated in the study were also teachers of the Bradley Method®. (McKinney, 2006).

This qualitative evaluation was based on interviews of fifteen women who were recruited online through a website that was associated with the Bradley Method®. The interviews were conducted electronically via email with an opportunity for follow-up questions. The analysis strategy included identification of themes and constant comparison that spanned the exchange of multiple emails with participants. Thematic saturation was achieved. Participants also conducted member checks of the thematic analysis. Summary content was reviewed by the author’s colleagues to increase validity. (McKinney, 2006).

The interviews results yielded the following themes: “the role of spouses or partners,” “the concept of ‘natural’ childbirth,” “the importance of relaxation and preparation,” “the quality of materials and teachers,” and “the relationships formed with caregivers” during labor (p. 27, McKinney, 2006). Women expressed that the Bradley® focus on training birth partners along with the expectant mothers was a primary reason they chose that method of childbirth education. Another feature that attracted most participants to the Bradley Method® was the model’s philosophy that childbirth is a natural phenomenon and most women can labor with minimal medical intervention. Most women interviewed, including two who delivered by cesarean
section, believed that they learned about helpful relaxation techniques from the Bradley® childbirth classes. (McKinney, 2006).

    The theme encompassing the quality of materials and teachers revealed a number of findings. Specific criticisms and observations ranged from viewing the materials as outdated, to reports of instructors of varying degrees of quality, to an apparent lack of support that some instructors appeared to receive from the parent organization of the Bradley Method®. Women also reported a range of experience in their relationship with healthcare providers during labor. One participant remarked that her obstetrician had a somewhat negative reaction after hearing that she had used the Bradley Method® for childbirth preparation and subsequently made rather sarcastic remarks about the idea of using dimmed lighting, relaxing music, and different positions for pushing. Another concern was that the Bradley Method® parent organization was not responsive to requests for support by a number of its childbirth educators. McKinley predicted that a growing number of educators who previously taught under the Bradley Method® will eventually transition to become independent educators, and thus, fewer women will have access to the Bradley Method® of childbirth education. This study concluded that the high degree of satisfaction of many participants stems from the Bradley Method® use of a learner-centered approach that prepares women and their birth partners to approach delivery critically and with greater empowerment. (McKinney, 2006).

**Discussion**

    Although the study by Malata et al. was conducted in Malawi, key similarities between Malawian women and Latinas make it a useful study for the present paper (2007). Similar to the Latina immigrants targeted by this paper, the Malawian participants had low literacy levels,
unreliable access to health care, high fertility rates, and tended to experience the first pregnancy at an early age (2007). Additionally, some Latina immigrants continue to actively practice cultural traditions regarding one’s health that are often dissimilar to practices in western medicine. The paper by Malata et al. addresses this issue and other concerns related to cultural appropriateness for the development and implementation of a childbirth education program (2007). Additionally, Malata et al. used experienced midwives who were each specifically trained to implement and evaluate that particular program (2007). Such experience and deliberate training of the educator are important considerations for the development of a program for Latinas.

Finally, another applicable feature of this evaluation is the mixed-method design. As the present paper includes implementation of a new childbirth education program for a minority population, qualitative analysis may be particularly useful. Results from interviews or focus groups could steer development of a quantitative instrument that could be implemented later to evaluate the same childbirth education program. Additionally, the quasi-experimental design used in by Malata et al. allowed for multiple testing points of both groups, thus increasing the likelihood that the questionnaire was measuring effects from participation in the educational program itself. (Malata et al., 2007).

The study by Finks et al. had a number of limitations that were not addressed by the authors. The evaluation strategy lacked a comparison group and a pre-test to determine participant knowledge before the course began. Furthermore, the authors focused on one primary outcome, perceived attainment of knowledge, and used results from a single questionnaire about course content to interpret both learning outcomes and participant satisfaction. Additionally, the design of the evaluation tool had potential weaknesses. First, the approach of simply calculating
the sum of Likert scale responses at the end of the questionnaire does not allow for weighting of certain course content areas that may be more important than other areas. Second, this strategy indicates that questions were structured so that all “positive responses,” i.e. those that indicated increased perceived knowledge, were indicated by a higher score on the Likert scale. This formatting approach could introduce error as one begins to anticipate the format of questions and answers with less deliberation while advancing through the questionnaire. (Finks et al., 1993).

A particularly useful result from the evaluation by Finks et al. stems from the open-ended questions at the end of the evaluation tool. Participants requested that the childbirth education program include information about how to obtain one’s newborn’s birth certificate and social security card. This recommendation is of utmost importance to the present paper because Latina women sometimes face significant challenges with navigating the system if problems arise with obtaining these important documents. (Finks et al., 1993).

Lee and Holroyd combine quantitative and qualitative methods to strengthen their evaluation. This study could have been further strengthened by including a comparison group and by administering the questionnaire before the class in addition to afterwards. Additionally, all women who were interviewed had non-medicated vaginal deliveries. This factor introduces a possible type I error because the study group did not include women with more difficult labors or unplanned cesarean deliveries; these women may have been less likely to report feeling prepared and satisfied with the childbirth education. An important strength of this evaluation is the additional time and work that was involved in allowing interviewees to review notes and interpretations from the interviews. Qualitative studies often neglect this confirmative review by participants and risk misinterpretations that Lee and Holroyd were able to minimize in their study. (Lee & Holroyd, 2009).
The qualitative study by McKinney shared a similar strength with Lee and Holroyd (2006; 2009). McKinney also reviewed and confirmed interpretations of the results with the participants (2006). A weakness of this evaluation is the selection bias that occurred when the study population was limited to women using a Bradley Method® website. The qualitative method however would be useful to incorporate into the present paper, for reasons described previously during the discussion of the Malata et al. paper (McKinney, 2006; Malata et al., 2007).

Application

These papers provide a range of evaluation methods that offer important considerations for developing the evaluation for the present paper. Koehn’s review of numerous evaluations highlights the need for improved quality and standardization in the evaluation of childbirth education classes (2002). As mentioned previously, Koehn identifies a need for theory-based evaluations, alternatives to convenience sampling that allow for high sample sizes, measurement tools with high validity and reliability, consideration of other variables that affect childbirth outcomes and a greater number of studies conducted within single countries and healthcare systems (2002). Malata et al. utilized a particularly thorough and systematic approach to the program design, implementation, and evaluation (2007). The quasi-experimental, mixed-methods evaluation using pre-/post-test sampling represents the most thorough and reliable methods of all papers in this review and will serve as the basis for this present paper’s evaluation. (Malata et al., 2007).

In addition to the examples of different evaluation methods, these studies present important questions to be considered during a program evaluation. Lee and Holroyd and Finks et
al. remind us that a woman’s satisfaction with a class and her perception of how that class affects her birth are also valuable outcomes to measure (2009; 1993). The paper by Finks et al. offers a useful reminder that teaching Latina woman about obtaining their newborns’ birth certificate and social security card are important topics to address in the class (1993).

