An Evaluation of a Program in Well-Baby Care for Spanish-Speaking Patients at UNC
Healthcare

By
Holly Ozgun

Senior Honors Thesis
Health Policy and Management
University of North Carolina at Chapel Hill

May 1, 2018

An Evaluation of a Well-Baby Educational Program for Spanish-Speaking Patients at UNC Health Care

Holly Ozgun
Health Policy and Management
University of North Carolina at Chapel Hill

Background: Spanish-speaking mothers have identified Spanish communication as key to receiving patient-centered care. A disparity exists between the amount of maternal health education that Latina mothers would like to receive and the amount that they do receive.

Program description: Ready, Set, Baby (RSB) is "an educational program designed to counsel prenatal women about maternity care best practices and the benefits and management of breastfeeding." The Women's Health Information Center (WHIC) at the North Carolina Women's Hospital established a pilot program to provide RSB education to Spanish-speaking mothers using volunteer educators.

Evaluation questions: What are the processes for recruiting, training, and managing volunteers, and conducting RSB sessions? What are stakeholder perceptions of these processes? Overall, how can the program improve?

Methods: Semi-structured key informant interviews.

Findings: Current processes for recruitment, training, management, and RSB sessions were modeled. Stakeholders identified positive aspects, such as flexibility and leveraging organizational strengths. Stakeholders identified negative aspects, including unclear ownership of processes, lack of communication, redundancies, and inconsistencies. Stakeholders also made recommendations for process improvements.

Implications: Updated processes that reflected stakeholders' recommendations were developed and will be implemented. Other collaborative programs should ensure clear division of responsibilities, eliminate redundancies between organizations, and leverage each organization's strengths to facilitate effective collaboration. Other volunteer-based language-access programs should create processes that are flexible to meet the differing needs of native- and non-native speaker volunteers, mandate standardized proof of language proficiency, and investigate the care-seeking patterns of their target population.

Introduction

Patients with Limited English Proficiency (LEP) face disparities in health care access, quality, outcomes, and patient experiences.[1-5] LEP patients receive insufficient language services, often relying on non-fluent providers or family members when professional interpreters are inaccessible.[6-10] When language services are provided, however, they improve health care access, quality, and outcomes for LEP individuals.[9]

The 40 million Spanish-speakers in the United States, most of whom are considered Latinos, face barriers to health care, including language barriers, discrimination, fear of deportation, lack of insurance, and high rates of poverty.[11-14] This highlights a need for linguistically appropriate health services for Spanish-speakers in the US. Language services are especially necessary in maternal health education. Latina mothers have identified Spanish communication as key to receiving patient-centered care.[4,15-18] Additionally, research has found a disparity between the amount of maternal health education that Latina mothers would like to receive and the amount that they do receive.[19]

Ready, Set, Baby (RSB) is "an educational program designed to counsel prenatal women about maternity care best practices and the benefits and management of breastfeeding, incorporating other important information to help women achieve their goals."[20] RSB was developed in 2010 by International Board Certified Lactation Consultants at the Carolina Global Breastfeeding Institute and the North Carolina Women's Hospital.[20] Educational materials are available in English and Spanish.

In the spring of 2017, the Women's Health Information Center (WHIC) at the North Carolina Women's Hospital established a pilot program to provide RSB education to Spanish-speaking mothers at the hospital (henceforth, "the program"). The WHIC

partnered with Carolina Conexiones (Conexiones) to develop and implement the program. Conexiones is an organization at UNC Children's Hospital that uses bilingual volunteers to provide navigation services to Spanish-speaking families across the Children's Hospital. The WHIC and Conexiones developed a "Women's Health Educator" (henceforth, "educator") volunteer position. Educators lead RSB sessions with Spanish-speaking mothers.

The recent development of the program and changes in program leadership indicate a need to evaluate the program's structure and processes. In addition, an evaluation of the N.C. Women's Hospital's "Baby-Friendly" status in June 2017 reemphasized the need for a reliable process for providing maternal health education, especially for Spanish-speakers.

The evaluation will be conducted using the Evaluability Assessment framework. The framework was originally developed at the Urban Institute in the 1970s, and has evolved throughout its use. The goal of this framework is to decide what aspects of the program should be changed to make it more effective or efficient. Additionally, it can serve as a preliminary step to an impact or effectiveness evaluation by determining what parts of the program can be evaluated. The steps of the Evaluability Assessment framework include analyzing program documents, clarifying the program theory, interviewing stakeholders to identify their perceptions of the program, and making conclusions and recommendations about the program.

The evaluation seeks to answer the following questions:

- What is the process for the recruitment and training of volunteers?

- What are stakeholders' perceptions of the current process for volunteer recruitment, training, and management? What challenges and areas for improvement do stakeholders identify?

- What is the process for conducting Ready, Set, Baby educational sessions?

- What are stakeholders' perceptions of the current process for conducting Ready, Set, Baby educational sessions? What challenges and areas for improvement do stakeholders identify?

- Overall, how can the program improve its volunteer recruitment and training process and implementation of educational sessions?

- How can these findings guide the implementation of other collaborative programs or volunteer-based language access programs, within UNC Health Care or in other settings?

Literature Review

Limited English Proficiency (LEP) patients experience significant health disparities. LEP is defined as speaking English less than "very well." Communication barriers impede health care access, and LEP patients often face other access barriers.[1] Additionally, LEP patients generally experience a lower quality of care.[1,2] They are less likely to receive encouragement to participate in decision making, empathy, or information, and they report lower patient satisfaction and less patient-centered care.[1,3,4] Furthermore, language barriers lead to higher rates of adverse health outcomes.[2,5] Several studies have documented heightened safety risks for LEP patients, including lower rates of informed

consent.[5,6,21,22] A 2015 study found that LEP patients had significantly more emergency department visits and hospitalizations than English-speakers.[23]

Most health organizations have insufficient language services to address these health disparities. LEP patients have experienced and reported fears of inaccurate interpretation and a lack of open communication with interpreters.[7,8] Patients may not use an interpreter due to mistrust or time constraints.[8] Providers often do not receive training on cultural competency or working with an interpreter.[24] One study found that only 30% of providers at a large academic health center felt "very comfortable" treating LEP patients.[24] Use of family members, friends, or bilingual staff members as ad hoc interpreters is prevalent, despite evidence that ad hoc interpreters are not as accurate as professionals.[6–10] Non-fluent providers often do not use any interpreter; some believe their limited language skills are sufficient to communicate with an LEP patient.[6,7] Providers also cite wait time and inability to locate a professional interpreter as barriers to professional interpreter use.[2,6,10] Additionally, language preferences and barriers are often underreported in electronic health records.[5,21]