Finally, many of these papers present important considerations to make when preparing a program for Latina women in particular. For example, aspects of the Lee and Holroyd study are particularly applicable to the present paper with regards to cultural characteristics of Chinese and Latina women (2009). Leininger notes that respect and obedience for authority figures, including healthcare providers, is an important component of Chinese culture (as cited in Lee & Holroyd, 2009, p. 362). Additionally, Holroyd et al. recognized the tendency of Chinese people to refrain from openly sharing emotional problems (as cited in Lee & Holroyd, 2009, p. 362). These characteristics are common in many Latin American cultures as well and require special consideration when evaluating a healthcare intervention.
Program Plan

Overview

The following program plan describes the goals and objectives, program theory, program logic model, implementation plan, and a discussion on program sustainability. None of the papers on childbirth education programs from the literature provided actual numbers related to objectives and outcomes. Thus, the target numbers listed in the following objectives are estimated targets that were derived from discussions with the two readers of this paper, an educator and an obstetrician. Some of the target numbers could be modified, for example, to correlate with the existing rate of attendance at post-partum clinic visits at the site where the program will be implemented. Of note, while this paper discusses the development of the childbirth education curriculum as a component of the implementation, the actual curriculum is not included in this paper. It is this author’s hope that consultation with a panel of Latina women for development of the curriculum will be possible during the upcoming year.

Goals and Objectives

Goal: To improve the perinatal experience and outcomes of Latina immigrant women.

Short-Term Objectives (1-12 months)

- By two months, 75% of participants will demonstrate proficiency in understanding the childbirth process.
- By two months, 80% of participants will demonstrate an understanding of the benefits and techniques of breastfeeding.
• By four months, 80% of participants will demonstrate a **greater understanding of the hospitalization process** as it pertains to the labor and delivery setting.

• By five months, 75% of participants will report **increased satisfaction with the childbirth experience**.

• By five months, 50% of participants will report **increased empowerment** to take action with regards to health matters.

**Long-Term Objectives (1-5 years)**

• By two years, there will be a 10% increase in the **rates of attendance at post-partum clinic visits**.

• By five years, the **number of women screened for and the number of women diagnosed with post-partum depression** will increase by 10%.

• By three years, **rates of breastfeeding** will increase by 10%.

• By five years, **duration of breastfeeding** will increase by 10%.

**Program Theory**

Social Cognitive Theory provides a useful foundation for developing this program. In particular, the concepts of behavioral capability, self-efficacy, and observational learning offer useful explanations of how and why this program is intended to function.

The concept of behavioral capability supports one of the key strategies of this program, to deliver childbirth education to Latinas. To reach the goal of improving the childbirth experience and outcomes of these women, this program will provide women with knowledge and skills that can be applied during labor and delivery and afterwards. For example, activities within the group
sessions will focus on understanding the stages of labor with respect to the corresponding physiological changes, becoming familiar with numerous techniques for coping with pain, and exploring coping mechanisms that were useful to other Latinas who have already undergone childbirth.

Self-efficacy is another key element of this program. This program targets first-generation immigrant Latina women. Many of these women are still learning English and will face challenges with communicating in a health setting. Culturally, many women from this group are often willing to agreeably interact with healthcare professionals to the extent of not expressing their personal fears, doubts, and questions. Childbirth will likely be the first experience many of these women have in a hospital in the USA. By increasing this target audience’s level of confidence and sense of empowerment, the program will serve to improve the women’s ability to engage with hospital staff and function in the childbirth environment.

Also related to improving one’s empowerment to deal with self-care and health needs, one objective of this program is to increase the number of women screened for and diagnosed with post-partum depression. The development of this objective takes into consideration the probability that a childbirth education program in isolation may not have the effect of decreasing the rate of post-partum depression. Limited research on this question reflects that no education program has demonstrated such an effect (Dimidjian & Goodman, 2009). Nonetheless, an education program can serve to educate women about the health problem and offer resources for women who struggle with the condition.

The concept of observational learning also fits well with this program because the program curriculum incorporates the advice and experiences of Latina women who have previously delivered children. Although women in the target audience will not be literally
watching other women during labor, they will receive audio accounts about personal labor experiences. It is the intent of this sharing that the pregnant women will view the experienced mothers as credible role models from whom they may learn useful behaviors for labor.
Childbirth Education

**Outcomes**

**Short-Term (1-12 months)**
- 75% of women demonstrate proficiency in understanding the childbirth process.
- 80% of women demonstrate an understanding of the benefits and techniques of breastfeeding.
- 80% of women demonstrate a greater understanding of the hospitalization process as it pertains to the labor and delivery setting.
- 75% of women report increased satisfaction with the childbirth experience.
- 50% of women report increased empowerment to take action with regards to health matters.

**Long-Term (1-5 years)**
- The attendance rate at post-partum clinic visits increases by 10%.
- The number of women screened for and diagnosed with post-partum depression increases by 10%.
- The rate of breastfeeding increases by 10%.
- The duration of breastfeeding increases by 10%.

**Resources**
- Patient Participants
- Health Center Staff
- Educational Materials
- Health Insurance

**Activities**

**Program Enrollment**
- Prenatal providers in the community inform Spanish-speaking patients of the program

**Coordination**
- Health center staff schedules class sessions and relays schedule to interested women.
- Health center staff submits documentation for insurance reimbursement of childbirth classes.

**Instruction**
- Health center staff provides childbirth education according to the program’s established curriculum.

**Group Participation**
- Participants discuss their concerns and questions regarding childbirth.
- Women with childbirth experience share lessons they learned from labor through pre-recorded video, as well as in person presentations to the group.

**Outputs**

Program is offered to 90% of Spanish-speaking prenatal patients in the community.

Class sessions are offered to 85% of interested women.

Staff is reimbursed for 80% of insured participants.

At least 90% of the curriculum is covered.

Participants learn from video, handouts, guest speakers and other class members.

Participants attend at least 65% of scheduled class sessions.

**Impact:** Improved prenatal experience & outcomes of Latina women.

**External Factors**
- Patient transportation to classes.
- Health insurance reimbursement for childbirth education classes.
- Patient access to insurance.
- Staff availability for leading class sessions.

**Christina Drostin, UNC**
Implementation

Program Development

Before focusing on the implementation of the actual program, it is important to first address the work that must occur to develop the childbirth curriculum and program materials. Complete development of the curriculum and materials will likely require one to two years. Many women in the target audience may receive Medicaid for Pregnant Women. Therefore a useful framework for creating the curriculum is the Clinical Coverage Policy distributed by the NC DHHS Division of Medical Assistance that delineates requirements for NC Medicaid reimbursement of childbirth education services (Appendix 1). This policy lists the topics required in a childbirth education program to qualify for reimbursement. The finalized curriculum in this program will incorporate all of the elements required for Medicaid reimbursement.

Curriculum development will involve a critical review of the literature on childbirth education, as well as study of existing childbirth education models including Lamaze, the Bradley Method®, and the Centering model. Further resources for the inclusion of certain educational components include local childbirth educators, midwives, nurses, and ob-gyn physicians with experience providing childbirth education. In brief, the general topics to be included in the program include pregnancy, labor and delivery, hospital culture, postpartum care, infant care, breastfeeding, and contraception. In addition to the curriculum itself, an educator’s manual will be written to guide the educator’s delivery of the educational material. The childbirth educator must comply with the designed program as closely as possible to minimize variation and maintain the internal validity of the evaluation. Furthermore, if the program is
expanded to multiple sites, the usefulness of the evaluation process is limited by the compliance of educators with the curriculum and mode of delivery. Development of this curriculum and an educator’s manual would require approximately six to twelve months of time.

The creation of educational materials for the program would require another six to twelve months of time. Many educational materials, including posters and handouts, can be purchased from companies selling pre-made materials. Some educational companies provide a set of childbirth education materials for the instructor. Consideration must be made with regards to the need for handouts to distribute to participants. Such handouts must be in Spanish and should include as many visuals as possible to accommodate many Latina women with limited or no formal education.

Another educational tool that should be developed before program implementation is a video of interviews of experienced Latina mothers. Interview questions would address their experiences during childbirth, as well as their experience as patients in hospitals in this country. The video could be watched during one or more class sessions. This format of education may be particularly appropriate and efficacious with reaching this target population of women who are largely disconnected from women in their families and home communities who would normally provide such advice in pregnancy. Additionally, a video may assist immigrant women with feeling that they are not alone in their experience and the challenges presented by childbirth in a foreign country.

**Implementation Activities**

This program will likely be implemented in a health department or similar community health center setting. Implementation of this program comprises the following activities:
organizational-level preparation, educator orientation, program coordination, participant enrollment, teaching the actual classes, and financial accountability of the program. The program logic model describes each of these activities and specifies the personnel responsible for the activity and the timeline for each activity.

Organization preparation will involve the director of the organization that is implementing the program, as well as either the nursing or outreach staff supervisor, and the health educator who will teach the childbirth classes. This preparation stage will last approximately four months and will involve a careful review of the program plan to understand how it will be implemented and the effect it will have on the current functions of the host organization. This activity will also require assignment of the remaining implementation activities to specific staff members in the organization, as well as adjustment of the implementation timeline to coordinate with other activities and upcoming obligations that demand time from staff members.

The next step is to ensure that the designated health educator who will teach the classes receive formal childbirth education training. Such training may require weekend travel to a larger city in the region where classes are only held at certain times during the year. Therefore plans and registration for attending this workshop should be addressed early (month two) soon after the start of organization preparation described above. It is critical that this training comply with Medicaid requirements to ensure that Medicaid will later reimburse for the program classes. Another component of this activity is that the educator will review the designated educational materials that he or she will use when teaching the childbirth classes for this program. In addition to the health educator’s work with this activity, the outreach or nursing supervisor of the host
organization will assist with enrollment in the childbirth educator training workshop and with assuring that the necessary educational materials are ready for use.

Logistical coordination will occur during months five through seven. This activity will involve the health educator, outreach or nursing supervisor, billing personnel, outreach and nursing staff and receptionist. Numerous details must be addressed during this time. An appropriate plan for informing participants and enrolling them in the program is needed. This will likely involve discussion among the supervisor, health educator, and outreach and nursing staff because these individuals will have regular contact with pregnant women in the target audience. Additionally, these staff members must be directed as to whom to communicate the names of interested participants. Key people who will need to receive the names of potential participants include the health educator as well as the receptionist responsible for scheduling appointments and possibly the childbirth classes themselves. Additionally, the billing personnel should receive a name of women wishing to participate to confirm or assist with Medicaid enrollment.

Participant enrollment will occur on an ongoing basis, beginning in month seven. The likely flow of this enrollment will coincide with enrolling newly pregnant women in other prenatal services with the host organization, such as clinic care and outreach services like maternity care coordination. The receptionist and health educator will likely work together to schedule a set of classes for any given group of interested participants in coordination with the participants’ due dates. One challenge for the scheduling of classes will be to coordinate with the two-three months of limited time when Latina women receive Presumptive Medicaid for Pregnant Women. The health educator can obtain this information from the Medicaid staff of the county Department of Social Services.
The actual childbirth education classes will be held beginning in month eight and continue through the extent of the designated program period. Depending on finalization of the curriculum, one childbirth course will likely comprise five two-hour sessions. One full course may be held every two months, or according to the frequency desired by the host organization. Due to the fact that classes will likely be scheduled during the evening or weekend, the frequency of courses is an important determinant of avoiding burnout of the health educator. If he or she is designating at least ten hours of time to each course, it may not be feasible for them to hold a course each month.

Accountability will require the work of multiple staff members and will begin in month seven when participants are first recruited. The health educator is responsible for ensuring that women interested in the program are assigned to a group and that a set of classes is scheduled for each group of women. The health educator is also responsible for conducting each class, or communicating with each participant whenever it is necessary to reschedule a class session. The outreach or nursing supervisor will assist the health educator with his or her duties, and will also work to ensure that the program is being implemented appropriately. The billing staff member is accountable for obtaining Medicaid reimbursement. Finally, the organization director will work with these staff members to ensure that the program is being implemented as it was designed.
<table>
<thead>
<tr>
<th>Activity</th>
<th>Staff Involved</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization preparation</td>
<td>Organization director, Outreach or nursing supervisor, Health educator</td>
<td>Months 1 – 4</td>
</tr>
<tr>
<td>Educator training</td>
<td>Health educator, Outreach or nursing supervisor</td>
<td>Months 2 – 6</td>
</tr>
<tr>
<td>Logistical coordination</td>
<td>Health educator, Outreach or nursing supervisor, Outreach and nursing staff, Receptionist, Billing staff member</td>
<td>Months 5 – 7</td>
</tr>
<tr>
<td>Participant enrollment</td>
<td>Health educator, Outreach staff, Nursing staff</td>
<td>Month 7 - ongoing</td>
</tr>
<tr>
<td>Childbirth education classes</td>
<td>Health educator</td>
<td>Month 8 – ongoing</td>
</tr>
<tr>
<td>Accountability</td>
<td>Health educator, Outreach or nursing supervisor, Billing personnel, Organization director</td>
<td>Month 7 – ongoing</td>
</tr>
</tbody>
</table>

Potential program participants are the newly pregnant Latina immigrants living in the Dare County. These women will likely speak Spanish as their primary language and will likely be unfamiliar with using the U.S. health care system. They will likely be eligible for 2-3 months of Presumptive Medicaid for Pregnant Women if they reside in NC. Most participants will receive their prenatal medical care from the same host organization that is implementing this program and would be advised of the program through the Maternity Care Coordinators, maternal health nurse, or clinic interpreter. However women receiving prenatal care from other healthcare providers will be welcome to enroll in this program. They would be informed of the program by their private physician. The designated childbirth educator at the health department would need to send a letter or flier to each private obstetrician or family practitioner so that he or she may inform their patients of the program.
Supplies and Budget

This program will rely on existing staff already employed by the host organization. A master set of educational materials for the program will be provided to the host organization. The organization will be responsible for making photocopies of the materials needed for each set of new participants.