Among LEP groups, Spanish-speakers in the United States face unique barriers to health care, evidenced by their lower utilization of and access to health care services compared to non-Latino whites.[12,25] In 2015, 57.5 million Latinos resided in the United States, and 40 million US residents (13.3%) reported speaking Spanish at home.[11] 16.4 million Spanish-speakers in the US (41% of Spanish-speakers) are considered LEP, and thus face significant language barriers.[11] Latinos have higher rates of poverty than whites and have the lowest rate of insurance among racial and ethnic groups;[11] poverty and lack of insurance are significant barriers to care.[26] Additionally, many Latinos face stigma and discrimination in

health care, and some providers do not feel comfortable working with Hispanic patients.[7,12,13] Undocumented Latino immigrants face policies that restrict their access to health insurance, insurmountable bureaucratic requirements (i.e. paperwork), transportation barriers, fear of deportation, and a lack of understanding of the US health system.[12] However, barriers to health care exist among both Latino US Citizens and undocumented Latinos; a 2015 study found that restrictive immigration policies deter health care utilization in both groups.[14] Although the Affordable Care Act of 2009 improved access to and utilization of care among Latinos, undocumented immigrants are not covered through public insurance or private insurance exchanges, and disparities in insurance rates and care utilization persist.[14,25]

Fortunately, there is evidence that language services improve health care access, quality, and outcomes for LEP individuals.[9] Use of professional interpreters is associated with improved care utilization, clinical outcomes, and pain management, and it can eliminate disparities in health care quality between English-speaking and LEP patients.[9,27] In a three-year study, use of interpreters decreased LEP patients' length of stay and likelihood of readmission within 30 days.[28] Additionally, interpreters increase informed consent obtainment, patient comprehension, and patient satisfaction. [9,22]

There is a significant need for and potential benefit from language services for Spanish-speakers within maternal health. Language barriers are one of the most significant problems in maternal health care.[4,15,29] In one study, Latina mothers described their experiences navigating health care as "*una batalla*" (a battle).[13] Latinas report less patient-centered maternal health care and identified communication as a critical element to patient-centered care.[4,15–18] Patient-centered care is especially important considering that

"*personalismo*" (personalized social interactions) is a prominent value in Hispanic culture.[18,29] Additionally, Latinas face disparities in maternal health care utilization, outcomes, and satisfaction compared to non-Hispanic white women, despite having higher fertility rates.[17,18,29–31] Hispanic mothers have improved health care experiences when language services are provided.[27,29]

Specifically, language services are needed and are beneficial in maternal health education for Latinas. One study found that Latina mothers in prenatal care expressed a need for information on more maternal health topics, but received information on fewer topics, as compared to African American women.[19] Language barriers or low health literacy may prevent Latina mothers from understanding the care they receive or how to care for themselves and their baby.[29,32] Additionally, detrimental health beliefs are prominent among Latinas, such as the belief that mothers should supplement breast-milk with formula.[33,34] In a 2011 health education evaluation, Spanish-speaking patients responded positively to health education materials that are written in basic Spanish, include images, and cover a variety of health topics.[35]

Program Description

Ready, Set, Baby Curriculum

The Ready, Set, Baby (RSB) curriculum was developed by the International Board Certified Lactation Consultants at the Carolina Global Breastfeeding Institute (CGBI) and North Carolina Women's Hospital.[20] The curriculum originated in 2011 and was updated through 2015. Covered topics include:[20]

- Skin-to-skin contact

- Rooming in (mother and baby sharing an inpatient room)

- Feeding on demand

- Exclusive breastfeeding

- Advantages for mother and baby

- Position and latch

A 2013 outcome evaluation analyzed mothers' experiences with RSB. This evaluation concluded that patients were generally satisfied with their RSB sessions and reported increased knowledge of the topics covered.[36] Notably, non-white women were more likely to be satisfied with their RSB session.[36] Women who received RSB education were more likely to practice skin-to-skin contact and feeding on-demand.[36] This evaluation led to the inclusion of information about common barriers to breastfeeding in the RSB curriculum.[20]

Additionally, a 2014-2015 pilot test evaluated the materials used in RSB sessions. Among 416 mothers, RSB participation significantly increased Infant Feeding Intention Scale scores, a predictor of breastfeeding, and knowledge of maternity care practices.[37]

Pilot Program Development

In the spring of 2017, the WHIC at the NC Women's Hospital established a pilot program to provide RSB education to Spanish-speaking mothers at the hospital (henceforth, "the program"). The WHIC partnered with Carolina Conexiones (Conexiones) to develop and implement the program. Conexiones is an organization at UNC Children's Hospital that uses bilingual volunteers to provide navigation services to Spanish-speaking families across the Children's Hospital. The WHIC and Conexiones developed a "Women's Health Educator"

(henceforth, "educator") volunteer position. Educators led RSB sessions with Spanish-speaking mothers.

Prior to the implementation of the program, bilingual WHIC staff members occasionally conducted RSB sessions in Spanish; however, there was no formal process to conduct RSB sessions that targeted Spanish-speaking mothers and families.

Initially, all educators were selected from among Conexiones volunteers, and they were required to complete their Conexiones volunteer commitment in addition to serving as educators. In the summer of 2017, the WHIC and Conexiones decided to make these be two distinct positions; thus, educators do not have to complete an additional volunteer commitment for Conexiones, and they report to the WHIC, not Conexiones.

Volunteer Recruitment and Training

Community members and college students are recruited to be educators and then undergo a training process. This training primarily involves proof of Spanish proficiency and instruction on leading a RSB session. The volunteer recruitment and training process is a major focus of this evaluation, since there is significant variation in the methods and duration of this process.

Methodology

This program structure and process evaluation utilized the Evaluability Assessment (EA) framework. The Urban Institute in Washington, D.C. developed EA in the 1970s and it has since been refined. An EA may address one or more goals:[38]

- Planning: To define program goals and identify plausible activities for meeting these goals.

- Formative: To decide what needs to be changed about a program to make it more effective or efficient.

- Summative: To determine what parts of a program are evaluable, as a preliminary step to an impact or effectiveness evaluation.

This program evaluation was formative, seeking to identify program improvements.