The major component of expense will be the time required from staff members of the host organization. Part of this time will be reimbursed by Medicaid. The time of additional personnel is detailed and listed below. A lesser expense is the indirect cost of using meeting space provided by the host organization, as well as equipment like a DVD player and TV. If that equipment is not already available at the health center, it would need to be purchased.
Table 2. Budget

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity and Expense</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educator Training</td>
<td>Childbirth educator training $600 (standard fee for training offered in Eastern NC)</td>
<td>$600</td>
</tr>
<tr>
<td>Health Educator</td>
<td>10 hrs of teaching per course + 4 hrs preparation + 8 hrs enrollment and coordination = 22 hours total / course</td>
<td>$2,800</td>
</tr>
<tr>
<td></td>
<td>1 course every 2 months = 11 hours avg. per month = 2.5 hours avg. per week = 8% salary (e.g. $35,000, average health dept salary)</td>
<td></td>
</tr>
<tr>
<td>Billing Staff</td>
<td>1 x 10 FTE</td>
<td>$800</td>
</tr>
<tr>
<td>Outreach / Nursing staff</td>
<td>1 x 10 FTE</td>
<td>$800</td>
</tr>
<tr>
<td>Nursing supervisor</td>
<td>1 x 10 FTE</td>
<td>$800</td>
</tr>
<tr>
<td>DVD and TV</td>
<td>1 x $200</td>
<td>$200</td>
</tr>
<tr>
<td>Printing of materials</td>
<td>$0.10 cents per copy x 26 pages per packet = $2.50 per participant</td>
<td>$150</td>
</tr>
<tr>
<td></td>
<td>$2.50 x 10 participants per group = $25.00 per course</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$25 per course x approx 6 courses per year = $150</td>
<td></td>
</tr>
<tr>
<td>Grand Total</td>
<td></td>
<td>$6,150</td>
</tr>
</tbody>
</table>

Sustainability

This program’s sustainability stems from Medicaid reimbursement that is already established in NC for childbirth classes. Yet to receive that reimbursement, careful coordination is required during the program implementation. Additionally, an initial cost to certify the designated health educator in childbirth education is necessary to meet Medicaid requirements for reimbursement.
Program Evaluation

Rationale and Approach

This program will be evaluated for its effectiveness and sustainability. Regarding effectiveness, evaluation will serve to indicate the degree to which the program improves women’s prenatal experiences and outcomes. Specifically, did women demonstrate increased understanding of the childbirth, breastfeeding, and hospitalization processes? Regarding sustainability, evaluation will serve to indicate the degree to which the program’s structure and implementation allow for its sustained existence. Specifically, were the program curriculum and materials used appropriately? Did the implementation process used by the host agency demand a reasonable degree of staff resources? Ideally, a full evaluation will be completed annually from data collected throughout the year. This process will occur throughout the first five years of the program’s initial implementation to allow for adjustments and improvements in the program; then the evaluation interval can be extended to every two to five years.

Ideally, the evaluation will be executed by a partnership involving one internal and one external evaluator. Collaboration between two such individuals would provide the benefits that both internal and external evaluators bring to the process and may balance each other to minimize the downfalls of each type of evaluator. For example, an external evaluator lacks familiarity with the host organization and target audience. Additionally, he or she will likely not have experience implementing this plan. The benefits of an external evaluator include impartiality, a “big picture” perspective to the process, and less bias or incentive to expect certain results from the evaluation. Conversely, a risk of using an internal evaluator is that such a person may be pressured to produce certain biased results of the evaluation. Yet the internal
evaluator offers valuable experience with the target audience, host organization, and the program itself. Thus, a partnership between external and internal evaluators would be idea. Both evaluators would need access to a Spanish interpreter to execute the evaluation. This paper’s author would be available for consultation with respect to utilizing the program logic model and executing the evaluation.

Stakeholders need to be informed of the evaluation process and presented with the results. The stakeholders include the host organization, grant funders, and women in the target audience. The host organization will be concerned with the evaluation both from the perspective of the staff members who implemented the program (childbirth educator, nursing staff, billing, and receptionist) and from the perspective of administrators. Ideally, the host organization will value the evaluation for its usefulness to provide opportunities for future improvements with the program. Realistically however, staff involved with implementing the program can be offended by an evaluation and view results as critiques of their work. Administrators often consider evaluation results as the determinant of whether a program was effective. Yet sometimes poor results from an evaluation are actually due to external factors that negatively effected the program’s implementation.

Other stakeholders include the grant funders who will expect to see whether or not the program is effectively reaching its goals and who may withhold future funding if objectives are not met. Finally, the target population is the most critical member of the stakeholders. Ideally, the evaluation will represent, in part, the target population’s feedback after women participated in the program and allow for future improvements in consideration of that feedback. Another effect of the evaluation is to promote awareness of the program in the target population so that more women can benefit from its goals.
Potential challenges include restricted time and funding for the evaluation process, conflicting interests and priorities of different stakeholders, and technical difficulties with using a newly designed evaluation tool to assess a new program. Careful planning at the onset of the program can minimize the risk of funding and timing restrictions. Strategies to address these challenges include involvement of the stakeholders in the evaluation process. At a basic level, stakeholders should be informed throughout the program implementation and evaluation process. At a higher level, stakeholders could also be involved through development of the evaluation tools. Finally, one member of the host organization’s staff should be directly involved as an internal evaluator. Of note, while funds from a grant may be used to contract services from an external evaluator, the entity providing the grant funds should not directly contract the external evaluator. Such a relationship could risk the impartiality and objectivity sought in an external evaluator.

**Evaluation Design**

A mixed-methods strategy based on a quasi-experimental design that incorporates a comparison group will be used to evaluate this program. Quantitative analysis will involve review of participant medical records, administration of a questionnaire, and collection of participant attendance during the program. Qualitative analysis will entail structured interviews to explore observational data from healthcare providers and the educator, and results from self-reflection on the behalf of participants and the educator.

The intervention arm will comprise women receiving childbirth education through this program at the host agency. The comparison arm will comprise women of similar demographics and health status who are receiving standard prenatal care at another community health center in
the same region of NC. Potential confounders of this design include the willingness of women in the intervention group to participate in the program. Ideally to minimize the effect of confounders, evaluation would use a randomized-control design, yet this strategy would make participant recruitment challenging as many women would not want to be randomized with regards to whether they receive childbirth education.

Evaluation Methods

Quantitative methods will include data collection via participant medical and Women, Infants and Children (WIC) program records, a questionnaire, and an attendance record of program participants. Patient medical records will provide information regarding attendance of prenatal and post-partum clinic visits and whether participants sought resources for suspected post-partum depression. WIC records will provide data on breastfeeding rates and duration among participants. Pre- and post-test questionnaires administered to participants will allow for assessment of knowledge attainment, confidence levels, and satisfaction. Attendance records of the program will reveal to what degree participants were present to receive information delivered through the program.