Evaluability Assessment Methods

The EA followed these iterative steps:[38]

1. Determine evaluation purpose, secure commitment, and identify work group members

    The evaluator identified the Director of the WHIC as a leader for the evaluation; they determined the purpose of the evaluation and the research questions. An existing program work group was identified as the work group for the evaluation. At a preliminary meeting, these members confirmed the evaluation purpose and research questions and agreed to participate in stakeholder interviews.

2. Define boundaries of the program to be studied

    The evaluator and Director of the WHIC established that the program to be evaluated is the RSB pilot program, as defined above; it does not include other related initiatives led by the WHIC or Conexiones.

3. Identify and analyze program documents

Program documents identified by stakeholders include documents published on the CGBI website and minutes from previous working group meetings. These documents were analyzed for common themes.

4. Identify and interview stakeholders

Stakeholders are those interested in the program, who impact it and are impacted by it. Stakeholder involvement ensures that the evaluator can influence the program's key decision-makers. Stakeholders were identified through two methods: on-site observation of the program by the evaluator, and referrals from a key informant, the director of the WHIC. Key stakeholders identified were: WHIC leaders; Carolina Conexiones leaders; Interpreter Services System Manager; lactation consultants; and Women's Health Educator volunteers.

This evaluation primarily collected data from interviews with key stakeholders. The interviews were in-person and semi-structured, following the interviews guide shown in Appendix A. Interviews addressed stakeholders' perceptions of the themes identified in the research questions: the current and ideal processes for volunteer recruitment, training, management, and conducting RSB educational sessions; potential areas for program improvement; and insights for future volunteer-based language access programs.

5. Describe stakeholder perceptions of program, and identify stakeholder needs, concerns, and differences in perceptions

The interviewer used an interview log to record notes and transcribe key quotes from the stakeholder interviews. This log was analyzed for common themes, and stakeholders' perceptions were aggregated according to theme. The EA work

group discussed areas of agreement and disagreement, needs, and concerns that emerge within these themes.

6. Develop and clarify program theory

The evaluator used data collected from stakeholder interviews and document analysis to develop preliminary logic models for volunteer recruitment and training and for conducting RSB sessions. These logic models highlighted areas of agreement and disagreement in program processes.

7. Determine plausibility of program model

The EA work group discussed the preliminary logic models and proposed updated models developed by the evaluator. They evaluated these processes' ability to meet program goals.

8. Draw conclusions and make recommendations

Conclusions and recommendations were made throughout the EA process. The EA work group finalized program logic models for volunteer recruitment and training and conducting RSB sessions. The group discussed stakeholder perceptions of program improvement and formalized recommendations for program changes.

9. Plan specific steps for the utilization of EA data

The EA work group decided to use the evaluation data to change the program to better meet staff and volunteer needs. They delegated responsibility for program improvements among work group members.

Limitations and Ethical Considerations

Limitations of this evaluation include bias introduced in the selection of stakeholders and the interviewer's experience in the program. Measures were taken to promote impartiality during the interviews. There are minimal ethical considerations in this evaluation; the evaluation addresses organizational improvements and does not address personal experiences or information.
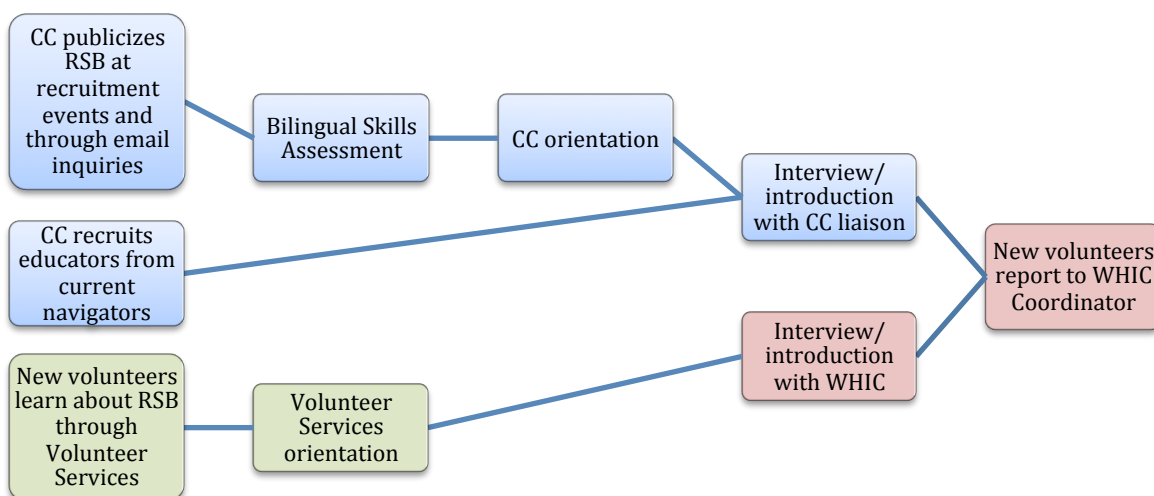
Findings

Stakeholder interviews and document analysis detailed the current processes for volunteer recruitment, training, management, and conduction of RSB educational sessions. Data were aggregated to develop models of the current processes. The interviews also highlighted the positives, negatives, and potential changes associated with these processes.

Volunteer Recruitment

Current process. Key stakeholders described the following process for recruiting volunteers:

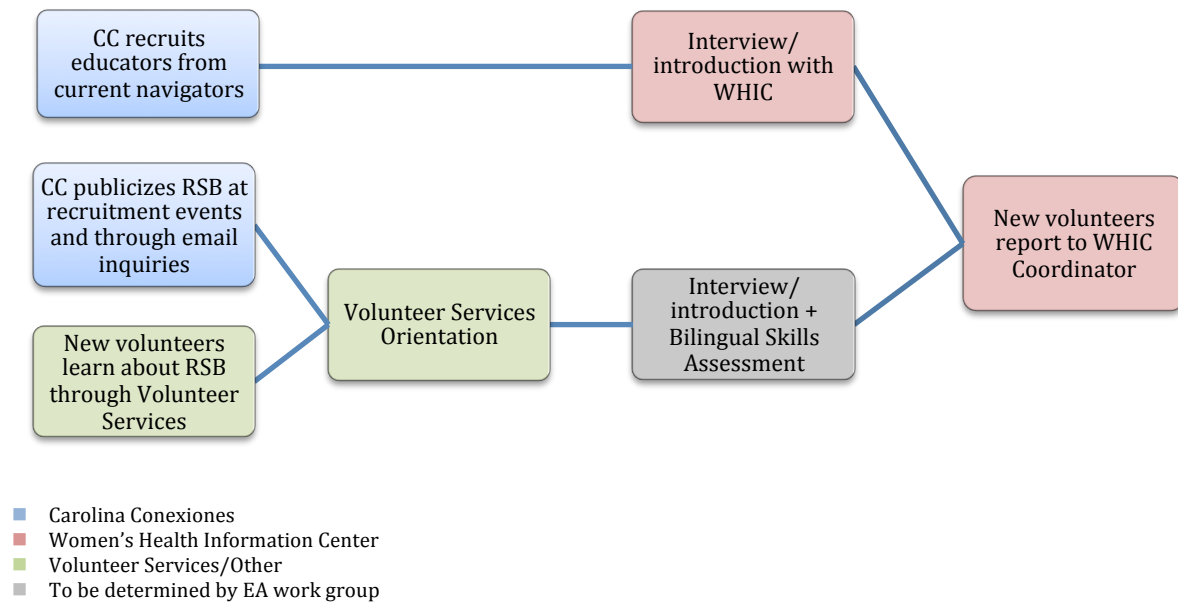**Figure 1**. Current process for volunteer recruitment.

Positive aspects. Stakeholders identified the following positive aspects of this process: recruiting through Carolina Conexiones provides experienced volunteers with strong, validated Spanish skills; and interviews confirm volunteers' interest and commitment.

Areas for improvement. Stakeholders identified the following negative aspects: unclear ownership of the recruitment process; lack of communication about how Carolina Conexiones and the Women's Health Information Center prepare volunteers during recruitment (e.g. what information is shared by each group?); the process is too reliant on the Carolina Conexiones liaison, a volunteer position; there are too many steps; and not all volunteers pass the Bilingual Skills Assessment.

Recommendations. Stakeholders recommended the following changes to improve the volunteer recruitment process: decide who is in charge of recruitment; combine the Bilingual Skills Assessment and interview/introduction; eliminate Carolina Conexiones-specific orientation, as it does not apply to RSB volunteers; and create a universal Bilingual Skills Assessment for all bilingual volunteers.

Updated process. The work group agreed to adopt the following process:

Figure 2. Updated process for volunteer recruitment.

- ■ Carolina Conexiones
- ■ Women's Health Information Center
- ■ Volunteer Services/Other
- ■ To be determined by EA work group

Volunteer Training

Current process. Key stakeholders described the following process for training volunteers:

Figure 3. Current process for volunteer training.
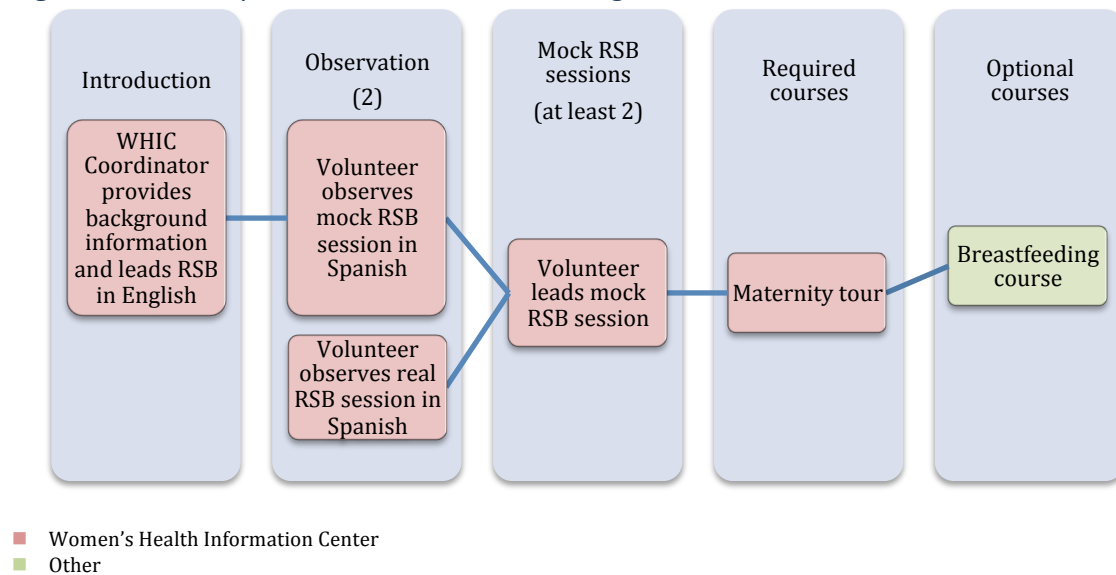
- ■ Women's Health Information Center
- ■ Other

Positive aspects. Stakeholders identified the following positive aspects of this process: the process follows Women's Health Information Center's standard training procedure (2 observations, 1+ mock session); it is flexible based on volunteer's needs; interactions with patients were most helpful to volunteers at UNC Hospitals.

Areas for improvement. Stakeholders identified the following negative aspects: the training process took too long, and there were no deadlines to encourage timely progress; it is hard to track volunteers' progress through training process; loss of contact with volunteers during training process; and unclear ownership of process.

Recommendations. Stakeholders recommended the following changes: Decide who is in charge of volunteer training; standardize tracking of volunteers' progress through training requirements; create a set schedule for completing training process, with deadlines; incorporate more contact with patients and guidance on patient interaction into the training process.