Qualitative methods will include data collection via structured interviews. These interviews will be administered to collect observational data from a random sample of program participants, the childbirth educator, and healthcare providers who work with the participants before, during, and after labor. The goal of the interviews with participants is to collect information regarding cultural appropriateness, understandability, and importance of the program material. The goal of the interviews with the childbirth educator is to evaluate the ease of program implementation and the curriculum content and design. The goal of the interviews with
the healthcare providers is to explore their assessment of changes in the participants’ attitudes and knowledge throughout the program’s implementation.

**Evaluation Planning Tables**

**Short-Term Objective 1:** By month two, 75% of participants will demonstrate proficiency in understanding the childbirth process.

<table>
<thead>
<tr>
<th>Evaluation Question</th>
<th>Person</th>
<th>Evaluation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do participants understand the childbirth process?</td>
<td>Participants</td>
<td>Pre-/post-questionnaire Structured interview</td>
</tr>
<tr>
<td></td>
<td>Comparison group</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Childbirth educator</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Healthcare providers</td>
<td></td>
</tr>
<tr>
<td>What methods were using for teaching women about the childbirth process?</td>
<td>Childbirth educator</td>
<td>Structured interview</td>
</tr>
<tr>
<td>How many participants understand the childbirth process?</td>
<td>Participants</td>
<td>Pre-/post-questionnaire Structured interview</td>
</tr>
<tr>
<td></td>
<td>Comparison group</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Childbirth educator</td>
<td></td>
</tr>
<tr>
<td>How many women who enrolled in childbirth education classes actually attended the day that the childbirth process was taught?</td>
<td>Childbirth educator</td>
<td>Program attendance record</td>
</tr>
<tr>
<td>What were the barriers to women becoming proficient in their understanding of the childbirth process? How were they addressed?</td>
<td>Participants</td>
<td>Pre-/post-questionnaire Structured interview</td>
</tr>
<tr>
<td></td>
<td>Childbirth educator</td>
<td></td>
</tr>
<tr>
<td>Did women who participated in the program appear more knowledgeable about childbirth than those who did not?</td>
<td>Healthcare providers</td>
<td>Structured interview</td>
</tr>
<tr>
<td>How can future classes be improved to better teach women about the childbirth process?</td>
<td>Childbirth educator</td>
<td>Pre-/post-questionnaire Structured interview</td>
</tr>
<tr>
<td></td>
<td>Participants</td>
<td></td>
</tr>
</tbody>
</table>
**Short-Term Objective 2:** By month two, 80% of participants will demonstrate an understanding of the benefits and techniques of breastfeeding.

<table>
<thead>
<tr>
<th>Evaluation Question</th>
<th>Person</th>
<th>Evaluation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do participants understand breastfeeding benefits and techniques?</td>
<td>Participants</td>
<td>Pre-/post-questionnaire</td>
</tr>
<tr>
<td></td>
<td>Comparison group</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Childbirth educator</td>
<td></td>
</tr>
<tr>
<td>What methods were using for teaching women about breastfeeding?</td>
<td>Childbirth educator</td>
<td>Structured interview</td>
</tr>
<tr>
<td>How many participants understand breastfeeding benefits and techniques?</td>
<td>Participants</td>
<td>Pre-/post-questionnaire</td>
</tr>
<tr>
<td></td>
<td>Comparison group</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Childbirth educator</td>
<td></td>
</tr>
<tr>
<td>What were the barriers to women becoming proficient in their understanding of breastfeeding benefits and techniques? How were they addressed?</td>
<td>Participants</td>
<td>Pre-/post-questionnaire</td>
</tr>
<tr>
<td></td>
<td>Childbirth educator</td>
<td>Structured interview</td>
</tr>
<tr>
<td>How can future classes be improved to better teach about breastfeeding?</td>
<td>Childbirth educator</td>
<td>Pre-/post-questionnaire</td>
</tr>
<tr>
<td></td>
<td>Participants</td>
<td>Structured interview</td>
</tr>
</tbody>
</table>

**Short-Term Objective 3:** By month four, 80% of participants will demonstrate a greater understanding of the hospitalization process as it pertains to the labor and delivery setting.

<table>
<thead>
<tr>
<th>Evaluation Question</th>
<th>Person</th>
<th>Evaluation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do participants understand the hospitalization process as it pertains to labor and delivery?</td>
<td>Participants</td>
<td>Pre-/post-questionnaire</td>
</tr>
<tr>
<td></td>
<td>Comparison group</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Childbirth educator</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Healthcare providers</td>
<td></td>
</tr>
<tr>
<td>What methods were using for teaching women about the hospitalization process?</td>
<td>Childbirth educator</td>
<td>Structured interview</td>
</tr>
<tr>
<td>How many women attended the tour of the hospital’s labor &amp; delivery department?</td>
<td>Childbirth educator</td>
<td>Program attendance record</td>
</tr>
<tr>
<td></td>
<td>Comparison group</td>
<td></td>
</tr>
<tr>
<td>How many participants understand the hospitalization process as it pertains to labor and delivery?</td>
<td>Participants</td>
<td>Pre-/post-questionnaire</td>
</tr>
<tr>
<td></td>
<td>Comparison group</td>
<td></td>
</tr>
</tbody>
</table>
What were the barriers to women becoming proficient in their understanding the hospitalization process as it pertains to labor and delivery? How were they addressed?

<table>
<thead>
<tr>
<th>Evaluation Question</th>
<th>Person</th>
<th>Evaluation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do participants report increased satisfaction with the childbirth experience, as compared to women in the comparison group?</td>
<td>Participants, Comparison group, Healthcare providers</td>
<td>Pre-/post-questionnaire, Structured interview</td>
</tr>
<tr>
<td>How many participants report increased satisfaction with the childbirth experience?</td>
<td>Participants, Comparison group</td>
<td>Pre-/post-questionnaire</td>
</tr>
<tr>
<td>What were the barriers to women having increased satisfaction with the childbirth experience? How were they addressed?</td>
<td>Participants, Healthcare providers</td>
<td>Pre-/post-questionnaire, Structured interview</td>
</tr>
<tr>
<td>How can future classes be improved to better prepare women for the reality of childbirth?</td>
<td>Childbirth educator, Participants</td>
<td>Pre-/post-questionnaire, Structured interview</td>
</tr>
</tbody>
</table>

**Short-Term Objective 4**: By month five, 75% of participants will report increased satisfaction with the childbirth experience.

<table>
<thead>
<tr>
<th>Evaluation Question</th>
<th>Person</th>
<th>Evaluation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do participants report increased satisfaction with the childbirth experience, as compared to women in the comparison group?</td>
<td>Participants, Comparison group, Healthcare providers</td>
<td>Pre-/post-questionnaire, Structured interview</td>
</tr>
<tr>
<td>How many participants report increased satisfaction with the childbirth experience?</td>
<td>Participants, Comparison group</td>
<td>Pre-/post-questionnaire</td>
</tr>
<tr>
<td>What were the barriers to women having increased satisfaction with the childbirth experience? How were they addressed?</td>
<td>Participants, Healthcare providers</td>
<td>Pre-/post-questionnaire, Structured interview</td>
</tr>
<tr>
<td>How can future classes be improved to better prepare women for the reality of childbirth?</td>
<td>Childbirth educator, Participants</td>
<td>Pre-/post-questionnaire, Structured interview</td>
</tr>
</tbody>
</table>

**Short-Term Objective 5**: By month five, 50% of participants will report increased empowerment to take action with regards to health matters.

<table>
<thead>
<tr>
<th>Evaluation Question</th>
<th>Person</th>
<th>Evaluation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do participants report increased empowerment to take action with regards to health matters?</td>
<td>Participants, Comparison group</td>
<td>Pre-/post-questionnaire</td>
</tr>
<tr>
<td>How many participants report increased empowerment to take action with regards to health matters?</td>
<td>Participants, Comparison group</td>
<td>Pre-/post-questionnaire</td>
</tr>
<tr>
<td>Evaluation Question</td>
<td>Person</td>
<td>Evaluation Method</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>What were the barriers to women reporting increased empowerment to take action with regards to health matters? How were they addressed?</td>
<td>Participants Childbirth educator</td>
<td>Pre-/post-questionnaire Structured interview</td>
</tr>
<tr>
<td>How can future classes be improved to increase the empowerment of women to deal with health matters?</td>
<td>Childbirth educator Participants Clinicians Labor &amp; delivery nurses</td>
<td>Pre-/post-questionnaire Structured interview</td>
</tr>
</tbody>
</table>

**Long-Term Objective 1:** By year two, there will be a 10% increase in the rates of attendance at post-partum clinic visits.

<table>
<thead>
<tr>
<th>Evaluation Question</th>
<th>Person</th>
<th>Evaluation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many participants attend post-partum clinic visits?</td>
<td>Participants Comparison group Childbirth educator</td>
<td>Pre-/post-questionnaire Medical chart review</td>
</tr>
<tr>
<td>What were the barriers to women increasing the rates of attendance at post-partum clinic visits? How were they addressed?</td>
<td>Participants Childbirth educator</td>
<td>Pre-/post-questionnaire Structured interview</td>
</tr>
</tbody>
</table>

**Long-Term Objective 2:** By year five, the number of women screened for and the number of women diagnosed with post-partum depression will both increase by 10%.

<table>
<thead>
<tr>
<th>Evaluation Question</th>
<th>Person</th>
<th>Evaluation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many women in the target population access professional assistance for dealing with post-partum depression?</td>
<td>Participants Comparison group Childbirth educator Healthcare providers</td>
<td>Pre-/post-questionnaire Medical chart review</td>
</tr>
<tr>
<td>What is the rate of screening women in the target population for post-partum depression?</td>
<td>Healthcare providers</td>
<td>Medical chart review</td>
</tr>
<tr>
<td>How many women in the target population were diagnosed with post-partum depression?</td>
<td>Healthcare providers</td>
<td>Medical chart review of Edinburgh Score</td>
</tr>
<tr>
<td>What is the prevalence of post-partum</td>
<td></td>
<td>Secondary data</td>
</tr>
</tbody>
</table>
depression in this population?

**Long-Term Objectives 3 & 4:** By year three, rates of breastfeeding will increase by 10%; and by five years, duration of breastfeeding will increase by 10%.

<table>
<thead>
<tr>
<th>Evaluation Question</th>
<th>Person</th>
<th>Evaluation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many women breastfeed?</td>
<td>Participants</td>
<td>Medical chart review</td>
</tr>
<tr>
<td></td>
<td>Comparison group</td>
<td>WIC participant record</td>
</tr>
<tr>
<td></td>
<td>Clinician</td>
<td></td>
</tr>
<tr>
<td></td>
<td>WIC staff</td>
<td></td>
</tr>
<tr>
<td>How long do women breastfeed each child?</td>
<td>Participants</td>
<td>Medical chart review</td>
</tr>
<tr>
<td></td>
<td>Healthcare providers</td>
<td>WIC participant record</td>
</tr>
<tr>
<td></td>
<td>WIC staff</td>
<td></td>
</tr>
<tr>
<td>What are the barriers to women breastfeeding?</td>
<td>Participants</td>
<td>Pre-/post-questionnaire</td>
</tr>
<tr>
<td>How were they addressed?</td>
<td>Healthcare providers</td>
<td>Structured interview</td>
</tr>
<tr>
<td></td>
<td>WIC staff</td>
<td></td>
</tr>
</tbody>
</table>

**Dissemination of Results**

Stakeholders include program participants, the staff and administrators of the health center that hosts the program, funders of the program, and clinicians who give medical care to the participants. The participants are invested in knowing the quality and impact of the program as they consider the effect it had on their childbirth and healthcare experiences, the possibility of future participation, and whether or not to refer friends to the program. The staff members are invested in learning how well they implemented the program and the degree to which goals were met. These staff members will likely be concerned about whether or not the time and energy they dedicated to the program was worthwhile; they also may be concerned about whether or not the
program was “successful” and how that might effect future funding of their staff position or the program itself. The health center administrator will also be concerned about whether or not the program objectives were met both due to a need to provide quality health services to the community and to justify funding. Funders of the program will likely be state and local government through support of Medicaid and the health center itself. Finally, clinicians who care for the program participants at the health center and in the hospital during labor will have a vested interested in the effects of the program. For example, if the program is effective, the clinicians will likely appreciate the information and skills that participants acquired because these changes may be evident and helpful with the birth process.

The evaluation results will be disseminated in a myriad of ways to these different stakeholders. Participants may receive results informally through staff members who describe the quality of the program during future clinic visits. Also, women in the community could be presented with the results through fliers or brochures that are recruiting new participants if those materials use success stories or statistics to indicate the program strengths. Some hospitals and health centers host “birthday” parties for all infants born during the past year. During such an event, a poster could describe to women the program’s evaluation results. If results are unfavorable, then a collaborative meeting may be a useful strategy to both present results to participants and also request their thoughts and suggestions for how to improve the program.

Health center staff members will be intimately involved in the evaluation process and may help compile the evaluation report itself. They also may review the results during routine employee performance reviews with their supervisors. The administrators of the health center will be presented the evaluation results immediately after the report has been finalized. They will
likely take key elements of the results to include them in the annual report that accounts for all programs hosted by the health center.

Regarding funders, local government will receive a copy of the health center’s annual report that may also include an oral presentation by the health director to a board of health, town council, or county commissioners. Aside from routine audits of Medicaid fund recipients and reviews of local and county health indicators, the state level of government may not be interested in reviewing this program’s evaluation results. Finally, healthcare providers could be given an executive summary of the evaluation and could be provided with the results through an oral presentation if the health center occasionally hosts dinners or educational talks for local clinicians.