Updated process. The work group agreed to adopt one of the following processes, pending further discussion:

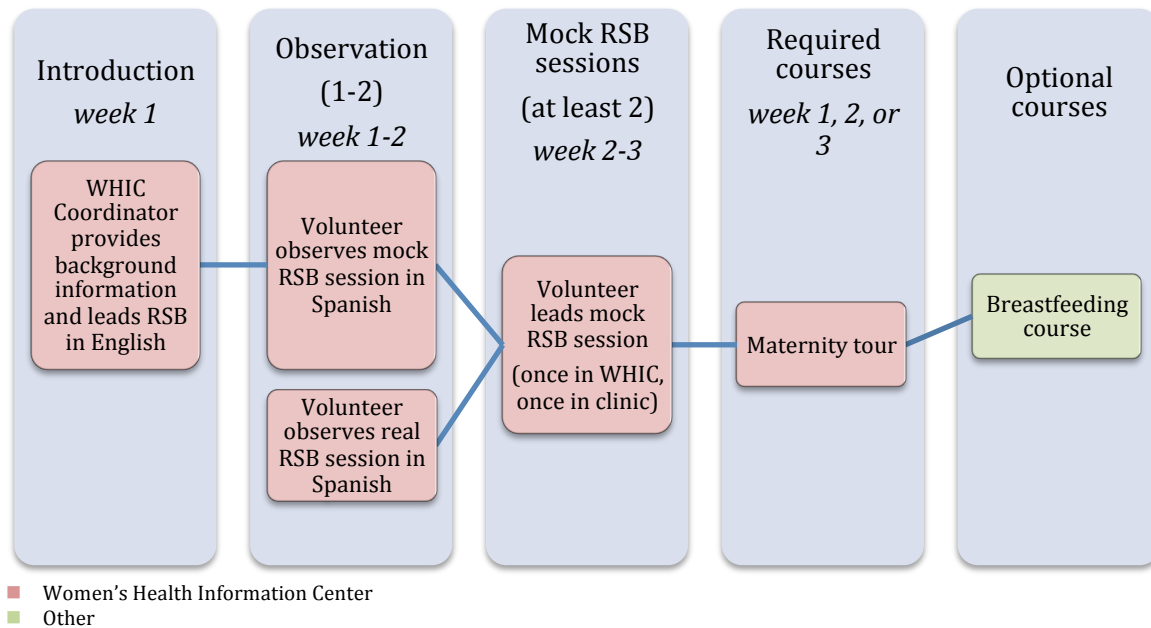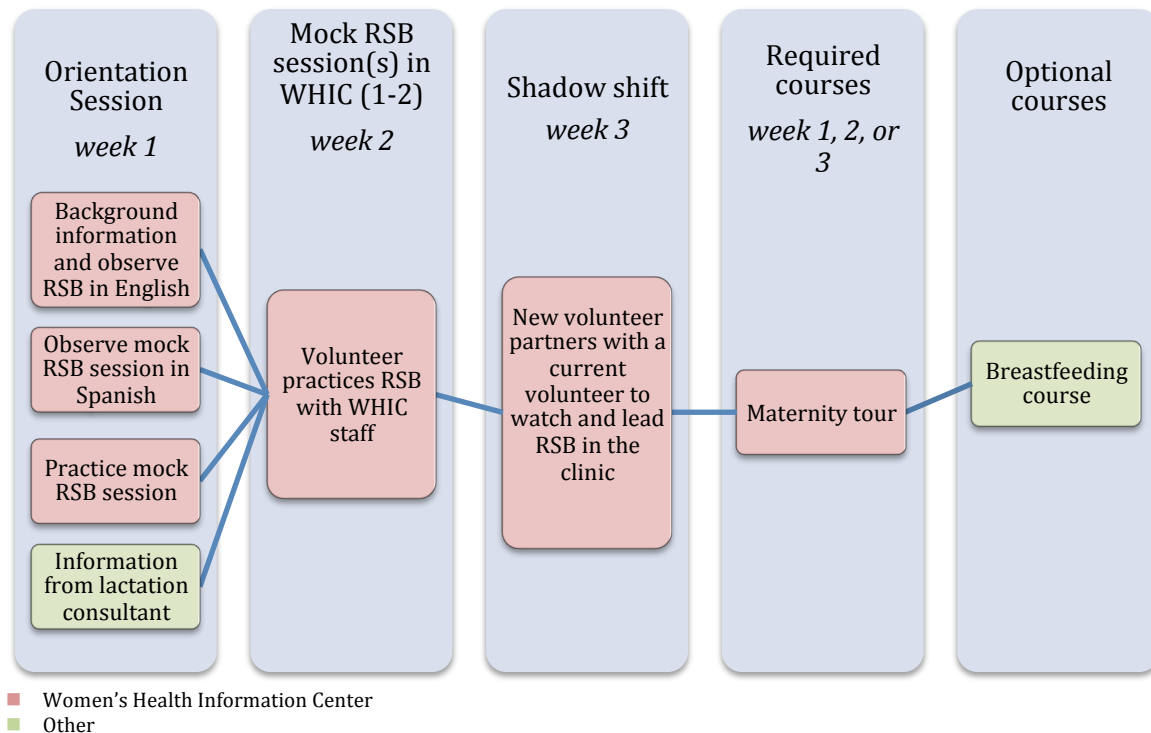**Figure 4**. Potential updated process for volunteer training.

Introduction *week 1*	Observation (1-2) *week 1-2*	Mock RSB sessions (at least 2) *week 2-3*	Required courses *week 1, 2, or 3*	Optional courses
WHIC Coordinator provides background information and leads RSB in English	Volunteer observes mock RSB session in Spanish / Volunteer observes real RSB session in Spanish	Volunteer leads mock RSB session (once in WHIC, once in clinic)	Maternity tour	Breastfeeding course

■ Women's Health Information Center
■ Other

Figure 5. Potential updated process for volunteer training.

Orientation Session *week 1*	Mock RSB session(s) in WHIC (1-2) *week 2*	Shadow shift *week 3*	Required courses *week 1, 2, or 3*	Optional courses
Background information and observe RSB in English / Observe mock RSB session in Spanish / Practice mock RSB session / Information from lactation consultant	Volunteer practices RSB with WHIC staff	New volunteer partners with a current volunteer to watch and lead RSB in the clinic	Maternity tour	Breastfeeding course

■ Women's Health Information Center
■ Other

Volunteer Management

Interviews revealed that there is no defined process for managing volunteers. However, management incorporates: oversight by the WHIC; volunteers choosing shifts using Google Calendar; tracking volunteers' attendance; and collecting data on patient encounters.

Positive aspects. Stakeholders identified the following positive aspects of volunteer management: the WHIC knows when volunteers will be in the clinic, and can plan accordingly; and volunteers have good attendance.
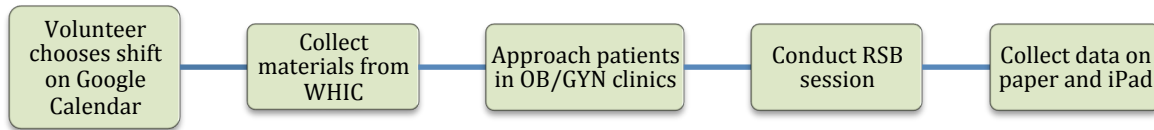
Areas for improvement. Stakeholders identified the following negative aspects: there is a lack of communication between the WHIC and Conexiones about volunteers' activity; there is an unclear division of responsibility between WHIC and Conexiones; volunteers cannot see when other volunteers are scheduled; sometimes volunteers are scheduled for shifts with very few patients; and not all volunteers use Google Calendar reliably.

Recommendations. Stakeholders recommended the following: decide who is in charge of managing volunteers; institute WHIC observation of volunteers for quality-assurance; establish more regular communication between the manager and volunteers (e.g. a weekly email).

Conducting RSB Sessions

Key stakeholders described the following process for conducting RSB educational sessions with patients:

Figure 6. Current process for conducting Ready, Set, Baby educational sessions.

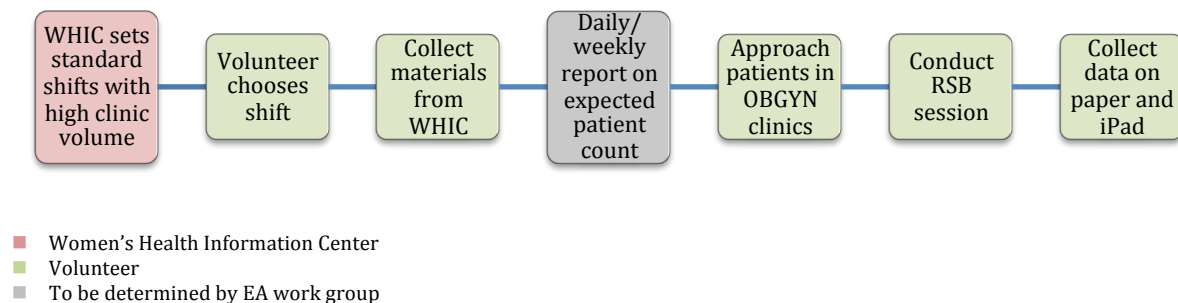| Volunteer chooses shift on Google Calendar	Collect materials from WHIC	Approach patients in OB/GYN clinics	Conduct RSB session	Collect data on paper and iPad

Positive aspects. Stakeholders identified the following positive aspects of this process: the waiting room is an appropriate setting for patient education; and it is easy for volunteers to check in with the WHIC during a shift.

Areas for improvement. Stakeholders identified the following negative aspects: volunteers do not know how many patients to expect during a shift; the front desk staff in the OB/GYN clinics do not understand or support the volunteers' role; oftentimes, there are not many patients in the clinic during a shift; volunteers do not know which patients to approach; and there is no direct oversight of volunteers

Recommendations. Stakeholders recommended the following changes: track when patients will be in the clinic; add other responsibilities for volunteers during slow shifts; begin shifts at 8am to maximize patient contact; improve relationships with clinic staff, especially front desk; and create a checklist for volunteers to follow to standardize encounters.

Updated process. The work group agreed to adopt the following process:

Figure 7. Updated process for conducting Ready, Set, Baby educational sessions.

WHIC sets standard shifts with high clinic volume	Volunteer chooses shift	Collect materials from WHIC	Daily/ weekly report on expected patient count	Approach patients in OBGYN clinics	Conduct RSB session	Collect data on paper and iPad

- 🟥 Women's Health Information Center
- 🟩 Volunteer
- ⬜ To be determined by EA work group

19

Discussion

Insights for Collaborative Programs

Clear division of responsibilities

Because the bilingual Ready, Set, Baby program began as a collaboration between Conexiones and the WHIC, there remained some misunderstanding of each organization's responsibilities. It was necessary to clarify ownership of each step of the process in order to eliminate redundancy and facilitate communication between leaders and volunteers.

Eliminate redundancies between organizations

The WHIC and Conexiones engaged in similar steps to recruit and train their volunteers, which created redundancy in their collaborative efforts. This led to confusion and frustration among volunteers. To avoid this, collaborative programs should identify and eliminate redundant steps in their processes.

Leverage each organization's strengths

Stakeholders noted several benefits from leveraging the strengths of each organization. For example, Conexiones successfully recruited experienced volunteers with demonstrated Spanish proficiency, and the WHIC adapted its existing training processes to meet the needs of bilingual educators. Collaborative programs should identify the unique strengths of all partners and create processes that take advantage of these strengths.

Insights for Volunteer-Based Language Access Programs

Need for flexibility to meet the needs of native and non-native speakers

Volunteers required varying levels of support during the training process. Volunteers learned both the content of the RSB curriculum and how to interact with

patients. In this program, volunteers' needs differed based on their experience speaking Spanish. In general, native Spanish speakers tended to grasp the material quicker, while non-native Spanish speakers required more support in learning vocabulary specific to maternal health. The flexibility of the RSB training process allowed it to adjust to the needs of each volunteer. Other volunteer-based bilingual programs should implement similar flexibility in training in order to match the needs of native- and non-native speakers.

Need for standardized proof of language proficiency

The RSB program initially drew from a pool of Spanish-speaking volunteers who had passed an established Bilingual Skills Assessment. However, as the program began to recruit volunteers from outside this pool, there was inconsistency in volunteers' language skills. Stakeholder interviews highlighted the need for a universal Bilingual Skills Assessment to ensure that all bilingual volunteers were equipped for their role. Ideally, health systems should adopt a universal language assessment for all bilingual volunteers to establish a standard of care for its non-English speaking patients.

Understand patterns of the target population

A major drawback of the RSB program was the lack of understanding of when Spanish-speaking patients visited the OB/GYN clinics. Stakeholders shared varying information about which times or days the most Spanish-speakers visited the clinic. This feedback highlighted the need to understand the care-seeking patterns of the target population. This information will allow language-access programs to meet their target population's needs while maximizing volunteers' time.

Use of Evaluability Assessment for a Formative Evaluation

Stakeholder interviews uncover differing perceptions

The primary method of data collection in the EA was stakeholder interviewing. Stakeholder interviews were effective in uncovering stakeholders' varying perceptions and misunderstandings of the program that were not addressed during group meetings. For example, almost all stakeholders individually expressed confusion about who was responsible for various steps in the process and a lack of understanding of others' roles; however, these concerns were not addressed during the work group's regular meetings. The individual stakeholder interviews were a useful tool to aggregate important issues and bring them to the attention of the group at large.

Focus on program theory facilitates program improvement

The EA methodology focuses on clarifying program theory in order to understand how the program is designed to work and identify gaps in means-ends connections.[38] This was critical to the evaluation's goal of generating program improvements. Stakeholders reported that visualizing the program theory aided in their understanding of how the program currently functioned and how to address issues. The focus ensured that program improvements would reach their intended goals, and aided in reducing program inefficiency.

Challenging to merge focus on future evaluation

Although a major purpose of EA is to design future program evaluation criteria, it was challenging to integrate a focus on future evaluation of the program into a formative evaluation. Interviews addressed how to evaluate the success of the program; however,

stakeholders were more focused on the current development of the program and had

difficulty identifying future evaluation criteria. It was difficult for stakeholders to

simultaneously consider current improvements and future evaluations. However, the

difficulty of integrating these two purposes should not discourage the use of EA for

program development and improvement; the EA was still successful in meeting the goals of

a formative evaluation.

Appendix A: Interview Guide

Interview Guide: RSB Program Evaluation

Stakeholder name: _____

Stakeholder position: _____

In this interview, we will discuss the Ready, Set, Baby language access program (also referred to as the pilot program). This has been a collaborative effort between the Women's Health Information Center and Carolina Conexiones, among others. We will not be discussing other programs led by either the WHIC or Conexiones.

Information collected will be shared with the group, but the identification of the person sharing the information will not be (i.e., I will share, "these program improvements were identified," not, "Holly thinks we can implement this change.") Information will be gathered during this interview through discussion and a concept mapping activity (sticky note activity).

I. Volunteer Recruitment

How are volunteers recruited for RSB? What are the current steps in the process for recruiting volunteers?

What do you think is good about this process?

What do you think is bad about this process? What concerns do you have about how volunteers are recruited?

What steps would you add to or change about the volunteer recruiting process?

What questions remain in your mind about how volunteers are recruited? What is confusing to you, or what are you unsure about?

II. Volunteer Training

How are volunteers trained to be RSB Women's Health Educators? What are the current steps in the process for recruiting volunteers?

What do you think is good about this process?

What do you think is bad about this process? What concerns do you have about how volunteers are trained?

What steps would you add to or change about the volunteer training process?

What questions remain in your mind about how volunteers are trained? What is confusing to you, or what are you unsure about?

III. Managing Volunteers

Once volunteers are fully trained, how is their participation in the RSB program managed? What are the current steps in the process for managing active volunteers?

What do you think is good about this process?

What do you think is bad about this process? What concerns do you have about how volunteers are managed?

What would you add to or change about the current way that volunteers are managed?

What questions remain in your mind about how volunteers are managed? What is confusing to you, or what are you unsure about?

IV. Conducting RSB Sessions

How are RSB education sessions conducted? What are the current steps in the process for conducting a RSB session?

What do you think is good about this process?

What do you think is bad about this process? What concerns do you have about how RSB sessions are conducted?

What would you add to or change about the current way that RSB sessions are conducted?

What questions remain in your mind about how RSB sessions are conducted? What is confusing to you, or what are you unsure about?

V. Program Improvement and Continuing Evaluation

Overall, what improvements to the RSB program would you implement?

What metrics would indicate whether the RSB program is successful? Where in the processes described above would this data be collected?

Appendix B: Interview List

Name	Title	Interview Date	Interview Status
Mary Quezada	WHIC Director	12/13/17 3:15 pm	Complete
Akanksha Arora	WHIC Childbirth Education Coordinator	12/06/17 2:00 pm	Complete
Kristina Morris Heredia	Carolina Conexiones Program Coordinator	11/29/17 2:00 pm	Complete
Alejandra Saucedo	Carolina Conexiones- RSB Liaison	11/30/17 9:30 am	Complete
Sharon Navarette	RSB Volunteer	1/31/18 12:30 pm	Complete
Maria Ortiz	RSB Volunteer	2/13/18 2:15 pm	Complete

References

1. Timmins CL. The impact of language barriers on the health care of Latinos in the United States: a review of the literature and guidelines for practice. *J Midwifery Womens Health* 2002;47(2):80-96. doi:10.1016/S1526-9523(02)00218-0.
2. Wilson CC. Patient safety and healthcare quality: the case for language access. *Int J Health Policy Manag* 2013;1(4):251-253. doi:10.15171/ijhpm.2013.53.
3. Pérez-Stable EJ. Language access and latino health care disparities. *Med Care* 2007;45(11):1009-1011. doi:10.1097/MLR.0b013e31815b9440.
4. Tandon SD, Parillo KM, Keefer M. Hispanic women's perceptions of patient-centeredness during prenatal care: a mixed-method study. *Birth* 2005;32(4):312-317. doi:10.1111/j.0730-7659.2005.00389.x.
5. Flores G, Ngui E. Racial/ethnic disparities and patient safety. *Pediatr Clin North Am* 2006;53(6):1197-1215. doi:10.1016/j.pcl.2006.09.003.
6. Patel DN, Wakeam E, Genoff M, Mujawar I, Ashley SW, Diamond LC. Preoperative consent for patients with limited English proficiency. *J Surg Res* 2016;200(2):514-522. doi:10.1016/j.jss.2015.09.033.
7. Mayo RM, Sherrill WW, Sundareswaran P, Crew L. Attitudes and perceptions of hispanic patients and health care providers in the treatment of hispanic patients: A review of the literature. *Hisp Hlth Care Int* 2007;5(2):64-72. doi:10.1891/154041507780978905.
8. Brooks K, Stifani B, Batlle HR, Nunez MA, Erlich M, Diaz J. Patient Perspectives on the Need for and Barriers to Professional Medical Interpretation. *R I Med J (2013)* 2016;99(1):30-33.
9. Karliner LS, Jacobs EA, Chen AH, Mutha S. Do professional interpreters improve clinical care for patients with limited English proficiency? A systematic review of the literature. *Health Serv Res* 2007;42(2):727-754. doi:10.1111/j.1475-6773.2006.00629.x.
10. Mayo R, Parker VG, Sherrill WW, et al. Cutting corners: provider perceptions of interpretation services and factors related to use of an ad hoc interpreter. *Hisp Health Care Int* 2016;14(2):73-80. doi:10.1177/1540415316646097.
11. FFF: Hispanic Heritage Month 2017. Available at: https://www.census.gov/newsroom/facts-for-features/2017/hispanic-heritage.html. Accessed October 17, 2017.
12. Hacker K, Anies M, Folb BL, Zallman L. Barriers to health care for undocumented immigrants: a literature review. *Risk Manag. Healthc. Policy* 2015;8:175-183. doi:10.2147/RMHP.S70173.
13. Steinberg EM, Valenzuela-Araujo D, Zickafoose JS, Kieffer E, DeCamp LR. The "battle" of managing language barriers in health care. *Clin Pediatr (Phila)* 2016;55(14):1318-1327. doi:10.1177/0009922816629760.
14. Pedraza FI, Nichols VC, LeBrón AMW. Cautious Citizenship: The Deterring Effect of Immigration Issue Salience on Health Care Use and Bureaucratic Interactions among Latino US Citizens. *J Health Polit Policy Law* 2017;42(5):925-960. doi:10.1215/03616878-3940486.
15. Baxley SM, Ibitayo K. Expectations of pregnant women of Mexican origin regarding

their health care providers. *J Obstet Gynecol Neonatal Nurs* 2015;44(3):389-396. doi:10.1111/1552-6909.12572.

16. Bergman AA, Connaughton SL. What is patient-centered care really? Voices of Hispanic prenatal patients. *Health Commun* 2013;28(8):789-799. doi:10.1080/10410236.2012.725124.

17. Pope C. Addressing limited English proficiency and disparities for Hispanic postpartum women. *J Obstet Gynecol Neonatal Nurs* 2005;34(4):512-520. doi:10.1177/0884217505278295.

18. Becker D, Tsui AO. Reproductive health service preferences and perceptions of quality among low-income women: racial, ethnic and language group differences. *Perspect Sex Reprod Health* 2008;40(4):202-211. doi:10.1363/4020208.

19. Vonderheid SC, Montgomery KS, Norr KF. Ethnicity and prenatal health promotion content. *West J Nurs Res* 2003;25(4):388-404. doi:10.1177/0193945903025004005.

20. Carolina Global Breastfeeding Institute. CGBI: Ready, Set, BABY. *UNC Gillings School of Global Public Health*. Available at: https://sph.unc.edu/cgbi/ready-set-baby/. Accessed October 19, 2017.

21. van Rosse F, de Bruijne M, Suurmond J, Essink-Bot M-L, Wagner C. Language barriers and patient safety risks in hospital care. A mixed methods study. *Int J Nurs Stud* 2016;54:45-53. doi:10.1016/j.ijnurstu.2015.03.012.

22. Lee JS, Pérez-Stable EJ, Gregorich SE, et al. Increased Access to Professional Interpreters in the Hospital Improves Informed Consent for Patients with Limited English Proficiency. *J Gen Intern Med* 2017;32(8):863-870. doi:10.1007/s11606-017-3983-4.

23. Njeru JW, St Sauver JL, Jacobson DJ, et al. Emergency department and inpatient health care utilization among patients who require interpreter services. *BMC Health Serv Res* 2015;15:214. doi:10.1186/s12913-015-0874-4.

24. Rollins LK, Bradley EB, Hayden GF, Corbett EC, Heim SW, Reynolds PP. Responding to a changing nation: are faculty prepared for cross-cultural conversations and care? *Fam Med* 2013;45(10):728-731.

25. Alcalá HE, Chen J, Langellier BA, Roby DH, Ortega AN. Impact of the affordable care act on health care access and utilization among latinos. *J Am Board Fam Med* 2017;30(1):52-62. doi:10.3122/jabfm.2017.01.160208.

26. Devoe JE, Baez A, Angier H, Krois L, Edlund C, Carney PA. Insurance + access not equal to health care: typology of barriers to health care access for low-income families. *Ann Fam Med* 2007;5(6):511-518. doi:10.1370/afm.748.

27. Jimenez N, Moreno G, Leng M, Buchwald D, Morales LS. Patient-reported quality of pain treatment and use of interpreters in spanish-speaking patients hospitalized for obstetric and gynecological care. *J Gen Intern Med* 2012;27(12):1602-1608.

28. Lindholm M, Hargraves JL, Ferguson WJ, Reed G. Professional language interpretation and inpatient length of stay and readmission rates. *J Gen Intern Med* 2012;27(10):1294-1299. doi:10.1007/s11606-012-2041-5.

29. Gurman TA, Becker D. Factors affecting Latina immigrants' perceptions of maternal health care: findings from a qualitative study. *Health Care Women Int* 2008;29(5):507-526. doi:10.1080/07399330801949608.

30. Gurman TA, Moran A. Predictors of appropriate use of interpreters: identifying

professional development training needs for labor and delivery clinical staff serving Spanish-speaking patients. *J Health Care Poor Underserved* 2008;19(4):1303-1320. doi:10.1353/hpu.0.0085.
31. Park J-H, Vincent D, Hastings-Tolsma M. Disparity in prenatal care among women of colour in the USA. *Midwifery* 2007;23(1):28-37. doi:10.1016/j.midw.2005.08.002.
32. Shieh C, Halstead JA. Understanding the impact of health literacy on women's health. *J Obstet Gynecol Neonatal Nurs* 2009;38(5):601-10; quiz 610. doi:10.1111/j.1552-6909.2009.01059.x.
33. Chiang R. Perspectives on Infant Feeding Beliefs, Attitudes, and Practices of Hispanic Mothers Enrolled in WIC: Implications for Breastfeeding Peer Counseling. 2017.
34. Hannan J. Minority mothers' healthcare beliefs, commonly used alternative healthcare practices, and potential complications for infants and children. *J Am Assoc Nurse Pract* 2015;27(6):338-348. doi:10.1002/2327-6924.12153.
35. Harvey I, O'Brien M. Addressing health disparities through patient education: the development of culturally-tailored health education materials at Puentes de Salud. *J Community Health Nurs* 2011;28(4):181-189. doi:10.1080/07370016.2011.614827.
36. UNC Gillings School of Global Public Health. CGBI: Ready, Set, BABY Evaluation 2013. *UNC Gillings School of Global Public Health* 2013. Available at: https://sph.unc.edu/cgbi/ready-set-baby-evaluation-2013/. Accessed November 9, 2017.
37. CGBI: Ready, Set, Baby – Additional Information || UNC Gillings School of Global Public Health. Available at: https://sph.unc.edu/cgbi/ready-set-baby-additional-information/. Accessed October 19, 2017.
38. Smith MF. *Evaluability Assessment: A Practical Approach*. Boston: Kluwer Academic; 1989.