For the sake of contributing to the professional movement of providing women with quality health services and education, it would be prudent to consider submitting the program evaluation to a peer-reviewed journal or presenting at a national meeting of professionals involved in childbirth education (doulas, childbirth educators, midwives, nurses, family physicians, and obstetricians).
Discussion

Childbirth education contributes to a major component of providing comprehensive and high quality health care. As women prepare to undergo one of the most physically challenging experiences of their lives, educators and health care providers can use this program plan to give support and useful information. One of this paper’s strengths is the inclusion of an evaluation plan. Too often, public health programs lack an evaluation process; or when evaluations are conducted, they are often designed and implemented after the program has been put into action. This evaluation plan offers a logic model and theory-based strategy to evaluate the childbirth education program and make improvements for future use of the program. Finally, targeting Latina immigrant women for this program helps to address unmet health needs of a marginalized population in the USA. Its design for implementation in community health centers allows for the program to be used in clinics located in rural and semi-urban areas where access to healthcare services is often limited and healthcare education in particular is sporadic.
Acknowledgements

I would like to acknowledge the time and work that Drs. Diane Calleson, Cristina Muñoz and Pam Dickens have contributed to this paper. I wish to thank each of them for their support and guidance that made this paper possible. Thank you to all the mentors who have taught me over the years about the wonders and gratification to be found in working with women during pregnancy. Finally, I thank my wife, Michele Drostin, for her understanding and support as I spent many hours assisting women during labor as I trained to become a doula and discover the wonder of being part of the childbirth experience.
Appendix A.

Division of Medical Assistance Clinical Coverage Policy No.: 1M-2 Childbirth Education Original Effective Date: October 1, 2002 Revised Date: August 1, 2008 07242008 i

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1.0 Description of the Service

Childbirth education is a series of classes designed to help pregnant women and their support person to understand the changes experienced during pregnancy, to prepare for the labor and delivery experience, and to understand the postpartum period, including, but not limited to, the importance of proper postpartum care for the mother and the child. These classes are based on the goals and objectives approved by the Division of Medical Assistance (DMA), which are listed in Section 5.2, Class Requirements.

2.0 Eligible Recipients

2.1 General Provisions

Medicaid recipients may have service restrictions due to their eligibility category that would make them ineligible for this service.

2.2 Limitations

Pregnant women who receive Medicaid are eligible for this service.

2.3 EPSDT Special Provision: Exception to Policy Limitations for Recipients under 21 Years of Age

42 U.S.C. § 1396d(r) [1905(r) of the Social Security Act]

Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) is a federal Medicaid requirement that requires the state Medicaid agency to cover services, products, or procedures for Medicaid recipients under 21 years of age if the service is medically necessary health care to correct or ameliorate a defect, physical or mental illness, or a condition [health problem] identified through a screening examination** (includes any evaluation by a physician or other licensed clinician). This means EPSDT covers most of the medical or remedial care a child needs to improve or maintain his/her health in the best condition possible, compensate for a health problem, prevent it from worsening, or prevent the development of additional health problems. Medically necessary services will be provided in the most economic mode, as long as the treatment made available is similarly efficacious to the service requested by the recipient’s physician, therapist, or other licensed practitioner; the determination process does not delay the delivery of the needed service; and the determination does not limit the recipient’s right to a free choice of providers.

EPSDT does not require the state Medicaid agency to provide any service, product, or procedure

a. that is unsafe, ineffective, or experimental/investigational.

b. that is not medical in nature or not generally recognized as an accepted method of medical practice or treatment.
Service limitations on scope, amount, duration, frequency, location of service, and/or other specific criteria described in clinical coverage policies may be exceeded or may not apply as long as the provider’s documentation shows that the requested service is medically necessary “to correct or ameliorate a defect, physical or mental illness, or a condition” [health problem]; that is, provider documentation shows how the service, product, or procedure will correct or improve or maintain the recipient’s health in the best condition possible, compensate for a health problem, prevent it from worsening, or prevent the development of additional health problems.

**EPSDT and Prior Approval Requirements**

a. If the service, product, or procedure requires prior approval, the fact that the recipient is under 21 years of age does NOT eliminate the requirement for prior approval.

b. IMPORTANT ADDITIONAL INFORMATION about EPSDT and prior approval is found in the Basic Medicaid Billing Guide, sections 2 and 6, and on the EPSDT provider page. The Web addresses are specified below.


EPSDT provider page: [http://www.ncdhhs.gov/dma/EPSDTprovider.htm](http://www.ncdhhs.gov/dma/EPSDTprovider.htm)

### 3.0 When Childbirth Education Is Covered

**IMPORTANT NOTE:** EPSDT allows a recipient less than 21 years of age to receive services in excess of the limitations or restrictions below and without meeting the specific criteria in this section when such services are medically necessary health care services to correct or ameliorate a defect, physical or mental illness, or a condition [health problem]; that is, documentation shows how the service, product, or procedure will correct or improve or maintain the recipient’s health in the best condition possible, compensate for a health problem, prevent it from worsening, or prevent the development of additional health problems.

EPSDT **DOES NOT ELIMINATE THE REQUIREMENT FOR PRIOR APPROVAL IF PRIOR APPROVAL IS REQUIRED.** For additional information about EPSDT and prior approval requirements, see Section 2.0 of this policy.

#### 3.1 General Criteria

Childbirth education is covered during pregnancy.

### 4.0 When Childbirth Education Is Not Covered

**IMPORTANT NOTE:** EPSDT allows a recipient less than 21 years of age to receive services in excess of the limitations or restrictions below and without meeting the specific criteria in this section when such services are medically necessary health care services to correct or ameliorate a defect, physical or mental illness, or a condition [health problem]; that is, documentation shows how the service, product, or procedure will correct or improve or maintain the recipient’s health in the best condition possible, compensate for a health problem, prevent it from worsening, or prevent the development of additional health problems.
EPSDT DOES NOT ELIMINATE THE REQUIREMENT FOR PRIOR APPROVAL IF PRIOR APPROVAL IS REQUIRED. For additional information about EPSDT and prior approval requirements, see Section 2.0 of this policy.

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4.1 General Criteria
Childbirth education is not covered when
a. the recipient does not meet the eligibility requirements listed in Section 2.0;
b. the recipient is not pregnant;
c. the procedure unnecessarily duplicates another provider’s procedure; or
d. the procedure is experimental, investigational, or part of a clinical trial.

5.0 Requirements for and Limitations on Coverage

IMPORTANT NOTE: EPSDT allows a recipient less than 21 years of age to receive services in excess of the limitations or restrictions below and without meeting the specific criteria in this section when such services are medically necessary health care services to correct or ameliorate a defect, physical or mental illness, or a condition [health problem]; that is, documentation shows how the service, product, or procedure will correct or improve or maintain the recipient’s health in the best condition possible, compensate for a health problem, prevent it from worsening, or prevent the development of additional health problems.

EPSDT DOES NOT ELIMINATE THE REQUIREMENT FOR PRIOR APPROVAL IF PRIOR APPROVAL IS REQUIRED. For additional information about EPSDT and prior approval requirements, see Section 2.0 of this policy.

5.1 Prior Approval
Prior approval is not required.

5.2 Class Requirements
Childbirth education includes a series of classes that meet for 1 or 2 hours each session, for a total of 10 hours of instruction. The classes shall be based on a written curriculum that outlines mandatory course objectives and the specific content covered in each class. Whether a nationally recognized curriculum is used or a curriculum is newly developed, content must include, but is not limited to, the following.

5.2.1 Pregnancy
a. Physical and emotional changes during pregnancy and childbirth
b. Physical activity and exercise during pregnancy
c. Nutritional needs of mother and fetus
d. Avoidance of harmful practices and substances including alcohol, drugs, non-prescribed medications and nicotine
e. Consumer advocacy
   1. Informed decision making for childbearing women
   2. Communication and negotiating skills with healthcare providers
   3. Birth plans
5.2.2 Labor and Delivery

a. The process of labor, including stages and phases as well as warning signs of preterm labor
b. Non-pharmacological comfort measures such as breathing and relaxation techniques, touch, massage, and hydrotherapy, in addition to emotional and physical support of the mother
c. Role of doulas, elders, or other support persons during labor and birth
d. Types of deliveries
e. Complications and relevant interventions such as an episiotomy or induction
f. Obstetrical analgesia and anesthesia
g. Education about hospital routines and the importance of touring the hospital/birthing center

5.2.3 Postpartum Care

a. Postpartum physical and emotional changes, including depression
b. Postpartum physical activity and exercise
c. Postpartum sexuality
d. Family planning
e. Breastfeeding issues/support

5.2.4 Infant Care

a. Normal newborn procedures
b. Normal newborn appearances
c. Preparation for breastfeeding
d. Safe sleep positions

5.2.5 Other Topics

Participants must be introduced to the following topics. If follow-up is needed, participants should be informed of where additional information can be obtained.

a. Infant feeding
b. Infant car seat use
c. Importance of well-child care
d. Family attachment to the newborn
e. Potential stress within the family
f. Family planning methods and referral, e.g., referral to medical provider or DSS family planning social worker; the Family Planning Waiver

5.3 Class Presentation

Classes should be taught in the language of the participant or in a means to ensure understanding by the participant. Curriculum and educational materials should be culturally appropriate and reflect average readability (6th–8th grade reading level). A variety of materials, including videos, charts, and other teaching aids may be used.
5.4 Class Schedule

Childbirth education classes are usually held in the second half of the pregnancy. They should be held when the support person can attend.

6.0 Providers Eligible to Bill for Childbirth Education

All Medicaid-enrolled providers (local health departments, physician or medical diagnostic clinics, outpatient hospitals, physicians, nurse practitioners, and nurse midwives) who employ certified childbirth educators are eligible to bill for this service.

6.1 Provider Qualifications

To qualify for reimbursement for childbirth education classes, a provider must

a. be enrolled with the N.C. Medicaid Program; and
b. be certified as a childbirth educator by a nationally recognized organization for childbirth education or meet State-approved childbirth education program requirements; and
c. be a licensed practitioner operating within the scope of his or her practice as defined under State law; or
d. be under the personal supervision of an individual licensed under State law to practice medicine.

6.2 Staff Qualifications

It is the responsibility of the provider agency to verify all staff qualifications for their staff’s provision of service. A copy of this verification must be maintained by the provider agency.

Childbirth education services must be rendered by a childbirth educator who meets one of the following criteria:

a. Certification from a nationally recognized organization for childbirth education, such as the International Childbirth Education Association (ICEA), Lamaze International, or other national organizations as approved by DMA.

b. Verification of meeting State-approved childbirth education program requirements.

Note: For more information, contact the Baby Love Program Manager at the Division of Medical Assistance:

Division of Medical Assistance  
Clinical Policy and Programs  
Baby Love Program Manager  
2501 Mail Service Center  
Raleigh NC 27699-2501
7.0 Additional Requirements

7.1 Federal and State Requirements
All providers must comply with all applicable state and federal laws and regulations.

7.2 Documentation
At a minimum, the client’s record must include the following documentation:
   a. Client’s name and date of birth
   b. Client’s Medicaid identification number (MID)
   c. Dates of service
   d. Total service time component (ex: 1 hour = 1 unit)
   e. Name and title of person performing the service

7.3 Records Retention
As a condition of participation, providers are required to keep records necessary to
disclose the extent of services rendered to recipients and billed to the N.C. Medicaid
program [Social Security Act 1902(a)(27) and 42 CFR 431.107]. Records must be
retained for a period of at least five years from the date of service, unless a longer
retention period is required by applicable federal or state law, regulations, or agreements
(10A NCAC 22F.0107).

Copies of records must be furnished upon request.

The Health Insurance Portability and Accountability Act (HIPAA) does not prohibit the
release of records to Medicaid (45 CFR 164.502).

8.0 Policy Implementation/Revision Information

Original Effective Date: October 1, 2002

Revision Information:

<table>
<thead>
<tr>
<th>Date</th>
<th>Section Revised</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/1/05</td>
<td>Section 2.0</td>
<td>A special provision related to EPSDT was added.</td>
</tr>
<tr>
<td>9/1/05</td>
<td>Section 8.0</td>
<td>Text stating that providers must comply with Medicaid guidelines was added to Section 8.0</td>
</tr>
<tr>
<td>12/1/05</td>
<td>Section 2.3</td>
<td>The web address for DMA’s EPSDT policy instructions was added to this section</td>
</tr>
<tr>
<td>12/1/06</td>
<td>Section 2.3</td>
<td>The special provision related to EPSDT was revised.</td>
</tr>
<tr>
<td>12/1/06</td>
<td>Sections 3.0 and 4.0</td>
<td>A note regarding EPSDT was added to these sections.</td>
</tr>
<tr>
<td>8/1/08</td>
<td>Section 1.0</td>
<td>The description of the service was redefined.</td>
</tr>
<tr>
<td>8/1/08</td>
<td>Section 4.0</td>
<td>The criteria for when the service is not covered were expanded.</td>
</tr>
<tr>
<td>8/1/08</td>
<td>Section 5.0</td>
<td>This section was revised to reflect new curriculum</td>
</tr>
</tbody>
</table>
requirements.
References


De Lee J. 1924. **Principles and Practice of Obstetrics.**


Hamilton B, Martin JA & Ventura SJ. Births: Preliminary Data for 2007. Table 1: Total births and percentage of birth with selected demographic characteristics, by race and Hispanic origin of mother: United States, final 2006 and preliminary 2007. US Department of
Health and Human Services, National Vital Statistics Reports. 2009 March 18, 2009;57(12).


wAPI#v=onepage&q=twilight%20sleep&f=false Accessed June 4, 2010.


Note: The paper by Handfield and Bell (1995) was not available for direct review. Therefore, all references to this paper were made through citations made by Koehn, 2002. For reader’s future reference, the following information applies to the Handfield and Bell paper studied by Koehn: