

CHOICE, COMMUNITY, & REPRODUCTIVE HEALTH

Expanding Access to Perinatal Education in Los Angeles



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All photography is sourced from the 4th Trimester Bodies Project.

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DISCLAIMER

This report was prepared in partial fulfillment of the requirements for the Master in Public Policy degree in the Department of Public Policy at the University of California, Los Angeles. It was prepared at the direction of the Department and of LOOM as a policy client. The views expressed herein are those of the authors and not necessarily those of the Department, the UCLA Luskin School of Public Affairs, UCLA as a whole, or the client.

GLOSSARY

Community clinic: A “safety-net clinic” distinguished by their mission to provide health care services for families and individuals regardless of their ability to pay. Community clinics and FQHCs both provide services to primarily uninsured, underinsured, and publicly insured individuals, thus their roles may overlap.¹

Federally Qualified Health Center (FQHC): A community-based health care provider that receives federal funding to provide primary care services in underserved areas. FQHCs have a legislative mandate to provide services to a specific population and are required to report utilization data to the federal Health Resources and Services Administration.²

Health Education: “Any combination of learning experiences designed to help individuals and communities improve their health, by increasing their knowledge or influencing their attitudes.”³

Health Literacy: “The degree to which an individual has the capacity to obtain, communicate, process, and understand basic health information and services to make appropriate health decisions.”⁴

Latinx: “A person of Latin American origin or descent (used as a gender-neutral or non-binary alternative to Latino or Latina).”⁵

Obstetrician-gynecologist (Ob-Gyn): “Physicians who possess special knowledge, skills, and professional capability in the medical and surgical care of the female reproductive system and associated disorders.”⁶

Perinatal: “Occurring in, concerned with, or being in the period around the time of birth.”⁷

Reproductive Health: “The diseases, disorders, and conditions that affect the functioning of the male and female reproductive systems during all stages of life.”⁸

Reproductive Age: 15-49 years old.⁹

¹ “Member Clinics.” Community Clinic Association of Los Angeles County, 2019. <https://ccalac.org/member-clinics>; Saviano, Elizabeth C. “California’s Safety Net Clinics: A Primer.” Rep. *California’s Safety Net Clinics: A Primer*. California HealthCare Foundation, March 2009. <https://www.chcf.org/wp-content/uploads/2017/12/PDF-SafetyNetClinicPrimer.pdf>.

² “Federally Qualified Health Centers.” Health Resources & Services Administration. U.S. Department of Health and Human Services, May 1, 2018. <https://www.hrsa.gov/opa/eligibility-and-registration/health-centers/fqhc/index.html>.

³ “Health Education.” Health Topics. World Health Organization, October 18, 2013. https://www.who.int/topics/health_education/en/.

⁴ “What Is Health Literacy? | Health Literacy.” Centers for Disease Control and Prevention. U.S. Department of Health & Human Services. Accessed February 2019. <https://www.cdc.gov/healthliteracy/learn/index.html>.

⁵ “Definition of Latinx in English.” Oxford Dictionaries | English. Oxford University Press, 2019. <https://en.oxforddictionaries.com/definition/latinx>.

⁶ “Obstetrics and Gynecology.” Fellow, American College of Surgeons. American College of Surgeons, 2019. <https://www.facs.org/education/resources/residency-search/specialties/obgyn>.

⁷ “Definition of Perinatal.” Merriam-Webster. Merriam-Webster, Incorporated, 2019. <https://www.merriam-webster.com/dictionary/perinatal>.

⁸ “Reproductive Health.” National Institute of Environmental Health Sciences. U.S. Department of Health and Human Services, December 18, 2018. <https://www.niehs.nih.gov/health/topics/conditions/repro-health/index.cfm>.

⁹ “Infertility Definitions and Terminology.” Sexual and Reproductive Health . World Health Organization, October 21, 2016. <https://www.who.int/reproductivehealth/topics/infertility/definitions/en/>.

EXECUTIVE SUMMARY

Perinatal health considers the health of a pregnant individual around birth, including the prenatal and postpartum periods. Perinatal education increases knowledge which, in turn, improves health outcomes. Unfortunately, perinatal education is often inaccessible to a variety of demographic groups, including ethnic/racial minorities and lower- to middle-income individuals.

Our client, LOOM, is a reproductive health education organization in Los Angeles that seeks to improve access to perinatal education in their community. This Applied Policy Project team has worked with LOOM to determine the most appropriate way to achieve that goal by answering the following question:

What strategies can LOOM implement to address service gaps in perinatal education in Los Angeles?

To answer this question, we utilized a mixed methods approach. First, to justify LOOM's class-based education approach, we conducted a literature review to understand the impact of perinatal education on health literacy and, consequently, health outcomes. We then conducted a market scan, field study, and interviews with both LOOM and community stakeholders to understand gaps in the Los Angeles perinatal education landscape. We also analyzed LOOM's existing perinatal course curricula to determine if it has the capacity to appropriately address service gaps. To further illustrate our findings, we used regression and spatial analysis to identify the regions of Los Angeles that may see the greatest impact from increased access to perinatal education. We incorporated all of our findings to recommend how LOOM should focus its future efforts.

The target population we identified is characterized as Spanish-speaking, low- or middle-income, and geographically isolated from currently available perinatal education services. Based on a robust set of criteria, we recommend LOOM prioritize the implementation of sliding scale perinatal classes offered in English and Spanish at LOOM. This option will allow the organization to address identified service gaps in Los Angeles's perinatal education market by introducing Spanish-language options and allowing flexible pricing to increase access for various income levels. However, given the significant resource investment this expansion would require from LOOM, we have also developed an implementation plan that considers strategies to address perinatal education service gaps in Los Angeles in the short-, medium-, and long-term.



INTRODUCTION

INTRODUCTION

CLIENT

LOOM is a young, socially driven for-profit business that provides education and empowerment around all aspects of an individual's reproductive experience. LOOM's comprehensive services cover topics ranging from sexual health education and period coaching to preconception support groups, pregnancy classes, and postpartum care. By placing an emphasis on the importance of autonomy in a person's reproductive experience, LOOM has set itself apart from peer reproductive education providers in Los Angeles.¹⁰

According to one of LOOM's co-Founders, LOOM exists to comprehensively educate both clients and the public on all of the options available within reproductive health and trusts them to make the best choices for themselves and their bodies. LOOM actively fosters a space where all questions are welcome, individualized approaches to reproductive care are supported, and the latest research is emphasized.

Since opening in October 2017, LOOM has exclusively operated as a for-profit entity with the goal of expanding its social impact. During its first year in business, LOOM raised over \$10,000 for local reproductive justice organizations – a significant amount considering donation funds were raised independently of class sales while the company was trying to achieve financial solvency. Instead, funds were raised through event ticket sales and product drives.¹¹ LOOM's leadership has actively considered how they can make an impact on reproductive health across Los Angeles, with particular consideration to racial and economic diversity; however, their current clientele is predominantly White, upper-income individuals. While LOOM has successfully increased its clientele base through social media and informal word-of-mouth marketing, the organization has not collected any data regarding its clients or the efficacy of its business model (i.e. demographics, learning metrics).¹²

This Applied Policy Project team has worked with LOOM to determine the most appropriate, feasible, and sustainable way to expand access to reproductive health education in Los Angeles by investigating the following question:

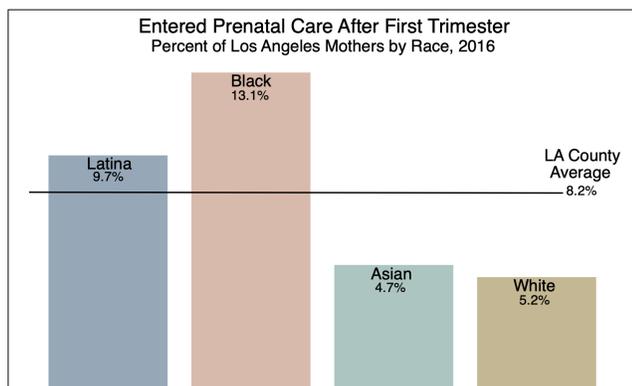
What strategies can LOOM implement to address service gaps in perinatal education in Los Angeles?

¹⁰ "Mission + Values." This is LOOM. LOOM, 2019. <https://thisisloom.com/mission-values/>.

¹¹ "#THISMATTERS." This is LOOM. LOOM, 2019. <https://thisisloom.com/pathways/events/thismatters/>. Informed by interview with LOOM co-Founder. LOOM hosts policy events such as "A Matter of Choice," which included conversations on abortion rights and reproductive justice.

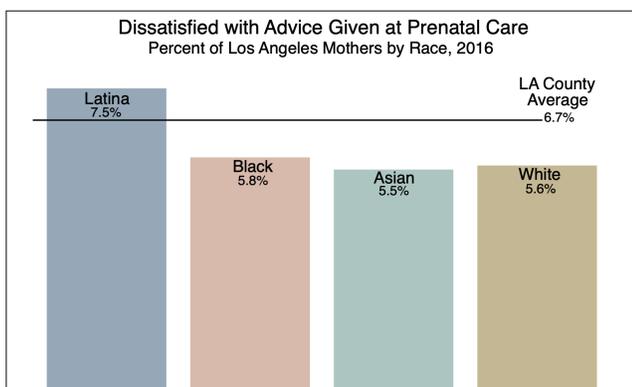
¹² Informed by interviews with LOOM co-Founder and Operations Director.

Figure 1.



Source: Los Angeles Mommy and Baby Project

Figure 2.



Source: Los Angeles Mommy and Baby Project

POLICY PROBLEM AND IMPORTANCE

Perinatal health considers the health of a pregnant individual around birth, including the prenatal and postpartum periods.¹³

Perinatal education therefore covers a wide range of topics, including pregnancy, childbirth, infant feeding, and infant care.

Perinatal education has proven positive health outcomes – it increases confidence in labor and delivery, promotes awareness regarding infant care, and improves communication with health care providers.¹⁴

Unfortunately, perinatal education is often inaccessible to ethnic/racial minorities and individuals in low and middle socioeconomic groups.¹⁵

Research has found that mothers who self-identify as Black or Latinx, as well as those with less than a high school diploma, are less likely to participate in perinatal education classes.¹⁶ In fact, Los Angeles mothers who self-identify as Latinx, Black, or

as possessing lower levels of education tend to have more negative experiences with perinatal care overall.¹⁷ Black and Latinx mothers in Los Angeles consistently report higher rates of delayed prenatal care (see Figure 1), which results in a higher risk of undetected complications or postponed treatment.¹⁸ Those same populations are also less likely to have consulted with a health care professional prior to becoming pregnant, an intervention that reduces the risk of adverse outcomes like premature birth and infant

¹³ Postpartum is “the period of approximately six weeks immediately following childbirth during which the mother’s body gradually returns to a non-pregnant state.” “Maternal Changes During Pregnancy, Labor, and Birth.” Anatomy and Physiology. BCcampus, March 6, 2013. <https://opentextbc.ca/anatomyandphysiology/chapter/28-4-maternal-changes-during-pregnancy-labor-and-birth/>.

¹⁴ See “Education as Intervention” section of this report.

¹⁵ Stoll, Kathrin H., and Wendy Hall. “Childbirth Education and Obstetric Interventions Among Low-Risk Canadian Women: Is There a Connection?” *The Journal of Perinatal Education* 21, no. 4 (2012): 229–37. <https://doi.org/10.1891/1058-1243.21.4.229>.

¹⁶ Morton, Christine H., and Clarissa Hsu. “Contemporary Dilemmas in American Childbirth Education: Findings From a Comparative Ethnographic Study.” *Journal of Perinatal Education* 16, no. 4 (2007): 25–37. <https://doi.org/10.1624/105812407x245614>.

¹⁷ “Health Indicators for Mothers and Babies in Los Angeles County, 2016.” Rep. *Health Indicators for Mothers and Babies in Los Angeles County, 2016*. Los Angeles County Department of Public Health - Maternal, Child & Adolescent Health Division, July 2018. http://publichealth.lacounty.gov/mch/lamb/Results/2016%20Results/2016LAMBSurveillanceRpt_07052018.pdf.

¹⁸ Los Angeles County Department of Public Health, “Health Indicators for Mothers and Babies in Los Angeles County, 2016.”

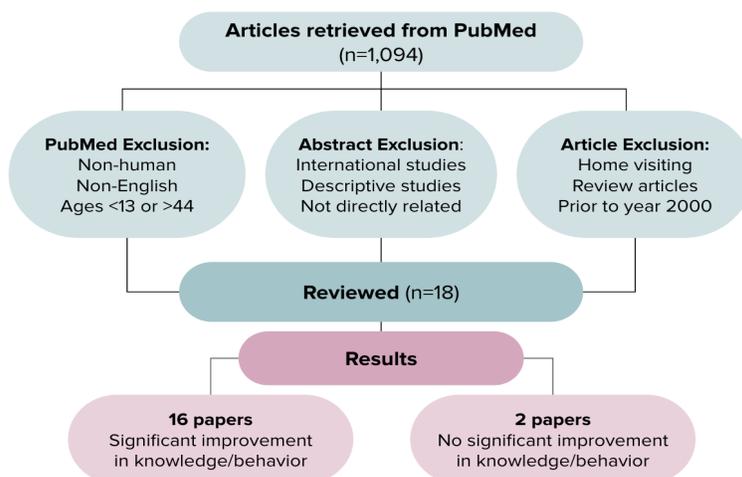
mortality.¹⁹ Furthermore, when they do access care, self-identified Latinx mothers in Los Angeles consistently report higher rates of dissatisfaction and discrimination (see Figure 2).²⁰

EDUCATION AS INTERVENTION

LOOM’s services focus on improving health literacy, which includes knowledge of best practices and technical understanding of provided medical care, through health education. Given that LOOM does not focus specifically on health outcomes, nor does it collect demographic or outcomes data, we conducted a systematic literature review to confirm a positive association between perinatal education and improved knowledge as a component of health literacy.

We used PubMed, a biomedical and life sciences literature database, to conduct our literature review. All trials, including randomized, prospective cohort, and cross-sectional studies were included (n=1,094). We excluded studies based on the following criteria: (1) Non-English; (2) Non-human; (3) Ages <13 or >44; (4) Descriptive studies; (5) Articles not directly related to perinatal health education; (6) Review articles; (7) Articles where the intervention included a home visiting component; (8) Publications prior to 2000. Given the unique health care and insurance system in the U.S., we additionally excluded studies performed outside the U.S. as they would not be comparable to LOOM. Three team members reviewed the remaining papers in their entirety (n=18; see Figure 3).²¹

Figure 3. Literature Review: Structure and Brief Summary of Results



¹⁹ Johnson, Kay, Samuel Posner, Janis Biermann, José F Cordero, Hani K Atrash, Christopher S Parker, Sheree Boulet, and Michele G Curtis. “Recommendations to Improve Preconception Health and Health Care --- United States.” Rep. *Recommendations to Improve Preconception Health and Health Care --- United States*. CDC/ATSDR Preconception Care Work Group and the Select Panel on Preconception Care, April 21, 2006. <https://www.cdc.gov/mmwr/preview/mmwrhtml/rr5506a1.htm>.

²⁰ Los Angeles County Department of Public Health, “Health Indicators for Mothers and Babies in Los Angeles County, 2016.”

²¹ See Literature Review Methodology located in Appendix A.

Ultimately, our literature review found that the relationship between health education and outcomes is supported in several areas of perinatal health, a majority of which are covered in LOOM’s curriculum.²² When considering communities that disproportionately experience poor health outcomes, studies have shown that perinatal education has the potential to address health disparities.²³ For example, Latinx children are less likely to have completed recommended immunizations by one year of age compared to White children, but health education has been shown to increase accurate vaccination schedule knowledge among Latinx parents.²⁴ In terms of maternal care, minority women experience more confusion and anxiety around the various types of genetic screenings offered during the perinatal period.²⁵ Education interventions aimed at clarifying the specifics of screenings, however, reduced anxiety and improved overall knowledge and preparedness.²⁶ In the absence of LOOM data, the relationship identified in the literature between education and improved knowledge demonstrates how an expansion of health education in Los Angeles could address the aforementioned disparities (see Figure 4).

Figure 4. Relationship Between Socioeconomic Factors, Health Literacy, and Perinatal Health Outcomes¹



²² See Literature Review Results located in Appendix A.

²³ Bryant, Allison S., Ayaba Worjolah, Aaron B. Caughey, and A. Eugene Washington. “Racial/Ethnic Disparities in Obstetric Outcomes and Care: Prevalence and Determinants.” *American Journal of Obstetrics and Gynecology* 202, no. 4 (January 12, 2010): 335–43. <https://doi.org/10.1016/j.ajog.2009.10.864>.

²⁴ Moore, Patricia. “Use of Perinatal and Infant Health Services by Mexican-American Medicaid Enrollees.” *JAMA: The Journal of the American Medical Association* 272, no. 4 (July 1, 1994): 297–304. <https://doi.org/10.1001/jama.1994.03520040059041>; Zúñiga de Nuncio, Maria Luisa, Philip R Nader, Mark H Sawyer, Michelle De Guire, Radmila Prislín, and John P Elder. “A Prenatal Intervention Study to Improve Timeliness of Immunization Initiation in Latino Infants.” *Journal of Community Health* 28, no. 2 (April 2003): 151–65. <https://www.ncbi.nlm.nih.gov/pubmed/12705316>; “Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger, United States.” Birth-18 Years Immunization Schedule. Centers for Disease Control and Prevention, 2019. <https://www.cdc.gov/vaccines/schedules/hcp/imz/child-adolescent.html>; “The Childhood Immunization Schedule.” Centers for Disease Control and Prevention, February 2013. <https://www.cdc.gov/vaccines/hcp/patient-ed/conversations/downloads/vacsafe-child-immun-color-office.pdf>. The immunization schedule is the series of vaccinations, including the recommended timing and appropriate doses as set by the Centers for Disease Control and Prevention. The immunization schedule is designed to protect infants and children from several communicable diseases by developing an early immunity.

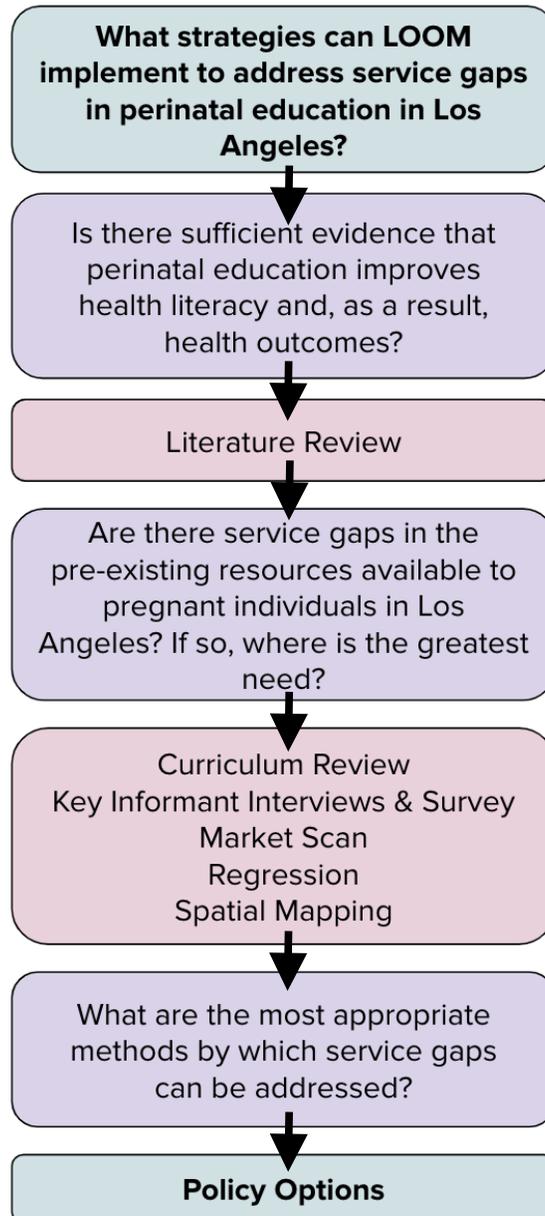
²⁵ “Genetic Screening.” ScienceDirect. Elsevier B.V., 2019. <https://www.sciencedirect.com/topics/medicine-and-dentistry/genetic-screening>. Genetic screening tests for the systematic early detection or exclusion of a hereditary disease, a genetic predisposition to a disease, or determines whether a person carries a predisposition which may produce a hereditary disease in their offspring.

²⁶ Botkin, Jeffrey R., Erin Rothwell, Rebecca A. Anderson, Nancy C. Rose, Siobhan M. Dolan, Miriam Kuppermann, Louisa A. Stark, Aaron Goldenberg, and Bob Wong. “Prenatal Education of Parents About Newborn Screening and Residual Dried Blood Spots.” *JAMA Pediatrics* 170, no. 6 (June 1, 2016): 543–49. <https://doi.org/10.1001/jamapediatrics.2015.4850>; Griffith, Jennifer M., James R. Sorenson, J. Michael Bowling, and Tracey Jennings-Grant. “Assessment of an Interactive Computer-Based Patient Prenatal Genetic Screening and Testing Education Tool.” *Health Education & Behavior* 32, no. 5 (October 2005): 613–26. <https://doi.org/10.1177/1090198105278747>.

LOGIC OF ANALYTICAL APPROACH

This report follows a sequence of strategic questions that informed each methodological choice. After confirming the impact of education through our literature review, our team utilized a combination of methods to characterize the landscape of perinatal education in Los Angeles. We then developed and evaluated several policy options to effectively answer LOOM's policy question (see Figure 5).

Figure 5. Logic of Analytical Approach



METHODOLOGY



METHODOLOGY

This report employs a mixed methods approach, which allows for triangulation of findings and provides a more comprehensive understanding of the ecology of perinatal education services in Los Angeles.

⌚ **Curriculum review** to determine if LOOM's courses are appropriate for an expansion of services.

⌚ **Market scan and field study** to determine what perinatal education services are available in Los Angeles.

⌚ **Key informant interviews and survey** to determine the qualities of perinatal education, barriers to access, and demand for new classes.

⌚ **Regression analysis** to determine what variables are predictive of seeing a women's health provider.

⌚ **Spatial analysis** to determine where in Los Angeles reproductive-age women have less access to a women's health provider.

CURRICULUM REVIEW

To understand whether LOOM's perinatal classes are appropriate for an expansion of services, we performed a document analysis of LOOM's current perinatal curriculum (hereinafter referred to as a curriculum review). The materials gathered from each course included a student handbook, educator slides, and a communication template used to remind clients of their upcoming class.

Our curriculum review included a readability analysis utilizing the Flesch-Kincaid model — a readability test that assesses average syllable, word, and sentence length as core measures of passage complexity and provides scores for reading ease and grade level.²⁷ Flesch Reading Ease is measured on a 0-100 scale, where higher scores correlate with texts that are more difficult to read and understand. Flesch-Kincaid Grade Level translates Reading Ease to a U.S. grade level, thus quantifying the years of education required for a reader to synthesize the text.²⁸

Very little information around accepted standards for health education, particularly perinatal education, exists. To further analyze LOOM's curriculum without increasing bias,

²⁷ Course materials were converted from PDF to plain-text and the readability tests were conducted within Microsoft Word.

²⁸ "How to Assess the Reading Level of Text Using Microsoft Word." Case Western Reserve University. Accessed March 2019. http://casemed.case.edu/cpcpold/students/module4/word_readability.pdf.

our team developed an internal codebook by making adjustments to established standards for “hospital-based perinatal education,” which were previously published in the *Journal of Perinatal Education*.²⁹ With that framework as a guide, we reviewed the documents for the following themes: (1) establishes “normalness,” (2) promotes awareness, (3) informs decision-making, (4) includes supportive person(s), and (5) promotes safety and wellbeing of both mother and baby (see Table 1).³⁰ All educational content was then individually coded by team members and findings were cross-referenced to eliminate bias.³¹

Our analysis determined that LOOM’s perinatal curriculum primarily establishes “normalness,” informs decision-making, and promotes awareness. Further, all class materials fall at or below a 10th grade reading level.

Table 1. Curriculum Review Codebook

Theme	Title	Description
1	Establishes "Normalness"	Information is focused on maintaining labor, birth, and postpartum and newborn care as a normal life event involving dynamic emotional, social, and physical change
2	Promotes Awareness	Information is comprehensive and increases general awareness around the process of preconception, pregnancy, childbirth, and parenting
3	Informs Decision Making	Information supports mother in making informed choices for their health during pregnancy, labor, and birth and for postpartum/newborn care
4	Includes Supportive Person(s)	Information facilitates supportive person(s) involvement, encouraging active participation in the educational process, labor, birth, and postpartum and newborn care
5	Promotes Mother/Baby Safety and Wellbeing	Curriculum aligns with standards established by the American College of Obstetricians and Gynecologists (ACOG) ^a and the American Academy of Pediatrics (AAP) ^b

Source: Adapted from Westmorel, “Innovative Perinatal Education Management Service”

^a “The American College of Obstetricians and Gynecologists is a membership organization dedicated to the advancement of women’s health care and the professional and socioeconomic interests of its members through continuing medical education, practice, research, and advocacy.”³²

^b The American Academy of Pediatrics (AAP) is “an organization of 67,000 pediatricians committed to the optimal physical, mental, and social health and well-being for all infants, children, adolescents, and young adults.”³³

²⁹ Westmorel, Marcia Haskins, and Elaine Zwelling. “Innovative Perinatal Education Management Service: Developing a Family-Centered, Hospital-Based Perinatal Education Program.” *Journal of Perinatal Education* 9, no. 4 (2000): 28–39. <https://doi.org/10.1624/105812400x87888>.

³⁰ Westmorel, “Innovative Perinatal Education Management Service”

³¹ To ensure accurate measurement of “Promotes Mother/Baby Safety and Wellbeing,” Theme 5 was coded by fourth year medical students.

³² “ACOG Mission, Vision and Core Values.” Women’s Health Care Physicians. American College of Obstetricians and Gynecologists. Accessed February 2019.

³³ “About the AAP.” American Academy of Pediatrics. Accessed March 2019. <https://www.aap.org/en-us/about-the-aap/Pages/About-the-AAP.aspx>.

MARKET SCAN AND FIELD STUDY

To characterize the network of perinatal education providers in Los Angeles, we conducted a market scan and field study. The market scan was compiled through Google and website searches to determine the available options on the market and specific characteristics of each option. To evaluate digital options, we also reviewed the top five downloaded pregnancy and birth-related applications from Apple's App Store.

Additionally, two team members conducted a field study by identifying a list of local community clinics the way many pregnant individuals would (i.e. online research and/or physician referrals) and contacted them via telephone to ascertain where clients could access perinatal education courses. We then visited the organizations in person.

Our analysis discovered that many community clinics near LOOM do not provide perinatal education services and there is a dearth of Spanish-language classes on the market.

KEY INFORMANT INTERVIEWS AND SURVEY

LOOM Educator Survey and Stakeholder Interviews

We developed a survey to administer to LOOM's educators to understand their experiences teaching both at LOOM and in settings outside of LOOM, as well as to explore their thoughts on a potential expansion of LOOM services. The survey was hosted on Google Forms and distributed via email to 13 educators; we observed a 64% response rate.³⁴

Additionally, we conducted interviews with LOOM's staff to understand their interest in various policy options, as well as LOOM's current clients and educators to compare perinatal education at LOOM and elsewhere. LOOM currently employs three full-time staff members — two co-Founders and an Operations Director — all of whom participated in our interviews.³⁵ Three current clients were interviewed who we identified through snowball sampling with team members asking staff and educators to facilitate introductions; these clients then identified additional clients they believed may participate in our research.³⁶ Lastly, three educators were identified based on their responses to the educator survey. Team members interviewed educators with insightful survey responses regarding either their experience teaching at both LOOM and in another setting, or their perspective on LOOM's potential expansion.³⁷ Educators and clients were granted anonymity in the context of this research.

³⁴ See Educator Survey located in Appendix D.

³⁵ See Staff Interview Guide located in Appendix E.

³⁶ See Client Interview Guide located in Appendix F.

³⁷ See Educator Interview Guide located in Appendix G.

Community Stakeholder Interviews

The interview guide for community stakeholders was developed to assess available perinatal education services, demand for LOOM services, and barriers to accessing perinatal education.³⁸ We recruited community stakeholders from Federally Qualified Health Centers (FQHCs) and local hospitals through telephone, email, and in-person outreach. We relied on a practicing Ob-Gyn to describe the goals and best practices of perinatal education, which guided our analysis of LOOM's curriculum.³⁹ Other stakeholders interviewed included one perinatal health worker, one health education specialist, and one Ob-Gyn resident.⁴⁰

Interview Thematic Analysis

All key informant interviews were audio recorded and conducted either in person or via telephone. After completing all interviews, we conducted a thematic analysis. First, team members collectively identified major topics covered across all interviews. Subsequently, two group members, one of whom was present at the particular interview, listened to each recorded interview and documented important quotes as they related to each topic. Each group member then analyzed a group of key informant interviews (i.e. staff, educators, clients, community stakeholders). As a team, we determined the common themes under each topic that arose across two or more interview groups.

Key informants identified a shortage of perinatal education in Los Angeles and a demand for perinatal education courses that emphasize choice and community. Additionally, key informants identified time, transportation, cost, language, and lack of childcare as barriers to accessing perinatal education services .

REGRESSION ANALYSIS

To describe characteristics of individuals who are accessing perinatal education and to corroborate the barriers to access discovered in the key informant interviews, we conducted a logistic regression analysis (see Table 2). The logistic regression, also known as a "logit model," is used to model the odds of an outcome that has a limited range of values.⁴¹ For example, the individual either did or did not attend perinatal education classes during pregnancy. Such data on pregnant individuals' participation in health education services is available in global health surveys, but is not accessible from

³⁸ See Community Stakeholder Interview Guide located in Appendix H.

³⁹ See Ob-Gyn Interview Guide located in Appendix I.

⁴⁰ Perinatal health workers help coordinate perinatal care. Health education specialists provide health education services.

⁴¹ "Logistic Regression | Stata Data Analysis Examples." UCLA Institute for Digital Research and Education. Accessed April 2019. <https://stats.idre.ucla.edu/stata/dae/logistic-regression/>.

U.S. population surveys.⁴² However, the Los Angeles Mommy and Baby Project most closely captures this data through participant response to the question, “During the six months before you got pregnant with your baby, did you talk to a doctor, nurse, or other health care worker about how to prepare for a healthy pregnancy and baby?”⁴³ Since many pregnant individuals gather health information, including referrals for education services, from their medical providers, we used “communication with a women’s health provider” as a surrogate for participating in perinatal education.⁴⁴

Recognizing that this surrogate outcome variable may be capturing all people with uteruses, including those seeking primary gynecological care, we limited our sample to respondents that identified as reproductive-age females with a child less than 1 years old (n=990). When further restricted to the Western portion of the U.S., the sample size decreased to n=272.

Within a logit model, predictor variables are combined to calculate the odds of the outcome occurring.⁴⁵ Past research has identified education, income, employment, being in a relationship, and identifying as White as variables positively associated with perinatal education attendance. The magnitude of the effect and interaction of these variables has not previously been reported.⁴⁶ To expand the breadth of variables, we searched the literature for characteristics of patients that “miss” or “no-show” for appointments when managing chronic disease. This population was chosen as a comparison given that pregnancy also requires repeat clinic visits over a specific period of time. From the literature, in addition to the previously mentioned variables, type of health insurance (i.e.

⁴² Blewett, Lynn A, Julia A Rivera Drew, Rissa Griffin, Miriam L King, and Kari Williams. “IPUMS Health Surveys: National Health Interview Survey, Version 6.3.” IPUMS Health Surveys. Minnesota Population Center, 2018. <http://doi.org/10.18128/D070.V6.3>.

⁴³ Blewett, “IPUMS Health Surveys: National Health Interview Survey, Version 6.3”; “Health Indicators For Women In Los Angeles County: Highlighting Disparities by Ethnicity and Poverty Level.” Rep. *Health Indicators For Women In Los Angeles County: Highlighting Disparities by Ethnicity and Poverty Level*. Los Angeles County Department of Public Health Office of Women’s Health and Office of Health Assessment & Epidemiology, January 2017. <http://publichealth.lacounty.gov/owh/docs/DataReport/2017-HealthIndicatorsforWomeninLACounty.pdf>; “The Los Angeles Mommy and Baby Follow Up Project (LAMB Follow-Up).” Maternal, Child, & Adolescent Health. Los Angeles County Department of Public Health. Accessed January 2019. <http://publichealth.lacounty.gov/mch/LAMB/FollowUp/FollowUp.html>; “Purpose: Los Angeles Mommy and Baby Project.” Maternal, Child, & Adolescent Health. Los Angeles County Department of Public Health. Accessed January 2019. <http://publichealth.lacounty.gov/mch/LAMB/lambpurpose.html>. In 2004, after recognizing the disparate poor birth outcomes across Los Angeles County, the Maternal, Child and Adolescent Health Division of Los Angeles County developed the Los Angeles Mommy and Baby (LAMB) Survey. The LAMB Survey seeks to understand the absence of information on this perinatal population, identify within which communities problems exist in order to direct resources, and engage in community dialogue to identify appropriate interventions with public programming and develop sustainable services.

⁴⁴ Blewett, “IPUMS Health Surveys: National Health Interview Survey, Version 6.3”; Gagnon, Anita J, and Jane Sandall. “Individual or Group Antenatal Education for Childbirth or Parenthood, or Both.” *Cochrane Database of Systematic Reviews*, July 18, 2007. <https://doi.org/10.1002/14651858.cd002869.pub2>; Walker, Deborah S., and Renee Worrell. “Promoting Healthy Pregnancies Through Perinatal Groups: A Comparison of CenteringPregnancy® Group Prenatal Care and Childbirth Education Classes.” *Journal of Perinatal Education* 17, no. 1 (2008): 27–34. <https://doi.org/10.1624/105812408x267934>.

⁴⁵ “Logistic Regression | Stata Data Analysis Examples.” UCLA Institute for Digital Research and Education. Accessed April 2019. <https://stats.idre.ucla.edu/stata/dae/logistic-regression/>.

⁴⁶ Chalmers, Beverley, Susie Dzakpasu, Maureen Heaman, and Janusz Kaczorowski. “The Canadian Maternity Experiences Survey: An Overview of Findings.” *Journal of Obstetrics and Gynaecology Canada* 30, no. 3 (March 2008): 217–28. [https://doi.org/10.1016/s1701-2163\(16\)32758-x](https://doi.org/10.1016/s1701-2163(16)32758-x).

public or private), health literacy, and language were identified as important.⁴⁷ The direction and magnitude of their effect were not consistently reported. Using Stata, data were aggregated and classified as identified in the literature. For example, educational attainment was converted from a measure of academic years completed to categories of academic achievement (i.e. less than high school, high school graduate, some college, college graduate).

Before using these identified predictor variables in the logit model, chi-square independence tests were performed to determine if there was any significant relationship between the predictor variables (i.e. is a person's educational attainment related to their health insurance type). A relationship between the predictor variables could affect the odds of the outcome and its interpretation. The predictor variables were determined to be independent for the sample population.

Different combinations of predictor variables were used to determine the significance and best fit for the logistic regression ($p=0.05$). To provide meaning (i.e. positive or negative effect) to the coefficients of the predictor variables, we calculated the impact of individual predictor variables while setting the others at their means (i.e. marginal effects at the means).⁴⁸ We then explored interactions between these significant variables to observe if individual variables influence the relationship of the predictor variable and outcome. For example, are individuals who delay health care due to lack of transportation more likely to use the Internet to look up health information, and is delaying health care because of transportation challenges negatively related to seeing a women's health provider?

We found that language, educational attainment, identifying as Hispanic, using the Internet to look up health information, and delaying health care due to a lack of transportation were all independently significant in the sample.

⁴⁷ Knolhoff, Joshua B., Brano Djenic, Chiu-Hsieh Hsu, Marcia E. Bouton, and Ian K. Komenaka. "Missed Appointments in a Breast Clinic: Patient-Related Factors." *The American Journal of the Medical Sciences* 352, no. 4 (October 2016): 337–42. <https://doi.org/10.1016/j.amjms.2016.07.003>.

⁴⁸ Williams, Richard. "Marginal Effects for Continuous Variables." University of Notre Dame, January 10, 2018. <https://www3.nd.edu/~rwilliam/stats3/Margins02.pdf>; Williams, Richard. "Using the Margins Command to Estimate and Interpret Adjusted Predictions and Marginal Effects." *The Stata Journal: Promoting Communications on Statistics and Stata* 12, no. 2 (2012): 308–31. <https://doi.org/10.1177/1536867x1201200209>.

Table 2. Regression Variables

Unknown and unreported cases were removed. Variables were reclassified as needed.

Variables Used to Refine the Sample		
Label	Name	Description
Age as of last birthday	age	Limit sample to the reproductive age of 15-49 years old.
Age of youngest child	yngch	Limit sample to youngest child less than 1 year of age to capture individuals nearest to perinatal period.
Female	sex	Limit sample to potentially pregnant individuals.
Household region	region	To consider variation across the U.S. 'West' includes Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.
Assumed Dependent Variable		
Label	Name	Description
Female who saw an Ob-Gyn	sawgyn	Female sample that saw or talked to "a doctor who specializes in women's health (an obstetrician/gynecologist)" during the past 12 months. Reclassified as dichotomous variable "sawobgyn."
Independent Variables		
Label	Name	Description
Age as of last birthday	age	Reclassified as "agere" to limit sample to the reproductive age of 15-49 years old (i.e. 15-19, 20-24, 25-34, and 35-49 years old). Generated additional dichotomous variable "agebin" to evaluate behavior of <35 years old and >35 years old.
Legal marital status	marstat	Reclassified as "marrstat" (i.e. married, separated/widowed/divorced, and single). Generated additional dichotomous variable "marrbin" to evaluate behavior of married individuals relative to non-married individuals.
Self-reported race	racenew	Reclassified as "race" (i.e. White, Black/African-American, American Indian/Alaska Native, Asian, and Multiple). Generated additional dichotomous variable "racebin" to evaluate the effect when combining individuals who identified as Black/African-American, American Indian/Alaska Native, Asian, and Multiple into one group.
Hispanic ethnicity	hispy	Dichotomous variable. Included to expand on "race/ethnicity" with particular attention to the population of Los Angeles.
Language interview conducted in	intervlang	Reclassified as "lang" (i.e. English, Spanish, English and Spanish, and Other - not otherwise specified). Generated additional dichotomous variable "langbin" to evaluate the effect of speaking English-only and speaking another language.
Educational attainment	educrec2	Reclassified as "educ" (i.e. Less than high school, high school graduate, attended some college, and college graduate/additional post-graduate training). Generated additional dichotomous variable "educbin" to evaluate the effect of having graduated from college.
Health insurance type	hipubcove	Dichotomous variable.

Income	incfam07on	Reclassified as “income” (i.e. \$0-35,000; \$35,000-49,999; \$50,000-74,999; \$75,000-99,999; \$100,000+) to approximate 100%, 200%, 300%, and 400% of Federal Poverty Levels of 2019 (for a household size of four). ^a
Delaying health care because of transportation	delaytrans	Dichotomous variable reclassified as "delaytranspo."
Delaying health care because of cost	delaycost	Dichotomous variable reclassified as "delaycost."
Used Internet to look up health information in the last 12 months	pclookhelry	Dichotomous variable reclassified as “pchealthinfo” as a proxy measure of health literacy. ^b

Note: See detailed assumptions regarding direction of each variable located in Appendix B. The National Health Interview Survey collects “information on the health, health care access, and health behaviors of the civilian, non-institutionalized U.S. population, with digital data files available from 1963 to present.” The NHIS is a principal source of information on the health of the U.S. population. The Integrated Public Use Microdata Series (IPUMS) Health Surveys (IPUMS NHIS) is a harmonized set of this open-access microdata; microdata provides individual records of persons and households instead of aggregate data.⁴⁹

^a *Source:* Amadeo, Kimberly. “Are You Eligible for Federal Benefits in 2019?” Federal Poverty Level Guidelines and Chart. The Balance, February 27, 2019. <https://www.thebalance.com/federal-poverty-level-definition-guidelines-chart-3305843>.

^b *Source:* Narasimhulu, Deepa Maheswari, Scarlett Karakash, Jeremy Weedon, and Howard Minkoff. “Patterns of Internet Use by Pregnant Women, and Reliability of Pregnancy-Related Searches.” *Maternal and Child Health Journal* 20, no. 12 (December 25, 2016): 2502–9. <https://doi.org/10.1007/s10995-016-2075-0>.

SPATIAL ANALYSIS

Through regression analysis and Geographic Information Systems (GIS), we sought to illustrate where in Los Angeles pregnant people are least likely to access perinatal education and determine the target population’s location relative to existing perinatal education providers. Our evaluation is limited to the city of Los Angeles given LOOM’s desire to focus its initial efforts on its neighborhood first.⁵⁰ Additionally, we have focused our analysis on a three-mile radius of LOOM, rather than its Service Planning Area (SPA).⁵¹ This decision was made due to the fact that LOOM is located in a small corner of its SPA, so any expansion would likely impact neighboring SPAs as well.

⁴⁹ Blewett, “IPUMS Health Surveys: National Health Interview Survey, Version 6.3.” IHIS IS NOW IPUMS HEALTH SURVEYS: NHIS.” IPUMS Health Surveys. Minnesota Population Center. Accessed March 2019. <https://nhis.ipums.org/nhis/>.

⁵⁰ Informed by interview with LOOM co-Founder.

⁵¹ Ong, Paul, and Evelyn Blumenberg. “Job Access, Commute and Travel Burden among Welfare Recipients.” *Urban Studies* 35, no. 1 (April 1997): 77–93. <https://doi.org/10.1080/0042098985087>; “Service Planning Areas (SPA) – 2012.” Los Angeles County GIS Data Portal. Los Angeles County Department of Public Health, March 1, 2012. <https://egis3.lacounty.gov/dataportal/2012/03/01/service-planning-areas-spa-2012/>. “Service Planning Areas.” Community Health Services. Los Angeles County Department of Public Health. Accessed January 2019. <http://publichealth.lacounty.gov/chs/SPAMain/ServicePlanningAreas.html>. Service Planning Areas are specific geographic regions in Los Angeles County used by the Department of Public Health to develop targeted services.

The GIS hotspot analysis was limited to an index of two rasterized variables provided by the American Community Survey.⁵² Variables were weighted equally in a generalized additive model, given there was a visible difference with the simplicity. Increased contrast would be expected given increased nuance. The included variables were language and education:⁵³

$$[\text{area perinatal need}] = (\% \text{non-English language} + \% \text{non-college graduates})$$

The cost for the network analysis was set as distance to determine a three-mile radius from LOOM.⁵⁴ To briefly explore potential barriers and implementation strategies for perinatal education, we examined the characteristics of hotspots. These included language, Latinx communities, vehicle access, and use of public transportation. Data from the *Los Angeles Times* provided neighborhood labels.⁵⁵ Overall, we identified a spatial mismatch southeast of LOOM, where there is high need for perinatal education but few available services.

⁵² Creating a raster is the process of transforming the data displayed on a map projection, into a raster. "A raster consists of a matrix of cells (or pixels) organized into rows and columns (or a grid) where each cell contains a value representing information, such as temperature." As an example, consider how the weather forecast is displayed in cool and warm colors to convey the variation of low and high temperatures across the U.S. "What Is Raster Data?" ArcGIS Desktop. Environmental Systems Research Institute, Inc., 2016. <http://desktop.arcgis.com/en/arcmap/10.3/manage-data/raster-and-images/what-is-raster-data.htm>; "American Community Survey (ACS)." Census Bureau QuickFacts. United States Census Bureau, January 31, 2019. <https://www.census.gov/programs-surveys/acs>. The ACS is an annual survey administered to approximately 3.5 million randomly-selected households by the U.S. Census Bureau. The survey questions differ from the decennial census and is designed to provide up-to-date information about communities to appropriately inform the data-driven distribution of federal funds for the development of infrastructure and public services.

⁵³ See Significant Regression Variables Located in Appendix C.

⁵⁴ Ong, "Job Access, Commute and Travel Burden among Welfare Recipients."

⁵⁵ "LA Times GIS Data." Los Angeles County GIS Data Portal. Los Angeles County Department of Public Health, December 9, 2014. <https://egis3.lacounty.gov/dataportal/?s=times%2Bneighborhoods>.



FINDINGS: THE LANDSCAPE OF PERINATAL EDUCATION IN LOS ANGELES

FINDINGS: THE LANDSCAPE OF PERINATAL EDUCATION IN LOS ANGELES

KEY FINDINGS

- ⌄ There are **service gaps** in the content, quality, and community of current perinatal education market options.
- ⌄ **Barriers to accessing** perinatal education include cost, health literacy, location, and timing.
- ⌄ There is a **spatial mismatch** between perinatal education providers and high-need areas.
- ⌄ The **target population** for expanded perinatal education access is Spanish-speaking and has little to no discretionary income.

CHARACTERISTICS OF CURRENTLY AVAILABLE SERVICES

LOOM

As previously mentioned, LOOM offers several perinatal classes covering a wide array of topics. LOOM's classes range from two to sixteen individuals per one educator. We focused on the organization's "Prepared Package" because it is most comparable to other perinatal education courses available on the market and therefore is most appropriate for drawing conclusions from our research.⁵⁶ Furthermore, it has one of the highest enrollment numbers of all LOOM courses and is the package that LOOM staff is most interested in expanding (See Table 3).⁵⁷

⁵⁶ The "Prepared Package" is a discounted bundle of three of LOOM's most in-demand perinatal courses. Informed by market scan.

⁵⁷ Informed by interview with LOOM co-Founder.

Table 3. Overview of LOOM’s “Prepared Package”

Class	Cost (per couple)	Description	Percent Enrollment ^a
Prepped: The Series	\$375	A three-part course (one course weekly for three weeks; 7.5 hours total). Information covered includes labor basics, labor comfort techniques, newborn care behaviors and procedures, and key insights for parents during the first 48 hours after delivery. Course materials range from 8th-10th grade reading level.	20%
Infant Feeding Basics	\$175	A two-hour course covering the science of breast- and chest-feeding, different feeding techniques and strategies, and partner involvement and support. Course materials range from 6th-8th grade reading level.	9%
Baby Care Basics	\$175	A two-hour course covering bathing techniques, basic hygiene, soothing, swaddling, and sleep expectations. Baby Care Basics also includes recommendations around what items parents should consider purchasing for the postpartum period. Course materials range from 5th-8th grade reading level.	13%

Source: “Classes for Birth + Baby Basics.” Pregnancy: Classes + Services for Expecting and Pregnant People. LOOM, 2019. <https://thisisloom.com/pathways/pregnancy/>.

Note: See Curriculum Review Findings located in Appendix K.

^a Percent enrollment is the number of individuals enrolled in specific class over total individuals participating in LOOM classes.

Other Perinatal Education Providers in Los Angeles

Our market scan revealed large cost differences in options for perinatal education in Los Angeles. Public clinics and hospitals provide courses ranging from \$0 to \$175 per class. Though offered in clinical environments, insurance does not cover any of this cost. Two of the six outside options we reviewed offer classes in Spanish, one of which only offers Spanish classes on Saturdays. In terms of location, these public clinics and hospitals range from 3.2 to 16.5 miles from LOOM. Comparatively, we identified four private-sector perinatal education providers in Los Angeles that charge between \$80 and \$450 per class and are located between 2.3 and 12.3 miles from LOOM. None of the private-sector services (including LOOM) offer classes in languages other than English.⁵⁸

During our field study, we visited a total of nine FQHCs in the area around LOOM. Only three provide perinatal education services in-house or had the ability to refer patients to

⁵⁸ The digital applications we reviewed were all free to download, and three of the top five downloads offered multilingual classes, including Spanish. However, all of the applications reviewed focused on a limited set of topics that we determined is not directly comparable to LOOM’s Prepared Package. For this reason, we have focused solely on in-person class options in Los Angeles as direct competitors to LOOM for the context of this APP. See Market Scan located in Appendix K.

alternative providers (none of which are covered by insurance). The remaining six were unable to provide information around perinatal education options. For example, when asked about perinatal education services, one receptionist referred us to the organization’s administrative office located approximately 30 minutes away for more information. Another organization suggested that we reach out to an Ob-Gyn. Given that Ob-Gyns are likely referring their patients to that organization for perinatal education classes, this suggestion results in a frustrating cycle of referrals that leaves pregnant individuals near LOOM without information as to where to access perinatal education.

Observed Service Gaps in Content, Quality, and Community

Key informants provided information regarding characteristics of both LOOM and its competitors, qualities of LOOM’s current and target populations, barriers to accessing perinatal education, and goals for LOOM’s expansion (see Table 4).

Table 4. Common Themes Arising from Key Informant Interviews
Common themes were identified across two or more interview groups (i.e. LOOM clients and community stakeholders).

LOOM Characteristics	<ul style="list-style-type: none"> • Community • Empowerment • Choice 	<ul style="list-style-type: none"> • Shame-Reducing • Evidence-Based • Normalizing
Competitor Characteristics	<ul style="list-style-type: none"> • Opinion-Based • Intimidating • Welcoming 	<ul style="list-style-type: none"> • Safety (CPR/First Aid/Car Seats)
LOOM’s Current Clientele	<ul style="list-style-type: none"> • Privileged • White • Female 	
Target Clientele	<ul style="list-style-type: none"> • Language • Diversity: Economic, Racial, Sexuality 	
Barriers to Access	<ul style="list-style-type: none"> • Location • Cost • Timing 	
LOOM’s Expansion Goals	<ul style="list-style-type: none"> • Partnerships • Combined Classes • Cultural Humility 	

Note: See Full Interview Analysis located in Appendix L.

When discussing characteristics of LOOM’s educational approach, LOOM and community stakeholders described similar themes including “community,” “empowerment,” “choice,” “shame-reducing,” “evidence-based,” and “normalizing.” LOOM stakeholders were very enthusiastic about the community aspect of LOOM’s classes — from the physical space to the “like-minded” participants, LOOM has cultivated a powerful feeling of community and belonging. Community stakeholders similarly discussed the importance of having a dependable community as someone becomes a parent, noting that the postpartum period can feel especially isolating without a strong community to rely on. For example, an Ob-Gyn resident noted, “[Women who are] disadvantaged are often socially isolated... they just need a community.”

Community stakeholders also highlighted “empowerment” as critical to feeling confident throughout pregnancy and birth, and spoke to the importance of “normalizing” pregnancy as an ordinary, physiological experience. Interviews with current LOOM clients and our curriculum review suggest that LOOM’s courses normalize the range of experiences encountered during the perinatal period and reduce the shame that may be associated with decisions around these experiences. While LOOM has positioned itself as a leader on aspects like “community” and “choice,” LOOM clients described LOOM’s potential competitors with phrases such as “opinion-based” and “intimidating,” qualities that led them to seek other options. For example, two LOOM clients shared that classes at Cedars Sinai Hospital were intimidating and clinical, with one client stating the class “was a little ‘conference-room’ feeling...[I] wasn’t able to fully relax my body.”

Notably, there was some discordance among current LOOM clients regarding their experiences at other perinatal education classes. One LOOM client found all hospital-based classes “sterile” and “lack[ing] community,” while another client expressed feeling welcomed at classes outside of LOOM. All of LOOM’s current clients spoke about having to look outside of LOOM for safety education (i.e. CPR, first aid, car seat utilization), while community stakeholders highlighted the importance of receiving such education while pregnant. Many of LOOM’s competitors, particularly hospital-based classes, are the only market option for classes covering safety information.

Finally, LOOM staff and educators highlighted a handful of considerations in regards to a LOOM expansion and voiced strong support for partnerships, combined classes, and cultural humility. LOOM staff were open to partnering with other reproductive health organizations in Los Angeles, explaining that if the target population is successfully accessing perinatal education through another organization, LOOM should simply support that organization’s efforts. Across the board, LOOM educators supported a combined course approach, where current LOOM clientele and target population clientele would attend classes together, over providing separate classes to different

populations. As one LOOM educator noted, “No matter how much money you have, a kid comes out of your vagina and the symptoms are the same...[the information] is digestible to anybody.”⁵⁹ Multiple LOOM educators also noted the importance of cultural humility when expanding access to new communities, which they believe would help to ensure the success of combined courses.

SIGNIFICANT BARRIERS TO ACCESS

Our regression analysis demonstrated that those less likely to have communicated with a women’s health provider are individuals who spoke a different language than English, did not graduate from college, identify as Hispanic, delay seeking health care due to a lack of transportation, and do not use the internet to access health information. Income, age, insurance type, and marital status were not significant for this population.⁶⁰ When these variables were combined, language, education, and use of the internet for health information remained significant.⁶¹ As a result of the above findings, we recommend LOOM address the following barriers to access:

Language

Community stakeholders and our market scan highlighted the need for more Spanish-language perinatal classes in Los Angeles. One health education specialist stated, “Even if someone says that they prefer English, you’ll notice them start switching to Spanish.” Independently, our regression identified speaking only-Spanish is associated with a -18.5% (lang, n=985; p<0.05) likelihood of seeing a women’s health provider relative to speaking only English. This effect is magnified in the Western region of the U.S. where speaking only Spanish is associated with a -34.4% likelihood of seeing a women’s health provider.

To understand the association between speaking Spanish and the likelihood of seeing a women’s health provider, we examined Hispanic women’s utilization of women’s health providers. Identifying as Hispanic is associated with a -10.1% likelihood of seeing a women’s health provider (hispy, n=990; p<0.05). This finding is magnified in the Western region of the U.S. at -14.5% (hispy, n=275; p<0.05).

Our GIS findings further highlighted the need for Spanish-language perinatal education in Los Angeles. A greater percentage of Spanish-speaking individuals and predominantly Black/African-American, Asian, and Latinx communities (“Hispanic” communities) were

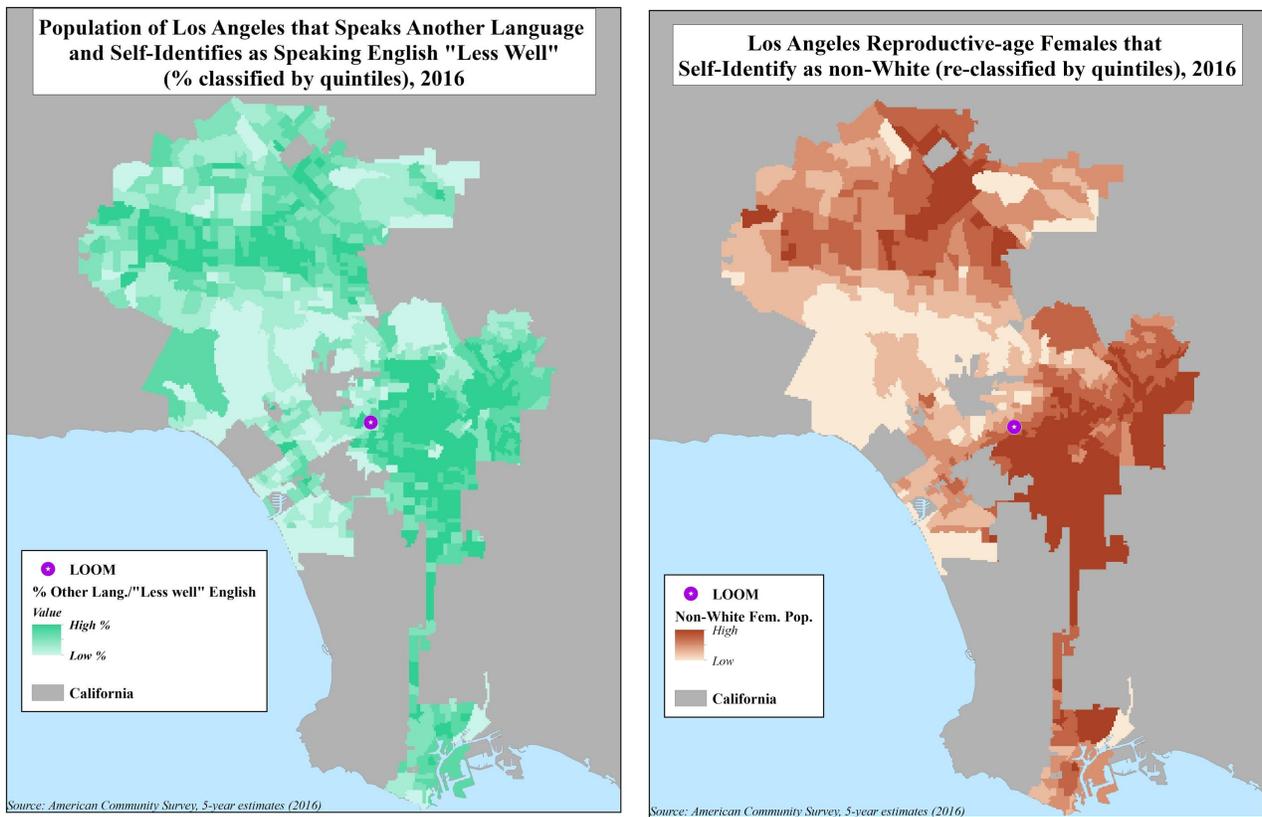
⁵⁹ Informed by interview with Educator #3.

⁶⁰ “Health Coverage Options for Pregnant Women.” Covered California. Department of Health Care Services, 2019. <https://www.coveredca.com/individuals-and-families/getting-covered/pregnant-women/>. Pregnant individuals are covered through public insurance in California via Medi-Cal. While pregnant individuals automatically qualify for public insurance, the majority of public and private insurance does not cover perinatal education.

⁶¹ See Regression Analysis located in Appendix C.

associated with predicted areas of high need (see Figure 6).⁶² Furthermore, to determine if there is a chilling effect on accessing health education for immigrants, we briefly explored the interaction between immigration status and identifying as Hispanic.⁶³ For reproductive-age females, being born in the U.S. is associated with +6.8% likelihood of seeing a women’s health provider.

Figure 6. Spatial Mapping of Los Angeles Population by Language and Race



Cost

All key informants mentioned cost as a barrier to perinatal education. In particular, one LOOM educator spoke to the specific needs of middle-income pregnant people in Los Angeles, stating “We have a lot of systems and resources in place for lower socioeconomic [people,] like WIC and MediCal. And those that have disposable income just have disposable income. But it's the woman and her family that are... considered middle class... that don't have access.”

⁶² We recognize the inherent issues of groupings (i.e. Hispanic, Black/African-American, and White) provided by the U.S. Census-language, which fails to capture the nuance of identity.

⁶³ Page, Kathleen R., and Sarah Polk. “Chilling Effect? Post-Election Health Care Use by Undocumented and Mixed-Status Families.” *New England Journal of Medicine* 376, no. 12 (March 23, 2017). <https://doi.org/10.1056/nejmp1700829>.

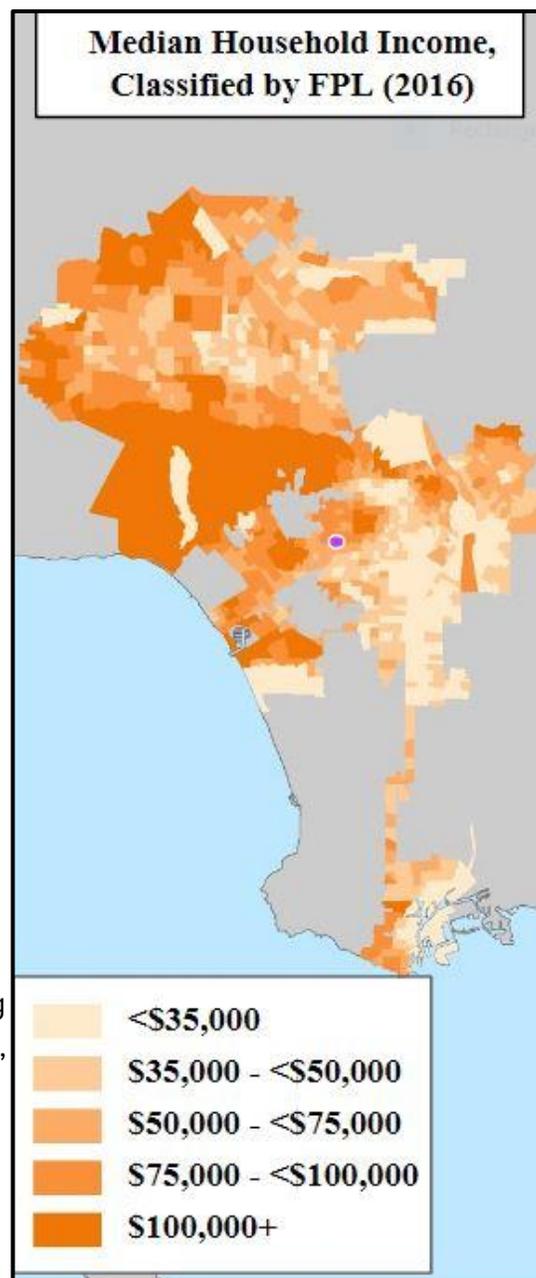
Community stakeholders highlighted the importance of creating low-cost, rather than no-cost, classes. They expressed that requiring some form of investment from participants is necessary to increase participant buy-in. Utilizing a low-cost option to encourage participant buy-in is also supported in the literature as the “sunk cost effect,” where participant’s monetary investment has a significant positive effect on their commitment and behavior.⁶⁴ However, because cost was also identified as a barrier to accessing perinatal services, we acknowledge that implementing any cost could pose an unintended barrier for low-income individuals. Additionally, our GIS mapping identified that the geographic areas of high need also have a greater proportion of households with an annual income less than \$35,000 (see Figure 7).

Location & Transportation

LOOM clients and community stakeholders both spoke about how challenging Los Angeles can be to navigate for a new parent. One current LOOM client spoke about how the 10-minute drive from their home to LOOM felt too daunting with a new baby, with additional concerns specific to Los Angeles such as traffic and parking. Location is increasingly concerning if clients depend on public transportation. Additionally, our regression analysis found that delaying health care due to a lack of transportation is associated with a decreased likelihood of accessing said health care (delaytranspo, n=990).⁶⁵ Our spatial analysis found there was a moderate association of increased commute time with areas of lower income,

corresponding with areas of greater need for perinatal education. These areas also had less access to vehicles and an increased reliance on public transportation (see Figure 8).

Figure 7. Spatial Mapping of Los Angeles Population by Median Household Income



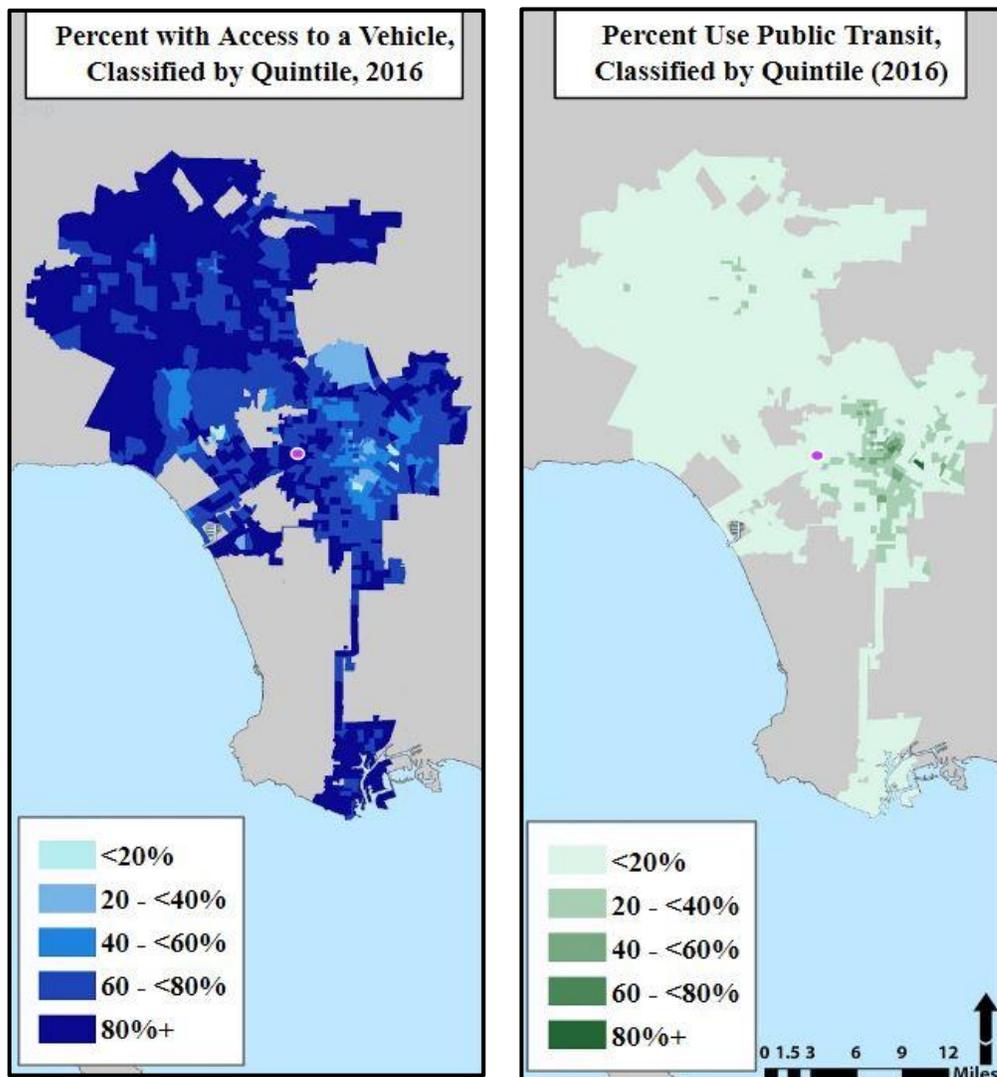
⁶⁴ Arkes, Hal R, and Catherine Blumer. “The Psychology of Sunk Cost.” *Organizational Behavior and Human Decision Processes* 35, no. 1 (February 1985): 124–40. [https://doi.org/10.1016/0749-5978\(85\)90049-4](https://doi.org/10.1016/0749-5978(85)90049-4); Coleman, Martin D. “Sunk Cost and Commitment to Medical Treatment.” *Current Psychology* 29, no. 2 (June 2, 2010): 121–34. <https://doi.org/10.1007/s12144-010-9077-7>.

⁶⁵ When population is restricted to reproductive-age females with a child under 1 year of age, delaying health care due to transportation was significant in our logistic regression, however, the marginal effects at the means was determined not to be statistically significant at -12.1% (n=990; p=0.09). This difference may potentially be attributed to the decreased sample size.

Timing

Community stakeholders and current LOOM clients both spoke to timing as a barrier. One LOOM client indicated that most perinatal education classes were offered during their newborn's regular naptime, requiring new parents to decide between keeping their infant's sleep schedule and attending a class. Another challenge community stakeholders noted was class programming during standard work hours (i.e. 9am to 5pm), forcing a new parent to choose between perinatal education and employment. Community stakeholders also discussed the unique role a for-profit company like LOOM can play in providing alternative class times that are infeasible for nonprofits to provide, which could circumvent the discussed scheduling challenges.

Figure 8. Spatial Mapping of Los Angeles Population by Location and Transportation



Education

Our regression analysis identified that increased education is associated with an increased likelihood of seeing a women’s health provider (educ, n=988; p<0.05). Graduating from high school (+14.2%), attending some college (+17.3%), and graduating from college (+19.8%) are all associated with an increased likelihood relative to having less than 12 years of education. Having a bachelor’s or professional degree is associated with a +7.1% likelihood of seeing a women’s health provider relative to not receiving a bachelor’s degree (educbin, n=988; p<0.05).

Use of Internet to Find Health Information

To predict the viability of a policy option in which LOOM creates a bilingual digital education platform, we briefly explored the use of the Internet for health information.⁶⁶ Our community stakeholders acknowledged that though most people have access to the Internet via smartphones, there would be little demand for a digital option among some members of the target population. For example, one community stakeholder shared that “a lot of the Mexican mothers aren't into looking on their phones.” This sentiment was corroborated through the regression analysis.

Our regression showed that using the Internet to look up health information is associated with a +10.3% likelihood of seeing a women’s health care provider (phealthinfo, n=985; p<0.05).⁶⁷ The data further revealed that delaying health care due to lack of transportation, decreased education, being older than 25 years old, and being lower income are associated with less utilization of the internet for health information.⁶⁸ Additionally, Spanish-speaking and Latinx populations are also less likely to use the internet for health information, further confirming that a digital option may be less desirable for certain communities within our target population.⁶⁹

SPATIAL MISMATCHING BETWEEN PROVIDERS AND PREDICTED ACCESS

Our GIS analysis indicated that the areas southeast of LOOM have greater need for perinatal education than other areas of Los Angeles within a three-mile radius of LOOM (see Figure 9). This area includes the neighborhoods of Baldwin Hills/Crenshaw, West Adams, Leimert Park, Jefferson Park, Arlington Heights, and Harvard Heights. Despite this need, a large portion of perinatal education providers in Los Angeles are located closer to Downtown (see Figure 10). Thus, our analysis has identified a spatial mismatch between the distribution of current perinatal education providers and areas of predicted need.

⁶⁶ See “Policy Options” section of this report.

⁶⁷ We did not limit this analysis by age of youngest child because the sample size was increasingly small.

⁶⁸ See Appendix C, Table 13.

⁶⁹ See Appendix C, Table 13.

Figure 9. Access to a Women’s Health Provider (3 mile radius of LOOM)

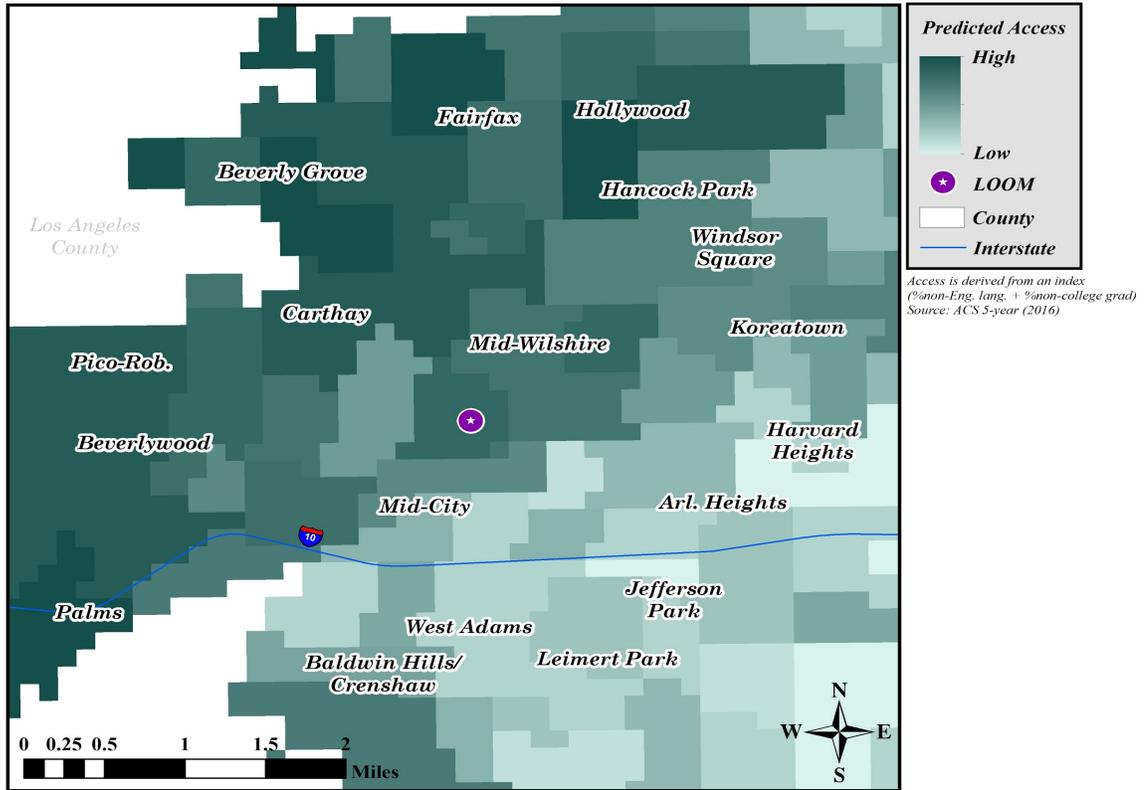
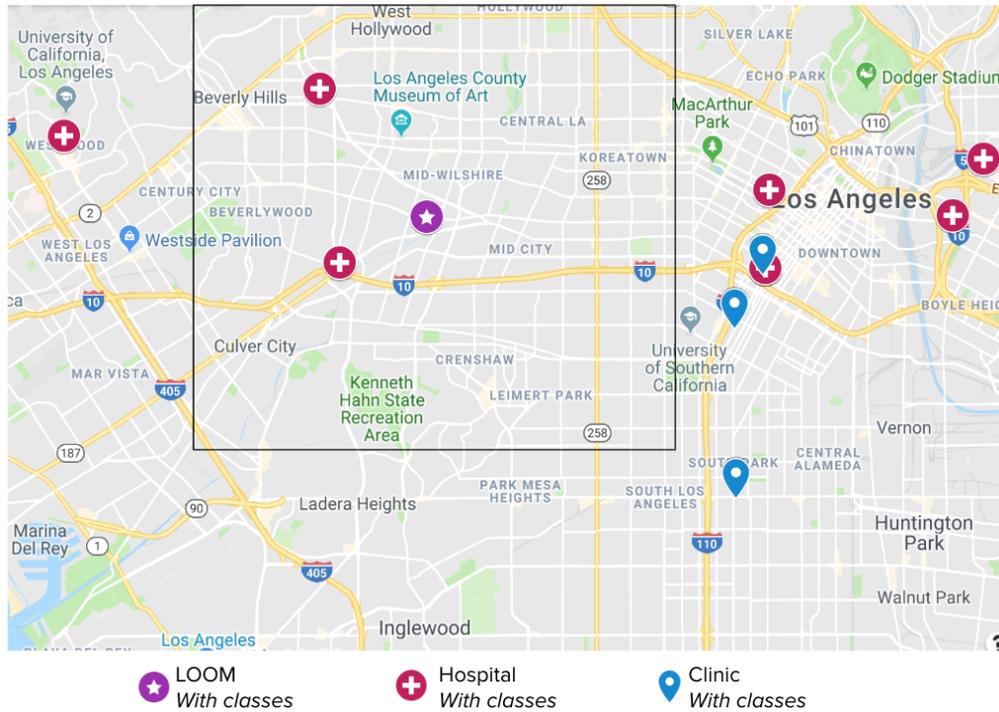


Figure 10. Geographic Distribution of Low-Cost Perinatal Education Providers in Los Angeles. The black square outline corresponds to a similar 3-mile radius as seen in Figure 9.



Note: Informed by market scan.

SUMMARY OF TARGET POPULATION

Due to the congruence of findings across our interview, regression, and spatial analyses, the target population we identified is Spanish-speaking and geographically isolated from existing perinatal education options. LOOM can have the greatest impact within these communities.

POLICY OPTIONS



POLICY OPTIONS

- ⬆ Sliding scale **classes offered in English and Spanish** at LOOM
- ⬆ Sliding scale **classes offered in English only** at LOOM
- ⬆ **Digital content** in English and Spanish
- ⬆ **Transportation fund** for rideshare partnership
- ⬆ **Community educator** training program in English and Spanish

In developing our policy options, we first considered whether LOOM should offer no-cost or low-cost perinatal education classes to the target population. Community stakeholders indicated that low-cost (approximately \$10 - \$20) courses were preferred over free courses, and evidence also suggests that having some monetary investment in a service increases attendance and utilization.⁷⁰ Similarly, a handful of LOOM stakeholders mentioned a need for affordable options for middle-income parents, though these clients could likely afford more than a static low-cost option. We therefore decided to focus on sliding scale classes where clients would sort themselves into different costs based on their willingness-to-pay.⁷¹ For the purposes of this report, we have analyzed the financial impact of a sliding scale option by quantifying target population client cost at \$15. This is the lowest client cost per class that LOOM could absorb without operating at a deficit and the average amount community stakeholders said the target population would be willing to pay.⁷² Thus, the sliding scale would range from \$15 to full cost. LOOM could still make some profit from these perinatal courses from clients who choose to pay more than the \$15 minimum.

We also considered whether target population clients and those fitting the profile of LOOM's current clientele should attend combined courses. Interviews with LOOM educators provided mixed results regarding a preference for separate or combined courses. Most of their hesitation for a combined class structure stemmed from concerns

⁷⁰ Arkes, "The psychology of sunk cost"; Coleman, "Sunk cost and commitment to medical treatment." Informed by interviews with Ob-Gyn Resident, Health Education Specialist, and Perinatal Health Worker. Implementing even a low cost could impose an added barrier to the target population. Because our analysis leaned in favor of a low-cost option, we will focus on this for our policy options, but discuss a no-cost option in the "Considerations" section of this report.

⁷¹ Sliding scale class options would not require a person to prove their financial need. LOOM's past events have offered sliding scale ticket options without proof of eligibility, and LOOM's co-Founders place an emphasis on trusting and respecting their clients.

⁷² Informed by LOOM's Year 1 financial information. A further examination of sliding scale payment can be found in the "Considerations" section of this report..

regarding target population preferences, but all educators emphasized a desire for increased diversity within LOOM classes and felt that it was important to “live LOOM’s values” by providing combined classes. All community stakeholders indicated that a combined option would be preferred and provide benefits to both groups through increased awareness of different lifestyles and an understanding that all pregnant individuals are deserving of the same opportunities for education, regardless of their economic background or lived experience. We thus decided to exclusively pursue course offerings where current LOOM clients and target population clients would be offered combined courses.⁷³ The policy options we developed are as follows:

OPTION 1: SLIDING SCALE CLASSES OFFERED IN ENGLISH AND SPANISH AT LOOM

LOOM would provide its current perinatal education classes in both English and Spanish on a sliding scale. English and Spanish courses would be offered individually, but by introducing a new Spanish-language course to the market LOOM will attract clients at different price points along the sliding scale. This option still provides the combined course requirement discussed above, as it will create Spanish-language courses that include both target population clients and individuals who reflect LOOM’s current clientele. The courses would be offered at LOOM by LOOM- employed educators. LOOM currently does not offer classes in Spanish, therefore this option would require translation of its curriculum. A few LOOM educators indicated that they speak Spanish and would feel confident teaching a Spanish-language class after the curriculum had been translated.⁷⁴

OPTION 2: SLIDING SCALE CLASSES OFFERED IN ENGLISH ONLY AT LOOM

LOOM would provide its current perinatal education classes in English on a sliding scale. The courses would be offered at LOOM by LOOM-employed educators. While we have identified a need for Spanish perinatal education, we anticipate a significant cost associated with translating LOOM’s current curriculum. Therefore, sliding scale English classes may be more feasible for LOOM, particularly in the short-term.

OPTION 3: DIGITAL CONTENT IN ENGLISH AND SPANISH

LOOM would create bilingual digital content based on its perinatal education curriculums. There are a variety of platforms that can host digital educational content, such as a smartphone application, portal on LOOM’s website, or Facebook page. Regardless of platform, digital content would combine video courses and reading materials to be

⁷³ In our initial analysis, we also considered a “status-quo” policy option in which LOOM would simply provide funding to other reproductive justice organizations in Los Angeles, similar to what they have been doing through their fundraising efforts. Ultimately, we excluded this option as it would not have appropriately addressed the focus of our policy question - expanding access to perinatal education.

⁷⁴ While introducing Spanish classes at LOOM creates multiple class track options, this option will also attract new, full-paying clients. Therefore, this option still complies with our one-track decision because full-paying and sliding scale clients would attend Spanish language classes together.

completed individually, with community-building aspects. Our analysis suggests that the LOOM-based community is highly valued by current clients, educators, and staff, and fostering community among parenting people is strongly supported by medical providers to prevent feelings of isolation and increase knowledge retention.⁷⁵ For these reasons, a community aspect of digital content would be critical to success. Community can be created digitally through forums or video chat services with other clients, scheduled digital community meet-ups, and ongoing communication with providers to broaden the learning possibilities. Additionally, considering our findings regarding the lack of Spanish-language services for parenting people in Los Angeles, this digital content should be developed in both English and Spanish from the outset. Based on our interviews with LOOM staff and community stakeholders, as well as our market scan, a digital option should have a fixed price of \$20 per month.

OPTION 4: TRANSPORTATION FUND FOR RIDESHARE PARTNERSHIP

Due to our regression analysis and interview findings suggesting that location and lack of transportation impact a person's ability to access perinatal education, LOOM should consider a policy option in which it partners with a rideshare company, such as Uber or Lyft, to provide transportation to access perinatal education. There is precedent for rideshare companies to partner with LOOM to expand health information access — Uber and Lyft have recently partnered with health care organizations to ensure patients are attending doctor's appointments.⁷⁶ LOOM would continue its current fundraising efforts and contribute proceeds from events to the transportation fund, but could also develop a donate function on its website. LOOM would manage a collective pool of funding from these mechanisms to be distributed to transportation-challenged people around Los Angeles.⁷⁷ A rideshare partnership would allow LOOM to provide participants with a promotional code to access a free roundtrip ride between their home and a perinatal education class of their choice (LOOM or otherwise).

OPTION 5: COMMUNITY EDUCATOR TRAINING PROGRAM IN ENGLISH AND SPANISH

Due to our regression and interview findings that language, location, and lack of transportation impact a person's ability to access perinatal education, LOOM should consider a policy option in which it develops a bilingual community educator program. This policy option would function similarly to community-based doula services, where a cadre of LOOM-certified educators would provide LOOM perinatal education curricula in

⁷⁵ Informed by interviews with LOOM stakeholders and Ob-Gyn resident.

⁷⁶ Siu, Antoinette. "Teaming up with AllScripts, Lyft Makes a Big Move into Health Care." San Francisco Business Times. American City Business Journals, May 24, 2018. <https://www.bizjournals.com/sanfrancisco/news/2018/03/05/lyft-allscripts.html>.

⁷⁷ Similar to the sliding scale classes at LOOM, participants would not need to prove their need in order to qualify and would simply request transportation funding from LOOM.

their home communities. This policy option necessitates the development of a Spanish-language LOOM curriculum.

Additionally, to protect LOOM's intellectual property and maintain the organization's brand, this policy option also requires LOOM to develop a perinatal education certification for community educators. The certification training will be built on LOOM's existing train-the-trainer model.⁷⁸

⁷⁸ Informed by interview with LOOM co-Founder.

CRITERIA IDENTIFICATION



CRITERIA IDENTIFICATION

To evaluate our policy options, we developed distinct criteria for each primary stakeholder (i.e. LOOM and the target population) to represent their unique perspective. Criteria specific to the target population are Impact, Demand, and Cost. Criteria specific to LOOM are Administrative Burden and Benefit. Within each criterion, the policy options were ranked from “very low” to “very high,” with variation between those extremes (see Table 5 for an overview of criteria and their corresponding scale).

Table 5. Criteria Matrix: Scale and Considerations

		Target Population			LOOM	
Criteria		Impact	Demand	Cost	Administrative Burden	Benefit
Scale	Very High	Very High	Very High	Very Low	Very Low	Very High
	High	High	High	Low	Low	High
	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
	Low	Low	Low	High	High	Low
	Very Low	Very Low	Very Low	Very High	Very High	Very Low

		Target Population			LOOM	
Criteria		Impact	Demand	Cost	Administrative Burden	Benefit
Considerations	Number of target population participants		Time commitment	Financial cost	Cost to LOOM	Brand loyalty
	Format	Format			LOOM support	Recognition
	Sense of community	Language			Implementation feasibility	Development opportunities

TARGET POPULATION CRITERIA

Impact

Impact measures the total number of target population clients reached, the format the course is provided in, and the sense of community cultivated as a result of each policy option. Estimating the number of target population clients is dependent upon several factors, including transportation accessibility, referral source, marketing, and engagement. The format information is presented in is important — increased knowledge retention is associated with educational services that utilize interactive learning environments and diverse learning modalities (i.e. audio, visual, and experiential).⁷⁹ Although cultivation of community is not guaranteed, membership size, feelings of trust and support, frequency of communication or activity, and sustainability of the “group” are

⁷⁹ Dougal, Jenny, and Rae Gonterman. “A Comparison Of Three Teaching Methods On Learning And Retention.” *Journal for Nurses in Staff Development (JNSD)* 15, no. 5 (1999): 205–9. <https://doi.org/10.1097/00124645-199909000-00006>; Stern, Cindy, and Craig Lockwood. “Knowledge Retention from Preoperative Patient Information.” *International Journal of Evidence-Based Healthcare* 3, no. 3 (April 2005): 45–63. <https://doi.org/10.1097/01258363-200504000-00001>.

conducive to the perceived benefit and strength of the community.⁸⁰ Considering these measures, policy options that are predicted to reach a greater number of participants, provide education in an interactive and varied format, and possess characteristics that cultivate a strong sense of community will be ranked “very high.”

Demand

This criterion assesses target population demand for each policy option by measuring their interest in the specific class format, time requirements, and language accessibility. Informed by our interview findings, the time measurement includes the length of time necessary to complete the perinatal education, time of day classes are offered, and estimated transportation time to access the class. Language accessibility is simply measuring the language each policy option is offered in. Beyond language, we are not measuring the accessibility of LOOM’s curriculum in this criterion because our curriculum review previously determined that LOOM’s curriculum is appropriate for both current and target populations. Target population demand will be ranked “very high” if there is substantial demand for the specified class format, there is a low time requirement, and the language is accessible to the target population.

Cost

To measure the cost of each policy option for the target population, we will consider how large a financial investment is required to cover enrollment and transportation costs. If a policy option requires little financial investment from the target population, it will get a ranking of “very low.” A ranking of “very low” in this criterion is more desirable due to the decreased financial burden for the target population.

LOOM CRITERIA

Administrative Burden

This criterion will measure the overall cost of each policy option to LOOM, including the estimated monetary cost to LOOM, how likely LOOM is to be supportive, and implementation feasibility. LOOM support is inclusive of the risk associated with each option, such as loss of intellectual property or current clientele. Overall, policy options that rank “very low” on administrative burden will require little LOOM investment, be supported by LOOM staff, have little associated risk, and be easy to implement. Similar to the target population “cost” criterion, policy options that have a lower overall administrative burden to LOOM will rank “very low.”

⁸⁰ Butler, Brian S. “Membership Size, Communication Activity, and Sustainability: A Resource-Based Model of Online Social Structures.” *Information Systems Research* 12, no. 4 (December 1, 2001): 346–62. <https://doi.org/10.1287/isre.12.4.346.9703>. In interviews, both LOOM and community stakeholders cited that “trust” and “support” increased and strengthened the sense of community amongst pregnant persons.

Benefit

To measure the benefit of each policy option to LOOM, we will consider recognition, brand loyalty, and development opportunities. Recognition will include how much other organizations in the industry, as well as potential clientele and the media, will pay attention to LOOM based on a specific policy option. Brand loyalty concerns the buy-in of current LOOM educators and clients for each policy option. Increased opportunities for LOOM investors or philanthropic funding will be captured by development opportunities. Overall, LOOM benefit will rank “very high” if a policy option results in greater recognition for LOOM, high brand loyalty, and increased development opportunities.

EVALUATION OF POLICY OPTIONS



EVALUATION OF POLICY OPTIONS

We ranked the five policy options across the criteria discussed above. First, team members individually ranked the policy options relative to one another along each criterion. If there was a disagreement between team members’ rankings, the full team discussed and reached a consensus. Policy options were allowed to receive the same ranking designation (i.e. two policy options could both receive a “high” ranking on the cost criterion). We describe the rankings in depth below (See Table 6).

Table 6. Evaluation of Policy Options

Criteria	Target Population			LOOM	
	Impact	Demand	Cost	Administrative Burden	Benefit
Sliding Scale Bilingual LOOM Classes	High	Moderate	High	Low	High
Sliding Scale English LOOM Classes	Moderate	Very Low	High	Very Low	Low
Bilingual Digital Content	Very Low	Low	Low	High	Very High
Transportation Fund for Rideshare Partnership	Low	High	Very Low	Low	Very Low
Community Educator Training Program	Very High	Very High	Moderate	High	Moderate

OPTION 1: SLIDING SCALE CLASSES OFFERED IN ENGLISH AND SPANISH AT LOOM

Implementing sliding scale classes at LOOM in both English and Spanish will likely reach a moderate number of target population clients relative to the other options. While offering courses in Spanish and at an affordable rate will increase access for Spanish speakers and those with limited discretionary income, target population clients will still be required to provide their own transportation (which has been identified as a barrier to accessing classes).⁸¹ As evidenced by our interview findings, holding in-person courses at LOOM is likely to result in greater information retention and sense of community as compared to a digital option.⁸² This policy option ranks “high” on impact.

The travel time required to access in-person classes increases the time requirement for the target population compared to the digital and community educators’ options. Target population demand for in-person classes is higher than for a digital option.⁸³ Additionally, our regression analysis suggests that the target population is less likely to use the

⁸¹ Informed by interviews with Ob-Gyn resident, Perinatal Health Worker, and Health Education Specialist.

⁸² Informed by interviews with LOOM Staff and Clients.

⁸³ Informed by interviews with Perinatal Health Worker and Health Education Specialist.

internet for health information.⁸⁴ Offering classes in both English and Spanish meets the language preferences of the target population. This option ranks “moderate” on the target population demand criterion.

The cost to the target population for this option will be greater than the digital unlimited monthly subscription option. Further, some classes that could be accessed through the transportation fund policy option are free, whereas the classes offered at LOOM will cost at least \$15. The cost of this option to the target population is “high.”

Translating its curriculum to Spanish will be a great expense to LOOM, however, this expense may be offset by increased profits from increased Spanish-speaking customers at all price points. LOOM’s ability to control its intellectual property is greater for the courses offered at LOOM than those provided by community educators or via a digital platform. However, translating the curriculum makes implementation of this option more difficult than expanding LOOM’s existing English-language classes or providing funds for transportation. Administrative burden for this option is “low.”

LOOM’s sustainability is strengthened when LOOM’s staff and educators feel they are having a positive social impact.⁸⁵ Compared to offsite options, having educators and clients interface directly with the target population will likely result in higher brand loyalty. By increasing the number of Spanish-language courses on the market, LOOM will also gain recognition for this work from the greater Los Angeles community, but less so than the high-visibility digital and community training policy options. Potential investors will likely support this option as it will increase the number of full paying customers, as well as improve LOOM’s brand recognition. This option ranks “high” for benefit to LOOM.

OPTION 2: SLIDING SCALE CLASSES OFFERED IN ENGLISH ONLY AT LOOM

Of all our policy options, sliding scale English courses at LOOM reaches the smallest number of target population participants because it requires clients to travel to LOOM and has limited language accessibility. Nonetheless, in-person courses increase learning retention and offer a stronger sense of community than digital courses. For these reasons, this option receives an impact ranking of “moderate.”

The time requirement for any in-person course is high given that our target population will have to travel farther and invest more time to access perinatal education. However, community stakeholders shared that an in-person learning format is preferred to digital teaching methods; this sentiment was further confirmed through the regression analysis.

⁸⁴ See Appendix C, Table 13.

⁸⁵ Informed by interview with LOOM co-Founders and Educators.

This option is unique from the remainder of our policy options in that it does not expand courses to languages other than English and therefore does not align with the language needs of the identified target population. Demand for this option is “very low.”

The cost to the target population of an English sliding scale LOOM class, as with its bilingual counterpart, ranks “high.” While the sliding scale pricing structure of this option addresses cost barriers, the target population maintains alternative options that are either free or less than the \$15 minimum LOOM would charge.

Given that LOOM would not need to translate their curriculum or hire additional Spanish-speaking staff, the cost to LOOM is significantly less with this option. LOOM staff members have vocalized support for providing a discounted version of their current services and stated that implementation of such would be highly feasible. The administrative burden LOOM would assume should they implement a sliding scale English course is therefore relatively minimal, thus earning this option a “very low” rank.

LOOM’s recognition in the community would likely be negligible due to this option’s limited reach and impact on the target population. Similar to the sliding scale classes offered in Spanish and English, this option increases brand loyalty amongst LOOM clients and educators due to more personal interactions. However, due to the above considerations, development opportunities would be relatively minimal as this option is likely less attractive to potential investors than other policy options. This option ranks “low” for benefit to LOOM.

OPTION 3: DIGITAL CONTENT IN ENGLISH AND SPANISH

A digital option offers a poor sense of community compared to in-person classes, as well as a lower likelihood of learning retention.⁸⁶ Digital content will also reach fewer individuals in the target population. While on-demand digital content would expand access to a transportation-challenged population, our regression analysis and community stakeholder interviews found that Spanish-speaking populations have a lower demand for digital education. For these reasons, bilingual digital content ranks “very low” on the impact criterion and “low” on target population demand.

A digital option will be charged on a monthly subscription basis for unlimited classes. The per class cost to the target population will be less than an in-person class at LOOM, but more costly than classes available through the transportation fund option. Due to this, the target population cost criterion is ranked “low.”

⁸⁶ Blewett, “IPUMS Health Surveys: National Health Interview Survey, Version 6.3.”

Developing multilingual digital classes will require LOOM to translate their curriculum and develop a digital platform, and this is estimated to be the most expensive of the policy options due to the large upfront cost required. Even with this high initial investment, LOOM co-Founders and staff have demonstrated support for this option, as they are already exploring creating digital content for their non-perinatal education classes.⁸⁷ Due to the translation requirements, upfront costs, and development process, implementation of this option will be less feasible than LOOM’s in-person classes or contributing to a transportation fund. Administrative burden for this option is “high.”

Since digital perinatal education is currently in limited supply, LOOM has the potential to gain a tremendous amount of recognition in both the greater Los Angeles area and nationwide by developing digital content that can, eventually, be accessible on-demand and in many languages.⁸⁸ Brand loyalty of both LOOM educators and clients will be strong - educators will increase engagement with their broader community and clients will have on-demand access to LOOM resources as LOOM remains an innovative market-leader.⁸⁹ Additionally, investors are likely to be interested in the broad reach that a digital option would have. Benefit to LOOM is “very high” for this option.

OPTION 4: TRANSPORTATION FUND FOR RIDESHARE PARTNERSHIP

Offering free transportation to access perinatal education classes across Los Angeles will impact a large number of target population participants. While transportation will allow access to in-person classes, these classes may be outside of LOOM. The sense of community cultivated by other providers is uncertain relative to LOOM. Impact is “low” for this policy option.

The target population demand for a transportation fund is ranked “high” because it allows target population participants access to classes in their language and class format of choice, but likely requires a larger time commitment due to scheduling restrictions and travel time.⁹⁰ The assumption is that since individuals can attend any class in Los Angeles, individuals will choose to attend free classes. With this autonomy, the financial cost to participants will be \$0. Cost for this policy option is “very low” for the target population.

With this option, LOOM will not need to develop a new curriculum. Additionally, LOOM will likely only need to invest a small amount of capital as it will simply maintain current event fundraising and implement a new web-based donation mechanism. The cost to

⁸⁷ Informed by interview with LOOM co-Founder.

⁸⁸ Informed by market scan.

⁸⁹ Informed by interview with LOOM Educator.

⁹⁰ Informed by interviews with community stakeholders.

LOOM for this option is therefore relatively minimal. While this option may be easy to implement, LOOM support will be minimal because participation will be encouraged at competing classes rather than ensuring that target population participants exclusively attend LOOM classes. Administrative burden for this option is “low.”

There will be minimal visibility for this option, therefore limited buy-in from current educators and clients is anticipated. This option will affect participation at other perinatal education providers in Los Angeles, and therefore increase LOOM’s recognition with those organizations. However, there will be less media coverage or knowledge of LOOM services via a transportation fund, and minimal investor opportunities as LOOM will not be growing its brand. Benefit to LOOM for this option is “very low.”

OPTION 5: COMMUNITY EDUCATOR TRAINING PROGRAM IN ENGLISH AND SPANISH

Training community educators to provide perinatal education has the potential to impact a large number of target population individuals. LOOM-certified community educators can bridge the gap in access to perinatal education as they will be embedded in communities of need and will therefore mediate some of the transportation, language, and location burdens identified as being associated with decreased perinatal education access. Additionally, in-person classes were determined to be most conducive to learning, attendance, and community-building. Impact for this policy option ranks “very high.”

Community stakeholders expressed increased interest and need for additional perinatal education courses across Los Angeles. Additionally, this option helps address the limited number of courses offered in languages other than English. While LOOM-certified community educators would offer classes in target population communities, classes would still only be available at specific times, which may continue to be a barrier to access. Even still, the time requirement for this policy option is less than other options. This option is determined to have “very high” demand.

The cost of each class to participants will be instructor dependent, however we anticipate the cost will be compatible with target individuals’ willingness and ability to pay. Given this variability, cost for this policy option is “moderate” for participants.

With this option, LOOM will need to recruit community educators, develop a Spanish-language curriculum, and create a certification training and instructor evaluation methods. LOOM will also need to develop a marketing campaign to increase demand for community-based courses. LOOM staff have expressed support for establishing LOOM-sponsored cells of perinatal education across Los Angeles and the U.S., but have also

expressed concerns about protecting their intellectual property. Administrative burden is “high” for this option.

There will be less internal visibility for this option than the other options we have considered. We anticipate limited support from LOOM’s current clients, though LOOM educators may be involved in training community educators and would therefore have some personal investment in this option’s success. There is increased potential for external recognition with this option as awareness of LOOM’s work extends beyond Los Angeles and more individuals become LOOM-certified. Community educators have the potential to be catalysts of community awareness, prioritization, and investment in perinatal education. Benefit to LOOM for this option is “moderate.”

RECOMMENDATIONS



RECOMMENDATIONS

Our policy question is primarily focused on expanding access to our identified target population, with less emphasis on the burden said expansion places on LOOM.⁹¹ Due to this, we performed a two-step analysis to identify a policy recommendation. First, we reviewed each policy option from the target population perspective and identified their top three highest ranked policy options. We then analyzed those three policy options from LOOM's perspective to identify our overall policy recommendation. Utilizing this method of evaluation, our recommendations are ranked below.⁹²

- 1. Sliding scale classes offered in English and Spanish at LOOM**
2. Community educator training program in English and Spanish
3. Transportation fund for rideshare partnership

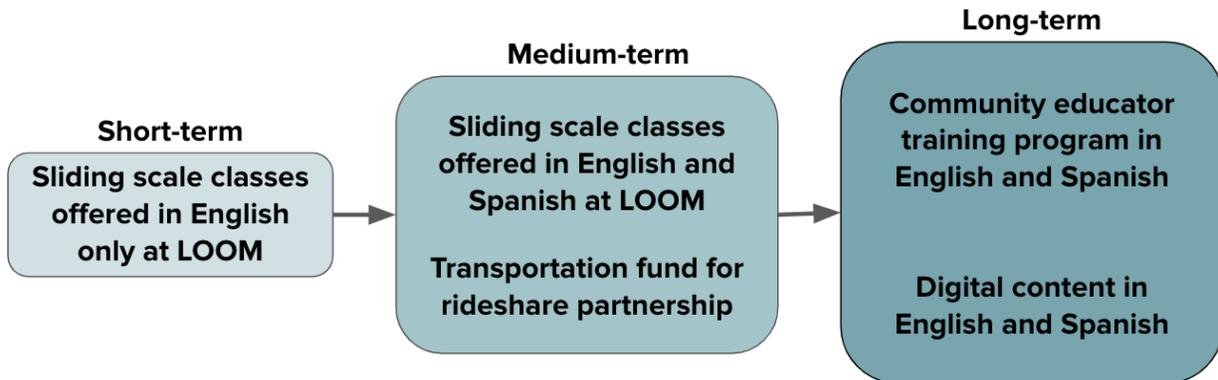
We have identified **sliding scale LOOM classes offered in English and Spanish** to be the best policy option of all alternatives considered. This policy option ranked third among the target population criteria, and subsequently ranked the highest among the LOOM criteria. Developing sliding scale bilingual LOOM classes appropriately addresses the needs of our target population and the service gaps we identified in the market. Additionally, this option poses the likelihood for high interest from LOOM staff and overall high benefit to LOOM through increased brand loyalty, community recognition, and funding opportunities.

Despite our identification of a top recommended policy option, LOOM could potentially implement a combination of all five policy options over the short-, medium-, and long-term. Developing a variety of approaches to increase access to perinatal education in Los Angeles over a longer period of time is particularly necessary given the administrative burden that bilingual sliding scale classes will place on LOOM. To make an immediate and sustainable impact, LOOM will need to consider implementing multiple strategies (see Figure 11).

⁹¹ This conclusion was confirmed through interviews with both LOOM co-Founders.

⁹² We conducted multiple sensitivity analyses using different approaches to determine a policy recommendation. In all scenarios, sliding scale bilingual classes at LOOM fell within the top three recommended policy options. See all Criteria Alternative Matrices located in Appendix M.

Figure 11. Implementation Plan



Short-term

Sliding scale English classes at LOOM will have a minimal impact on the target population, but this option poses little administrative burden to LOOM and could be implemented almost immediately.

Medium-term

Fundraising for transportation and sliding scale classes at LOOM in English and Spanish pose a moderate administrative burden to LOOM. Sliding scale bilingual classes at LOOM will likely have a greater impact on perinatal education access compared to a transportation partnership. However, there was less demand from the target population for bilingual LOOM classes because they require a larger financial investment.

Fundraising for transportation is an adaptable option to combine with other short- and long-term recommendations and could maximize the impact on the target population.

Long-term

The bilingual digital and training bilingual community educators options are most appropriately characterized as long-term recommendations. Of these, training community educators will have a much greater impact on the target population as compared to digital content, but a digital option will provide LOOM a great benefit. Both of these options will likely have a positive impact on LOOM's recognition in the greater reproductive education community, both in Los Angeles and nationwide.

CONSIDERATIONS

While certain implementation considerations were weighed during the evaluation of our policy options (i.e. pricing and language), this section further details key considerations for LOOM to remain cognizant of while implementing the policy recommendations previously discussed.

Data Collection

First and foremost, we strongly recommend that LOOM develop a monitoring and evaluation program. This will require collecting data on client demographics and education outcomes, such as information retention, to provide evidence in support of their business model. Additionally, LOOM could consider collecting data on reproductive health outcomes, such as breastfeeding initiation and duration or cesarean section rates. This data could ultimately provide more evidence for funding opportunities and further expansion of LOOM services.

Pricing structure

For the reasons discussed throughout this report, a sliding scale payment option is most appropriate for courses offered at LOOM. Of course, it will be vital for LOOM to ensure it maintains profitability despite some clients paying less than full price for classes. Due to this, we have identified \$15 as the lowest end of the sliding scale that LOOM is capable of accepting. This price point is within a range provided by community stakeholders and is also the point at which LOOM breaks even if they host a class at full capacity.⁹³ However, implementing a \$15 minimum price point inherently excludes a segment of the population that cannot afford \$15 for perinatal education. Thus, if there is consistent demand for sliding scale classes, LOOM should consider shifting the sliding scale minimum to \$0. Lastly, if this pricing model proves successful, LOOM could expand the sliding scale to their other courses.

LOOM will need to market the sliding scale option so that clients of different incomes appropriately sort themselves into different price points. On its general marketing materials, LOOM should make clear that full price classes are offered, but also provide sliding scale payment options. Additionally, LOOM should develop marketing materials specifically for the target population that clearly advertise the sliding scale payment option with simple steps for accessing lower-cost classes at LOOM. For example, this pricing model can be advertised at FQHCs or other community clinics that serve lower-income and Spanish-speaking individuals. To encourage the appropriate sorting of clients and decrease confusion in the sliding scale, LOOM should advertise three price points: the advertised full price of the class, the average payment, and the total cost to

⁹³ Informed by review of LOOM's Year 1 financials.

LOOM per participant (class + staff + rent/utilities).⁹⁴ By leveraging full-price paying clients' interest in social justice, LOOM should be able to signal that the sliding scale option is specifically intended for those individuals who truly need a decreased price point and potentially encourage increased payments from others.⁹⁵

Language

Our top recommendation, sliding scale classes at LOOM in English and Spanish, will require LOOM to translate their curriculum into Spanish. LOOM currently has some Spanish-speaking educators who feel confident in teaching a Spanish curriculum in the short-term. However, prior to these educators teaching Spanish-language classes, we recommend they take a Spanish competency exam to demonstrate fluency. If demand for Spanish-language perinatal education classes is high after LOOM pilots sliding scale bilingual classes, we also recommend LOOM considers hiring a native Spanish-speaker to teach its Spanish-language classes.

Furthermore, though we have focused on Spanish, many languages are spoken in Los Angeles (i.e. Chinese, Korean). If LOOM's foray into Spanish-language education proves successful, it should consider expanding class offerings in a variety of languages. Additionally, a digital platform has the potential to easily include additional languages to serve multiple populations.

Time Constraints

Time constraints, such as length of class, time of day, and childcare requirements, are an additional barrier to accessing perinatal education.⁹⁶ LOOM should consider these barriers when expanding its services by maintaining their currently offered evening and weekend classes. Additionally, LOOM could consider providing childcare during class times or making perinatal classes welcoming to parents with children.

LOOM Certification

In developing a community educator training, LOOM should create a certification program to maintain brand identity and ensure protection of intellectual property. LOOM can recruit community educators by coordinating with community-based organizations (i.e. clinics, recreation centers, religious centers).⁹⁷ LOOM certification should initially be

⁹⁴ Camilleri, Adiran. "How Pay-What-You-Want Pricing Models Can Be Profitable." *Marketing*. SmartCompany, March 12, 2018. <https://www.smartcompany.com.au/marketing/pay-what-you-want-models-can-profitable/>; Gneezy, Ayelet, Uri Gneezy, Gerhard Riener, and Leif D. Nelson. "Pay-What-You-Want, Identity, and Self-Signaling in Markets." *Proceedings of the National Academy of Sciences* 109, no. 19 (May 8, 2012): 7236–40. <https://doi.org/10.1073/pnas.1120893109>.

⁹⁵ Informed by interviews with LOOM stakeholders.

⁹⁶ Informed by interviews with LOOM and community stakeholders.

⁹⁷ "Childbirth Educator Certification." The International Childbirth Education Association (ICEA), 2017. <https://icea.org/certification/childbirth-educator-certification>. As specified by existing childbirth education certification programs,

offered free-of-charge to allow LOOM to build a name for itself, but once demand increases the certification should be provided on a sliding scale basis. It will be important for LOOM to create a certification assessment before awarding a LOOM Community Educator certificate to participants to ensure that all community educators are providing classes in the manner LOOM intends. Supplementary funding for a certification program could be sought from investors with interest in LOOM's brand and community-based education programs.

Safety Information

We recommend that LOOM introduce safety information, such as CPR, first aid, and car seat training, into its "Prepared Package" courses. All LOOM clients we spoke with were required to seek this information at alternative locations. Introducing safety content to their curriculum could allow LOOM to become a one stop shop for all perinatal education.

Marketing and Outreach

LOOM will need to rely on new modes of marketing and outreach to reach the target population we have identified. The organization's current reliance on social media to advertise their services should be evaluated and updated to appropriately reach new communities.⁹⁸ This will likely require an increased budget focused on community-specific marketing. Additionally, policy options such as community educators and a transportation fund will require LOOM to build relationships with new stakeholders through marketing efforts and referral partnerships.

LOOM community educators may have little to no experience, be lay individuals committed to helping during childbearing, or be a doula, nurse, or professional looking to expand their services to perinatal education.

⁹⁸ Informed by interview with LOOM Operations Director.

LIMITATIONS



LIMITATIONS

While we produced a comprehensive report, we were limited by the data available for our specific population and region. Myopic attention is paid to population-based outcomes in our database (i.e. exclusive breastfeeding, cesarean delivery), and information on the experiences of pregnant individuals beyond these outcomes is woefully lacking. Additionally, there exists little to no consistent measurement of qualities like “community” or “confidence” as they pertain to perinatal education. Our limitations were inherent to the available data and variables selected, and thus provided boundaries for our analysis.

Most importantly, critically missing in our assessment are the perspectives of potential beneficiaries (i.e. target population). Our respect for participant consent and perceived competition with community providers guided our decision to forego continued endeavors to contact members of the target population directly. A future project could consider an IRB-approved community-based participatory study to give voice to the narratives of pregnant individuals’ motivations, values, and needs for perinatal education.



CONCLUSIONS

CONCLUSIONS

Evidence supports perinatal education as an intervention with potential to improve the health of pregnant individuals and their children, and our analysis suggests that the current landscape of perinatal education providers in Los Angeles is insufficient for a variety of reasons. In particular, we observed that transportation, cost, and a notable lack of courses taught in Spanish are among the factors most likely to affect a pregnant individual's access to perinatal education.

Our recommendation is the result of an analysis of both target population- and LOOM-focused criteria, including impact, demand, cost, administrative burden, and benefit. Ultimately, the most effective, efficient, and impactful option LOOM could pursue to address service gaps in both quality and location of perinatal education in Los Angeles is expanding its curriculum to include a sliding scale option in both English and Spanish.

We also recommend that LOOM maximize its impact by implementing several strategies over time. In the short-term, with little to no increased investment, LOOM has the capacity to immediately create a sliding scale English course and can thus mitigate cost as a barrier to access. LOOM should then prioritize translating its curriculum to Spanish to implement a bilingual sliding scale course option at LOOM, as well as continue its current fundraising efforts to alleviate transportation burden. Finally, LOOM's long-term business plan should include developing a bilingual digital platform and training trusted, LOOM-certified community educators who can host bilingual perinatal education courses in areas where they are needed most — two strategies that effectively address barriers of cost, transportation, and language at once.

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APPENDICES



APPENDICES

Appendix A. Literature Review Methodology and Results

A literature review was performed using the PubMed database to determine whether perinatal education positively impacts knowledge as a component of health literacy. We used the PICO method to determine search criteria and identify relevant literature (see Table 7).⁹⁹

Table 7. Search Strategy

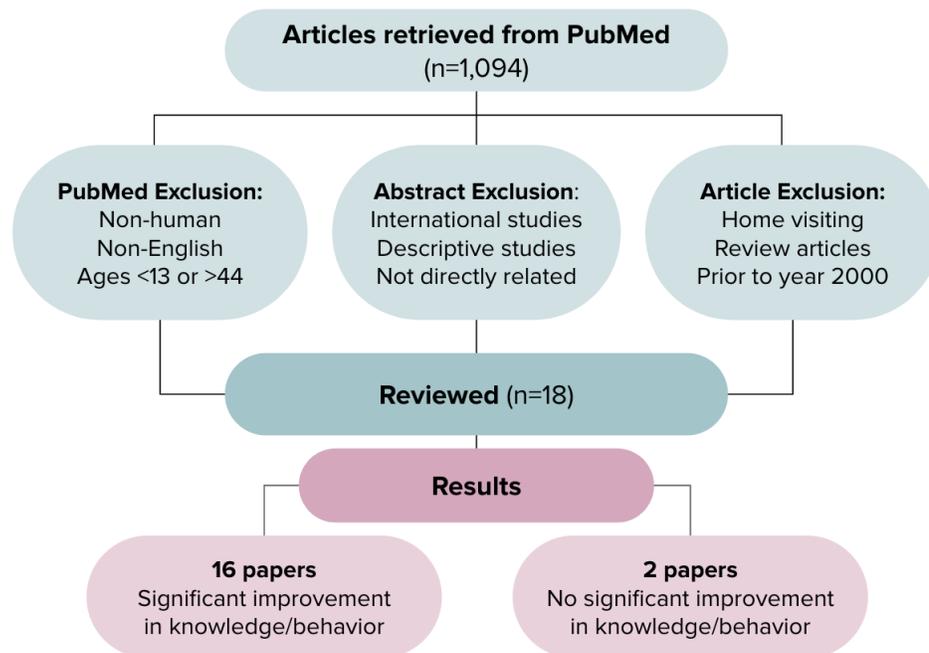
PICO	Concept	Search Strategy
Population	Reproductive age men and women	mother*[Text Word] OR "pregnant women"[Text Word] OR female*[Text Word] OR parent*[Text Word] OR mothers[Mesh] OR parents[Mesh] OR "pregnant women"[Mesh] OR "women"[Mesh] OR "women"[Text Word]
Intervention	Perinatal health education	"childbirth education"[Text Word] OR "prenatal education"[Text Word] OR "antenatal education"[Text Word] OR "infant care"[Text Word] OR "neonatal care" [Text Word], OR "labor education"[Text Word] OR "prenatal education"[Mesh]
Control		
Outcome	Health literacy or Knowledge	"health literacy"[Text Word] OR "health literacy"[Mesh] OR "knowledge"[Mesh] OR "knowledge"[Text Word]

All trials, including randomized, prospective cohort, and cross-sectional studies were included. We excluded the following criteria using PubMed filters: (1) Non-english; (2) Non-human studies; (3) Ages <13 or >44. Upon review of the article titles and abstracts, the following exclusion criteria were applied: (1) Studies performed outside the U.S.; (2) Descriptive studies; (3) Articles not directly related to perinatal health education. Remaining articles were split between three team members who then excluded: (1) Review articles; (2) Articles where the intervention included a home visiting component; (3) Publications prior to 2000. Three team members reviewed the remaining papers in their entirety.

The systematic search identified 1,094 potentially relevant citations. After applying the inclusion and exclusion criteria, 18 articles were selected for a comprehensive review (see Figure 12).

⁹⁹ "Health (Nursing, Medicine, Allied Health): Search Strategies: Framing the Question (PICO)." Research Guides. NYU Libraries, March 5, 2019. <https://guides.nyu.edu/c.php?g=276561&p=1847897>. PICO Method: A technique used in evidence-based practice to frame a question and locate, assess, and evaluate evidence. The steps may be repeated as needed. Elements include: Problem/Patient/Population, Intervention/Indicator, Comparison, and Outcome.

Figure 12. Literature Review Selection Process



Nine of the articles were randomized control trials, eight were prospective cohort studies, and one was a cross-sectional study with a non-equivalent control. Education interventions covered various topics including immunizations, prenatal and newborn screening, infant feeding, shaken baby syndrome, safety, sleep, neonatal abstinence syndrome, oral health, infant development, and postpartum depression.

15 of the papers looked at knowledge as the primary outcome, 87% of which showed a significant improvement in knowledge after the perinatal education intervention. 7 papers analyzed behaviors between intervention and control groups, of which 71% showed improvement in sleep or breastfeeding post-intervention. Three of the papers also reported significant increases in preparedness, confidence, and satisfaction after the intervention (see Tables 8 and 9).

Table 8. Literature Review Analysis

Citation	Increased Knowledge	Other Outcomes
Randomized Trial of a Children's Book Versus Brochures for Safe Sleep Knowledge and Adherence in a High-Risk Population.	Yes	
Swaddling and Infant Sleeping Practices.	Not measured	More likely to perform safe sleep practices*
Health Messaging and African-American Infant Sleep Location: A Randomized Controlled Trial.	No	No significant effect on behaviors
Prenatal Education of Parents About Newborn Screening and Residual Dried Blood Spots: A Randomized Clinical Trial.	Yes	Increased support for screening and satisfaction*
Development, Implementation, and Evaluation of a Pilot Parenting Educational Intervention in a Pregnancy Buprenorphine Clinic.	No	
Messaging Affects the Behavior of African American Parents with Regards to Soft Bedding in the Infant Sleep Environment: A Randomized Controlled Trial.	Not measured	More likely to perform safe sleep practices*
Improving infant sleep safety through a comprehensive hospital-based program.	Yes	Increase in safe sleep behavior*
Acceptability and initial efficacy of education for teen mothers.	Yes	
Anticipatory guidance through DVD.	Yes	Reduction in visit time*
Innovative delivery of newborn anticipatory guidance: a randomized, controlled trial incorporating media-based learning into primary care.	Yes*	Increase in preparedness and confidence in at least one topic*
Using Baby Books to Increase New Mothers' Safety Practices	Not measured	More likely to perform safe practices at home*
Effectiveness of a presentation on infant oral health care for parents.	Yes*	
Assessing an infant feeding web site as a nutrition education tool for child care providers.	Yes*	Improved attitudes and behaviors regarding breastfeeding*
Secondary analysis of the "Love Me...Never Shake Me" SBS education program.	Yes*	
Pediatric oral health knowledge of African American and Hispanic of Mexican origin expectant mothers.	Yes*	
Assessment of an interactive computer-based patient prenatal genetic screening and testing education tool.	Yes*	No change in anxiety, but high satisfaction and feeling of preparedness

Parenting knowledge among substance abusing women in treatment.	Yes*	
A prenatal intervention study to improve timeliness of immunization initiation in Latino infants.	Yes*	More kids were up to date on immunizations

* Results Significant

Table 9. Literature Review Results

Results	Number of papers
Significant improvement in knowledge and/or behavior	16
No significant improvement in knowledge and/or behavior	2

Appendix B. Detailed Regression Assumptions

We built the regression model in the following manner.

Variables used to refine the sample:

- Age as of last birthday (“age”) - To limit sample to the reproductive age of 15-49 years old (i.e. 15-19, 20-24, 25-34, 35-49 years old).
- Age of youngest child (“yngch”) - To limit sample to yngch=00 (i.e. youngest child less than 1 year of age) in order to capture individuals nearest to delivery. A limitation of our data is the inability to specify ‘currently pregnant individuals.’ Restricting to women with a child less than one year of age was determined to be the closest approximation of this population.
- Female (“sex”) - To limit sample to potentially pregnant individuals. We recognize that we may miss a segment of individuals given the survey’s limited capturing of gender identity.
- Household region (“region”) - To consider variation across the United States. ‘West’ includes the Pacific Division (Washington, Alaska, Oregon, California, and Hawaii) and the Mountain Division (Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, and Nevada). Regional variation was beyond the scope of the current project.

Assumed dependent variables:

- Female sample that saw or talked to “a doctor who specializes in women’s health (an obstetrician/gynecologist)” during the past twelve months (“sawgyn”).
Reclassified as dichotomous variable “sawobgyn.”

Independent variables:

- Age as of last birthday (“age”) - Reclassified as “agere” to limit sample to the reproductive age of 15-49 years old (i.e. 15-19, 20-24, 25-34, 35-49 years old). Generated additional dichotomous variable “agebin” to evaluate behavior of individuals less than 35 years old and 35+ years old. Expected a positive effect if individual is 35+ years old.
- Legal marital status (“marstat”) - Reclassified as “marrstat” (i.e. married, separated/widowed/divorced, single). Generated additional dichotomous variable “marrbin” to evaluate the behavior of married individuals relative to non-married individuals. Expected a positive effect if individual was partnered relative to non-married individuals. A limitation of this variable is the inability to capture supportive partnerships of non-married individuals.
- Self-reported race (“racenew”) - Reclassified as “race” (i.e. White, Black/African-American, American Indian/Alaska Native, Asian, Multiple). Generated additional

dichotomous variable “racebin” to evaluate the effect when combining individuals who identified as Black/African-American, American Indian/Alaska Native, Asian, and Multiple into one group. Expected persons identifying as White to have positive effect.

- Hispanic ethnicity (“hispyr”) - Dichotomous variable. Included to expand on “race/ethnicity” with particular attention to the population of Los Angeles. Expected not-identifying as Hispanic to have a positive effect.
- Language interview conducted in (“intervlang”) - Reclassified as “lang” (i.e. English, Spanish, English and Spanish, and Other - not otherwise specified). Generated additional dichotomous variable “langbin” to evaluate the effect of speaking English-only and speaking another language. Expected speaking English-only to have a positive effect. A limitation is no further specification of the other languages included in this population.
- Educational attainment (“educrec2”) - Reclassified as “educ” (i.e. Less than high school, high school graduate, attended some college, and college graduate/additional post-graduate training). Generated additional dichotomous variable “educbin” to evaluate the effect of having graduated from college. Expected increased years of education to have a positive effect.
- Health insurance type (“hipubcove”) - In the setting of chronic disease, individuals without insurance have higher rates of clinic absence. Once pregnant, individuals are provided health insurance. We are uncertain the effect of public insurance.
- Income (“incfam07on”) - Reclassified as “income” (i.e. \$0-35,000; \$35,000-49,999; \$50,000-74,999; \$75,000-99,999; \$100,000+) to approximate 100%, 200%, 300% and 400% of Federal Poverty Levels of 2019 (for a household of 4). Expected increased income level to have a positive effect.
- Reasons for delaying seeking health care because of cost (“delaycost”) or transportation (“delaytrans”, reclassified as “delaytranspo”) - Dichotomous variables.
- Used the Internet to look up health information in the last 12 months (“pclookhelyr”) - Dichotomous variable reclassified as “pchealthinfo” as a proxy measurement of health literacy. Expected to have a positive effect.

Appendix C. Significant Regression Variables

Table 10. Population of reproductive-age women with youngest child under 1 year of age. Dependent variable “saw a women’s health provider, last 12 months.” Independent significant variables reported with their marginal effects include educational attainment, language, identifying as Hispanic, delaying health care due to lack of transportation, and looking up health information on the Internet.

<i>Education</i>		<i>Observations:</i>			988
Reference:		Did not graduate from high school			
Predictor	logit p-value	MEM	Std. Err.	p	
High school graduate	0.001	0.143	0.044	0.001	
Some college	0	0.173	0.043	0	
College graduate	0	0.199	0.042	0	

<i>Education</i>		<i>Observations:</i>			985
Reference:		Did not graduate from college			
Predictor	logit p-value	MEM	Std. Err.	p	
College graduate	0.003	0.071	0.21	0.001	

<i>Language</i>		<i>Observations:</i>			985
Reference:		Speaks only English			
Predictor	logit p-value	MEM	Std. Err.	p	
Spanish	0	-0.185	0.059	0.002	
English and Spanish	0.001	-0.247	0.103	0.017	
Other	*	*	*	*	

* Unable to estimate

<i>Language</i>		<i>Observations:</i>			985
Reference:		Speaks another language			
Predictor	logit p-value	MEM	Std. Err.	p	
Speaks only English	0	0.183	0.049	0	

<i>Language (Western U.S.)</i>		<i>Observations:</i>		
		<i>271</i>		
Reference:	Speaks only English			
Predictor	logit p-value	MEM	Std. Err.	p
Spanish	0	-0.344	0.108	0.001
English and Spanish	0.001	-0.351	0.139	0.012
Other	*	*	*	0

<i>Language (Western U.S.)</i>		<i>Observations:</i>		
		<i>274</i>		
Reference:	Speaks another language			
Predictor	logit p-value	MEM	Std. Err.	p
Speaks only English	0	0.311	0.083	0

<i>Hispanic</i>		<i>Observations:</i>		
		<i>990</i>		
Reference:	Not Hispanic			
Predictor	logit p-value	MEM	Std. Err.	p
Hispanic	0	-0.101	0.028	0.001

<i>Hispanic (Western U.S.)</i>		<i>Observations:</i>		
		<i>274</i>		
Reference:	Not Hispanic			
Predictor	logit p-value	MEM	Std. Err.	p
Hispanic	0.001	-0.146	0.046	0.002

<i>Delay health care due to lacking transportation*</i>		<i>Observations:</i>		
		<i>19,920</i>		
Reference:	Did not delay health care due to lacking transportation			
Predictor	logit p-value	MEM	Std. Err.	p
Delayed	0	-0.079	0.021	0

* Population not restricted to youngest child under 1 year of age.

<i>Delay health care due to lacking transportation</i>		<i>Observations:</i>		
		<i>990</i>		
Reference:	Did not delay health care due to lacking transportation			
Predictor	logit p-value	MEM	Std. Err.	p
Delayed*	0	-0.121	0.073	0.097

* p>0.05 for MEM; could be attributed to sample size and magnitude of effect

<i>Looked up health info on Internet, last 12 months</i>				<i>Observations:</i>	985
Reference: Did not look up health information on the Internet					
Predictor	logit p-value	MEM	Std. Err.	p	
Used the Internet for health information	0	0.103	0.023	0	

<i>Looked up health info on Internet, last 12 months (Western U.S.)</i>				<i>Observations:</i>	272
Reference: Did not look up health information on the Internet					
Predictor	logit p-value	MEM	Std. Err.	p	
Used the Internet for health information	0.005	0.13	0.047	0.006	

Table 11. Population of reproductive-age women with youngest child under 1 year of age. Logistic regression and Interactions for dependent variable “saw a women’s health provider, last 12 months.”

<i>Saw Women's Health Provider, last 12 months</i>				<i>Observations:</i>	983
Reference: Less than high school, speaks another language, did not look up health information on the Internet					
Predictor	Coefficient	Std. Err.	p	95% CI [LL,UL]	
Education					
High school grad	0.63	0.279	0.024	[0.082, 1.18]	
Some college	0.779	0.295	0.008	[0.202, 1.36]	
College grad	0.921	0.332	0.006	[0.270, 1.57]	
Speaks only English	0.609	0.285	0.032	[0.051, 1.17]	
Used the Internet for health information	0.538	0.215	0.012	[0.117, 0.959]	
Constant*	0.438	0.259	0.091	[-0.069, 0.945]	

* p>0.05 for constant

<i>Saw Women's Health Provider, last 12 months</i>			<i>Observations:</i> 988	
Reference: Less than high school, speaks another language, non-Hispanic				
Predictor	Coefficient	Std. Err.	p	95% CI [LL,UL]
Education				
High school grad	0.682	0.276	0.014	[0.141, 1.22]
Some college	0.908	0.29	0.002	[0.340, 1.48]
College grad	1.16	0.316	0	[0.540, 1.78]
Speaks only English	0.52	0.32	0.104	[-0.107, 1.15]
Hispanic	-0.246	0.246	0.319	[-0.728, 0.237]
Constant	0.769	0.358	0.032	[0.068, 1.47]

<i>Saw Women's Health Provider, last 12 months</i>			<i>Observations:</i> 988	
Reference: Less than high school, speaks another language, did not delay health care due to lacking transportation				
Predictor	Coefficient	Std. Err.	p	95% CI [LL,UL]
Education				
High school grad	0.667	0.277	0.016	[0.124, 1.21]
Some college	0.934	0.286	0.001	[0.373, 1.50]
College grad	1.18	0.31	0	[0.567, 1.78]
Speaks only English	0.692	0.283	0.014	[0.137, 1.25]
Delayed health care due to transportation	-0.605	0.412	0.143	[-1.41, 0.204]
Constant	0.563	0.257	0.029	[0.058, 1.07]

Table 12. Population of reproductive-age women with youngest child under 1 year of age. Logistic regression used to inform index. Dependent variable “saw a women’s health provider, last 12 months.”

<i>Saw Women's Health Provider, last 12 months</i>				<i>Observations:</i>	988
Reference: Less than high school, speaks another language					
Predictor	Coefficient	Std. Err.	p	95% CI [LL,UL]	
Education					
High school grad	0.699	0.276	0.011	[0.159, 1.24]	
Some college	0.96	0.285	0.001	[0.401, 1.52]	
College grad	1.23	0.307	0.001	[0.628, 1.83]	
Speaks only English	0.675	0.282	0.017	[0.122, 1.23]	
Constant	0.519	0.255	0.042	[0.019, 1.02]	

Table 13. Demographic associations with using the Internet to look up health information.

<i>Use of the Internet to look up health information by language-use</i>			<i>Observations: 17,746</i>			
		Language Spoken				
		English-only	Spanish-only	Both	Other language, not otherwise specified	
Use of the Internet for health information	No	35.50%	80.34%	67.06%	72.37%	
	Yes	64.50%	19.66%	32.94%	27.63%	

<i>Use of the Internet to look up health information by race</i>			<i>Observations: 17,694</i>			
		Self-identified Race				
		White	Black	Amer. Indian/ Alaska Native	Asian	Multiple
Use of the Internet for health information	No	35.62%	50.16%	51.85%	40.50%	33.79%
	Yes	64.38%	49.84%	48.15%	59.50%	66.21%

<i>Use of the Internet to look up health information by Hispanic-identity</i>		<i>Observations: 17,746</i>	
		Hispanic	
		No	Yes
Use of the Internet for health information	No	34.01%	56.28%
	Yes	65.99%	43.72%

<i>Use of the Internet to look up health information by age</i>			<i>Observations: 17,746</i>			
			Age			
			15-19	20-24	35-24	35+
Use of the Internet for health information	No	47.74%	38.68%	35.80%	39.43%	
	Yes	52.26%	61.32%	64.20%	60.57%	

<i>Use of the Internet to look up health information by income</i>			<i>Observations: 16,824</i>				
			Income				
			1	2	3	4	5
Use of the Internet for health information	No	50.64%	38.90%	32.21%	26.45%	21.19%	
	Yes	49.36%	61.10%	67.79%	73.55%	78.81%	

<i>Use of the Internet to look up health information by delaying health care due to lack of transportation</i>		<i>Observations: 17,734</i>	
		Delay health care, transportation	
		No	Yes
Use of the Internet for health information	No	38.21%	46.69%
	Yes	61.79%	53.31%

<i>Use of the Internet to look up health information by delaying health care due to cost</i>		<i>Observations: 17,734</i>	
		Delay health care, cost	
		No	Yes
Use of the Internet for health information	No	39.39%	32.56%
	Yes	60.61%	67.44%

<i>Use of the Internet to look up health information by marital status</i>		<i>Observations: 17,714</i>		
		Marital Status		
		Married	Sep/Wid/Div	Single
Use of the Internet for health information	No	33.94%	43.24%	41.17%
	Yes	66.06%	56.76%	58.83%

Appendix D. Educator Survey

Survey Intro

This survey will help inform research being conducted by UCLA graduate students in partnership with LOOM. The purpose of this study is to determine what role (if any) LOOM can play in expanding access to reproductive education to low-income women in LA and beyond. We are interested in learning about your unique role at LOOM as an educator, as well as any other reproductive education experience you may have from other organizations besides LOOM.

Please be as honest as you feel comfortable with. Your responses will only be viewed by the four UCLA graduate students working on this research.

We may ask you to complete a follow-up interview with us so that we can learn more about you and your experience. You will have an opportunity to provide your contact information at the end of this survey if you are willing to participate in a follow-up interview.

Survey Questions

- What classes do you teach? - multiple choice, can choose more than 1
- How long have you been teaching at LOOM?
- What qualifications or certifications have you received, if any? For example, Licensed Midwife, Certified Professional Midwife, or International Board Certified Lactation Consultant. Please clarify if you got this through LOOM or another organization.
- In a few words, how would you describe your average class? This can be a short description focusing on general size, clientele characteristics, environment, etc.
- Have you taught reproductive education courses at other locations besides LOOM? - yes/no
 - If yes:
 - What organization/location?
 - Can you please explain any differences in style, content, cost, or clientele characteristics between LOOM and the other place(s) you have taught?
- How prepared do you feel to teach a different clientele than LOOM is currently serving? I.e. lower income, non-coupled, etc. (Very prepared, somewhat prepared, neutral, somewhat apprehensive, very apprehensive)
 - Would you prefer to integrate a different clientele into your current LOOM classes, or have separate classes for different clientele groups?
 - Would you prefer to teach a different clientele at LOOM, or go to another community-based location to teach?
- What do you believe is the most important skill or piece of knowledge that clients get from your class?
- Generally speaking, how do you think clients feel after attending on of your classes? I.e. empowered, nervous, anxious, prepared.
- Demographic info
 - Age

- Race
- Gender - male, female, non-binary, prefer not to specify
- Highest Level of Education Completed
- Is there anything else you'd like us to know?
- If you would be willing to answer a few follow-up questions should we have any, please provide your contact information.
 - Name
 - Email address

Appendix E. Staff Interview Guide

Questions (All)

I. General

- Please introduce yourself and the role you play at LOOM.
- What is your background and experience in reproductive health?

II. Founding and Business Development

- When was LOOM founded?
 - How would you describe the process of founding LOOM? (Quinn & Erica) When did you join LOOM? (Sarah)
 - What are the changes you've observed since founding, if any?
- Did LOOM follow any particular financial or business model during its founding? If so, could you please describe it?
- What are your future goals for LOOM as an organization?
- Who are your biggest competitors? In LA and beyond.
 - More broadly, how do you fit into an ecology of reproductive health services?
- What do you believe sets LOOM apart from other reproductive health education offerings in LA?
 - Are you actively trying to foster that culture? If so, how?
- We understand that LOOM's primary focus is offering choice. Does this include Western as well as alternative medicine? If so, can you speak to that?
 - Does LOOM adhere to the health care recommendations of any organization or agency? (ACOG, AAP, etc).
- How do participants generally learn about LOOM's services?
 - Referrals, internet, social media, etc.

III. Service Expansion

- How would you describe your current service offerings?
- How would you describe LOOM's current clientele?
 - Is LOOM's current clientele what you were hoping it would be? If not, how would you like to see it change or who would you like to see more represented?
 - For Erica: As an educator, if this clientele were to change to be more inclusive of lower income women, do you think that would require an adjustment to curriculum or teaching methods?
- How do you envision an expansion of LOOM's services working/looking/functioning?
 - Specifically: class/content, clientele, cost, location, teachers

IV. Conclusion

- Is there anything else you think we should know that we haven't already covered?

Interviewees: Personalized Questions

I. Co-founder and Chief of Social Impact

- How is the Impact arm of LOOM associated with this expansion?
- How do you envision this expansion will be funded?
- If our research determines that there is not space in the market for LOOM to expand access to their classes, how else do you envision LOOM getting more involved with the community?
- What is LOOM's goal in terms of impact?
 - Are you currently measuring that? If yes, how? If no, do you plan on developing methods to measure impact in the future?

II. Co-founder and CEO

- How did you develop LOOM's curriculum?
 - Did you follow a specific teaching method or other provider's curriculums as a guide?
- How are LOOM educators trained?
 - Do you think your educator trainings will need to shift if you expand to a new client community, such as low-income women? If so, how?
- As an educator, what do you hope each client will take away from your class? Specifically the childbirth education classes
- I believe you've recently been involved with classes targeting teen moms - Can you talk some about this and how it may inform your approach to a LOOM expansion?
 - Lessons learned
- How can you foster community aspect of LOOM on digital platform?

III. Operations Director

- How are you currently tracking and evaluating your client experience?
- What is LOOM's goal in terms of impact?
 - Are you currently measuring that? If yes, how? If no, do you plan on development methods to measure impact in the future?

Appendix F. Client Interview Guide

Introduction:

A little bit about our project. LOOM is interested in expanding access to childbirth education to a broader community of LA women. We are a group of UCLA students working with LOOM to assess the current prenatal education services available in LA. We are hoping to learn from you the different experiences you've had at LOOM and non-LOOM reproductive education classes.

We have a list of questions we would like to ask you. Feel free to ask us any questions throughout this interview, or if you would prefer not to answer a question you can let us know that as well. We will be taking notes throughout the interview, and will use the broad themes we discuss today to inform our research. Any questions before we begin?

Questions:

- How did you find out about LOOM?
- What non-LOOM reproductive education classes have you attended?
 - Where did you take them?
 - When did you take the non-LOOM classes?
 - Why did you decide to take non-LOOM classes?
 - Were they covered by insurance/how did you pay?
- What LOOM classes have you attended?
 - Who were your instructors?
 - When did you take the LOOM classes?
 - Why did you decide to take classes at LOOM?
- What differences did you notice between LOOM and non-LOOM classes?
 - How would you characterize the learning environment at LOOM and non-LOOM courses?
 - Do you feel you learned more, less, or the same amount of information from LOOM and non-LOOM classes?
 - Did you feel more empowered to make reproductive health decisions after LOOM vs. non-LOOM?
 - For future reproductive education classes, do you think you'll use LOOM or non-LOOM?

Appendix G. Educator Interview Guide

Educator #1

- Do you believe your experience as a nurse makes you more or less qualified to be a LOOM educator? How did nursing uniquely prepare you to be a childbirth educator?
- You mentioned in your survey response that size and content were differentiating factors between LOOM and hospital classes. Could you elaborate on this? (Specifically, how would that difference affect the patient/client experience?)
 - Do you know how much the hospital classes you taught cost the clients? Was any of it subsidized or influenced by a client's income?
- In your survey response, you indicated that you feel very prepared (5 out of 5) to teach different clientele than LOOM is currently serving, and also that you'd rather teach clientele at LOOM than at a community-based location. Could you elaborate on what you believe makes you feel prepared, and why you'd rather teach at LOOM?
 - When answering these questions, how would you characterize the "different clientele" that you're envisioning?

Educator #2

- Do you believe your MPH makes you more or less qualified to be a LOOM educator? How did your MPH uniquely prepared you to be a childbirth educator?
- You prefaced your characterization of clientele by saying "I can only assume they are white by looking at them"... Do you think it would be impactful/beneficial to have some sort of method by which LOOM can measure class demographics?
- You indicated that the client base at the other reproductive health organization you worked at differed significantly from that of LOOM. How did it differ?
 - Do you feel as though you had to alter your teaching methods, content, etc. to meet the needs of each unique group? If yes, how so?
 - Do you know how much clients paid for these classes, or if they were subsidized in any way?
- You indicated that you feel somewhat prepared (4 out of 5) to teach a new clientele at LOOM. What would it take to make you feel very prepared (5 out of 5)?
- You mentioned that there is more racial and sexuality diversity in the Family + Baby and Baby Care Basics classes. Compared to what? Why do you think that is?

Educator #3

- You gave us some great insight on how classes differ at a few different organizations in Los Angeles (thank you!). If you had to choose *one* organization to roll out expanded access to low-income women, which do you think would be most appropriate (LOOM, included)? Why?
- Based on your description of the different organizations, can you speak more about the similarities and differences between LOOM and A Mother's Haven?
- You responded that integration would be your preference because "folks should be aware of different lifestyles." How do you believe current clientele would benefit from

increased awareness of other lifestyles? How would a new clientele benefit from increased awareness of the lifestyles of your current clientele (if at all)?

- You also indicated that “But if [you were] experiencing a financial hardship, some of the questions from privileged parents would annoy [you].” Could you elaborate on that more?
- You mentioned that “Everyone deserves to feel what LOOM makes new parents feel” as why you’d like to see new clientele integrated into LOOM’s current offerings.
 - Can you elaborate on what that LOOM-specific feeling is?
 - What do you believe would be the biggest obstacle LOOM faces to ensuring a more diverse clientele walks away feeling that same sense of empowerment?

Appendix H. Community Stakeholder Interview Guide

Introduction:

We are UCLA students working on a project that is aiming to assess the current prenatal education services available in the area. We are partnering with a socially motivated for profit organization that is considering expanding their services to low-income women in the area. Therefore, we are trying to understand what services are currently available. Additionally, if women are in need and desire additional services, we would like to understand more about their priorities in the types of services and barriers to currently accessing such services.

Questions:

I. Assessing what is available

- What health education resources are available for pregnant women you work with?
 - Tell me about what attendance/utilization of these resources is like?
 - Describe some barriers to attendance/utilization?
 - What is the cost of each resource?
- If there are no or few resources available, what might be some reasons why?

II. Assessing interest in LOOM services

- Would women at your facility be interested in a free or low cost reproductive health education courses?
 - Prepped, The Series: 3-Week Childbirth Education Series
 - Prepped, Accelerated: One Day Childbirth Education Class
 - Baby Care Basics: Diapering. Bathing. Sleep. Gear.
 - Infant Feeding Basics: Breast. Chest. Bottles. Supplementation.
- Would women be willing to pay for these classes; if so how much?
- Would providers and staff be interested in having a referral system in place for providing these services to their clients?
 - If so, how would you this work in practice?
- Rank classes in order of most desired to least desired
- What topics/skills are most important for your clients to get out of these courses?

III. Assessing barriers to attendance

- If classes were offered at low or no cost what might be some other barriers to attending classes?
- How far are your clients willing to travel for classes?
- How might women feel if they received free or low cost services at a facility that offered full price services to other clients? (Can describe LOOM demographics here)
- Would clients be interested in a digital prenatal education option?
 - Approximately how many of your clients would you say have internet access regularly (at least 1x/week)?
 - What are barriers that your clients might face if there were a digital option?

- Are there any unique characteristics of your client population that you think may be important for implementing a health education curriculum?

IV. Conclusion

- Are there any other things you would like us know?
- If we have follow up questions, can we contact you again?

Appendix I. Ob-Gyn Interview Guide

Questions:

- What would you ideally want your patients to get from a:
 - Childbirth education course
 - Baby care basics course
 - Infant feeding course
- How useful do you think each course (scale 1-10, 10 being most useful)
 - Childbirth education course
 - Baby care basics course
 - Infant feeding course
- What are some key evidence based practices you would like to see taught in each of the following:
 - Childbirth education course
 - Baby care basics course
 - Infant feeding course
- What is to be gained from offering these courses?
- Do you think these courses have the potential to impact health literacy/knowledge?
- Do you think these courses should be optional, required, and or covered by insurance?
- What are some shortfalls or weakness of these types of courses?
- Are there any populations you think would most benefit from these courses?

Appendix J. Curriculum Review Findings

All materials in the “Prepared Package” yielded a Flesch Reading Ease score of 53.5 or higher and the Grade Level scores of each LOOM course fell below 10th grade. We observed the most dominant themes across all courses to be establishes normalness, informs decision-making, and promotes awareness (see Table 14).

Table 14. Curriculum Review Findings

Course Title	% Enrollment	Price	Duration	Document Description	Key Takeaways	Reading Ease	Grade Level	Dominant Themes
Prepped: The Series	20%	\$375	3 classes, 2.5 hours each; spans 3 weeks	Educator Slides	labor basics (stages, interventions, expectations); labor comfort techniques (medicated and unmedicated); postpartum and early parenting (newborn care and "normal" behaviors)	53.5	9th-10th	Establishes Normalness, Informs Decisionmaking
				Communication Template	class time reminders, post-class follow-up, dissemination of course materials	71.2	6th-7th	Includes Supportive Person
				Student Booklet	labor basics (stages, interventions, expectations); labor comfort techniques (medicated and unmedicated); postpartum and early parenting (newborn care and "normal" behaviors)	62.1	8th-9th	Establishes Normalness, Includes Supportive Person, Promotes Awareness, Informs Decisionmaking
Infant Feeding Basics	9%	\$175	1 class, 2 hours	Student Booklet	science of breast- and chestfeeding, different feeding techniques and strategies, partner involvement and support	68.1	7th-8th	Establishes Normalness, Informs Decisionmaking
				Educator Slides	science of breast- and chestfeeding, different feeding techniques and strategies, partner involvement and support	68.7	6th-7th	Establishes Normalness
Baby Care Basics	13%	\$175	1 class, 2 hours	Student Booklet	bathing techniques, basic hygiene, soothing, swaddling, sleep expectations, necessary "gear" postpartum	69.4	7th-8th	Establishes Normalness, Promotes Awareness
				Educator Slides	bathing techniques, basic hygiene, soothing, swaddling, sleep expectations, necessary "gear" postpartum	74.6	5th-6th	Establishes Normalness

Appendix K. Market Scan

Table 15. Market Scan Findings

Location	Description	Cost	Distance from LOOM
<i>Low-Cost/Public Options</i>			
Cedars Sinai	Childbirth Series	\$175 - \$200	3.2mi, ~17min, 30min PT
	Childbirth Series: 2-day intensive (3h/day) + tour	\$175	
	Childbirth Series: 3-day intensive (3h/day) + tour	\$200	
	Labor Comfort and Support: 3h (*discount to \$125 if enrolled in other Childbirth Series course)	\$150	
	Childbirth Refresher: 3h	\$135	
Eisner Health	Learning to breastfeed (2h)	Free	6.9 miles, 20 mins, 38 mins PT
	Cesarean Birth and VBAC options (1h)		
	Childbirth Preparation Lamaze #2 (3h) - 2 sessions		
	Daddy Boot Camp (3h)		
	Infant Feeding - 1h		
	Healthy Pregnancy and Fetal Development - 1.5h		
	Baby Care basics - 2h		
	Birth of your baby - 1.5h		
	Nutrition during pregnancy - 1h		
	Post-partum care-1h		
	Car Seat Safety - 1h		
Good Samaritan	Childbirth Readiness - First Experience (2.5hr)	Free	5.9mi, 25min, 45min PT
	Childbirth Readiness - Unmedicated (6hr)		
	Breastfeeding/Baby Care (5hr)		

	Childbirth, Breastfeeding, Baby Care (5hr)		
	Infant CPR (1hr)	\$25	
	Breastfeeding Support (1.5hr)	Free	
Kaiser Permanente	Prepared Childbirth; 1 class (2.5h)	Free	6.4mi, ~30min, 1h PT
	Breastfeeding; 1 class (2.5h)		
	Baby care basics; 1 class (2.5h)		
Hollywood Presbyterian	Childbirth Preparation: 1-day (8hr)		6.5mi, ~30min, 1h PT
UCLA BirthPlace	Childbirth Preparation: 4-two hour sessions	\$150	Reagan 7.6mi, ~35min, 1h PT
	Making Milk: Strategies for Lactation Success (1- three hour session)	\$65	
	Breastfeeding (1-three hour session)	\$65	
	Basics of Breastfeeding (1-one hour session)	\$20	
	Baby care (1-four hour session)	\$85	
	Infant CPR and Baby Safety (1-three hour session)	\$45/pp or \$75/couple	
White Memorial	Childbirth Class (1 day, 3hr or 3-day, 3h/day)		
	Breastfeeding		
	Infant CPR and Safety		
	Baby Care (3hr)		
Huntington Hospital	Childbirth preparation - Weeknight (3 days, 3h/day) or Weekend (2 days, 5h/day)	\$100	16.5mi, ~45min, ~1h20min PT
	Infant care (3 day) - Weeknight (3 days) or Weekend (2 days)	\$70	
	Breastfeeding basics (3h) - Weeknight or Weekend	\$35	
	CPR (3h) - Weeknight or Weekend	\$70	
	Baby and Me (T 1.5h)	\$12	
Private/For-Profit Options			

Babytalk LA	Expecting Parents groups (preparing home for baby, CPR, BF, PP information): 6-1 hr sessions	\$450	2.3 miles, 10 min
Pump Station & Nurtury	Supported Birth Childbirth Prep Class (stages of labor, pain techniques, c-sections, etc) - 2 classes, 3 hrs each	\$320	8.5 miles, 20 min
	One Day Childbirth Prep Class (stages of labor, pain techniques, c-sections, early postpartum) - 1 day, 6 hrs	\$350	
	Baby Care 101 (feeding, soothing, sleep, etc) - 1 day, 4 hrs or 2 days, 2.5 hrs/day	\$145 - \$155	
	Intro to Breastfeeding (expectations & strategies) - 1 day, 3 hrs	\$80	
	Pediatric CPR Safety - 1 day, 2.5 hrs	\$80	
Bini Birth	Baby Care (infant care, postpartum period)	\$160	12.3 miles, 45 mins
	Childbirth Education (similar to prepped topics) - 1 day, weekend or 4wk series	\$425-475	
	Labor Comfort Measures	\$145	
Carriage House	Childbirth Education (physical & emotional stages of pregnancy & labor, pain techniques, birth preferences, etc)	\$450	held at WMN Space - 4.1 miles, 15 mins
Digital/Apps			
Pregnancy +	only educational in that it shows size of baby over the pregnancy, otherwise just a personal diary/tracker - 23.5k downloads	free	app
The Bump	visualize baby's growth, educational articles, q&a forum - 10.8k downloads	free	app
Pregnancy Tracker - Baby Center	daily pregnancy news feed, food and nutrition ideas, health and pregnancy exercise advice, weekly checklists and reminders, and tips for dealing with morning sickness and other pregnancy symptoms - 33k downloads	free	app
Ovia Pregnancy Tracker	2000+ pregnancy articles, tips, and tools to support you throughout your pregnancy - 21.1k downloads	free	app

What to Expect - Pregnancy & Baby Tracker	personalized updates on your baby's development, expert tips, helpful articles and the latest parenting news. Join a tight-knit community of parents-to-be with due dates in the same month, and get support from an active, caring parent community - 116k downloads	free	app
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Appendix L. Full Interview Analysis

Table 16. Full Interview Analysis

Key

Text in black = pulled from LOOM staff, client, and educator interviews

Text in red = pulled from community stakeholder interviews

Bold text and/or **text highlighted yellow** = key themes across all interviews

Characteristics	Curriculum	Business Goals	Expansion	Barriers	Current Clientele	Competitors	Target Population
Community	Evidence-based	Increase interest in repro health	Partnerships (clinics/hospitals)	Geographic accessibility	Privileged	CPR, first-aid, car seats	Language
Empowerment	Normalizing*	Increase knowledge	One-track	Cost*	White	Felt more opinion-based	Economic diversity
Choice	Harm reduction model	Space for parenting people	Culturally sensitive	Timing	Predominantly female	Intimidating	Sexuality diversity
Reducing shame & guilt	Best practices	Policy impact	Change hiring help and postpartum	Distance	Mid 20s - early 40s	Welcoming	Race
Aspirational	Relatable/intimidating	Originality	Change +Baby curriculum	Location	Upper- to middle-income	Old school	Shortage of services
Inclusive/holistic	Choice*	Impact culture	Digital*	Parking	Insurance coverage	Tried & true	Lack postpartum
Trust	Teaching approach	Team buy-in	1:1	Transportation	"Wanting to have a more premium education experience"	Entrenched	Parenting class need
Empowering	<i>Opinionated</i>	B-Corp	Scholarship	Time of day	Growing LGBTQIA community	Shame-ridden	CPR
Confident	Educational*	Price setting	Prior fundraising	Length of class	Trendy	Exclusive	Doula
No shame	Non-judgemental	Referrals	Partnerships	Childcare	"Have POC, but definitely in minority"	White privilege	
Community	Privilege	Social media	Baby is universal	Language	Supportive person is almost always a spouse or partner	Intimidating	
Feminist	Inclusive	No advertising	Great educators	Literacy	"Flower-crowned, breastfeeding goddess mothers"	Lack of community	

Comfortable	Does LOOM cover all? Yes, minus epidural	Online resources	Integration better		Social justice-esque	Community-based	
Choice*	Literacy		Racially & economically diverse		Engaged	Medi-cal population	
Less nervous			Diversity in sexual orientation		Heterosexual	Preferences pushed	
Decreased fear			Educators are prepared		Cisgender	Out of pocket (\$35)	
			Mixed reviews on location preferences		First child		
			All 3 classes important		Educated		
			Around town		Fathers		
			Spanish		Middle-income		
			Evenings and Saturdays		Language/culture		
			Low-cost (\$10-20)		Spanish-speaking		
			Cultural considerations (i.e. Latinas)		Latinas		
					Medi-Cal		

Appendix M. All Criteria Alternative Matrices

We evaluated our policy options along the target population and LOOM criteria using a variety of approaches. When using similar approaches to weighting the target population and LOOM criteria, the qualitative and quantitative criteria alternative matrices provided us with similar top recommendations, leading us to the robust policy recommendation detailed in the report. Each criteria analysis approach is detailed below (see Tables 17-22).

Table 17. Qualitative Criteria Alternative Matrix

Criteria	Target Population			LOOM	
	Impact	Demand	Cost	Administrative Burden	Benefit
Sliding Scale Bilingual LOOM Classes	High	Moderate	High	Low	High
Sliding Scale English LOOM Classes	Moderate	Very Low	High	Very Low	Low
Bilingual Digital Content	Very Low	Low	Low	High	Very High
Transportation Fund for Rideshare Partnership	Low	High	Very Low	Low	Very Low
Community Educator Training Program	Very High	Very High	Moderate	High	Moderate

We analyzed the qualitative criteria alternative matrix three separate ways:

- Target Population first, LOOM second | We analyzed the policy options from the target population perspective first. Based on the top three rated options, we then evaluated those options from the LOOM perspective. This is the analysis we have included in the body of this report.

Target Population Ranking: #1 Community Educator Training Program -- #2 Transportation Fund for Rideshare Partnership -- #3 Sliding Scale Bilingual LOOM Class

LOOM Ranking: #1 Sliding Scale Bilingual LOOM Class -- #2 Community Educator Training Program -- #3 Transportation Fund for Rideshare Partnership
- LOOM first, Target Population second | We analyzed the policy options from the LOOM perspective first. Based on the top three rated options, we then evaluated those options from the target population perspective.

LOOM Ranking: #1 (tied) Bilingual Digital Content & Sliding Scale English LOOM Classes -- #2 Sliding Scale Bilingual LOOM Classes

Target Population Ranking: #1 Sliding Scale Bilingual LOOM Classes -- #2 Bilingual Digital Content-- #3 Sliding Scale English LOOM Classes
- Target Population and LOOM together | We analyzed the policy options from the target population and LOOM perspectives together.

Overall Ranking: #1 Community Educator Training Program -- #2 Transportation Fund for Rideshare Partnership -- #3 Sliding Scale Bilingual LOOM Classes

Quantitative Criteria Alternative Matrices

For all quantitative criteria alternative matrices, policy options with a higher Total Score are recommended over policy options with lower Total Scores.

Table 18. Target Population (70%) and LOOM (30%)

Criteria		Weight	Policy Options									
			Sliding Scale Bilingual LOOM Classes		Sliding Scale English LOOM Classes		Bilingual Digital Content		Transportation Fund for Rideshare Partnership		Community Educator Training Program	
			Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score
Target Population	Impact	0.4	3	1.2	2	0.8	2	0.8	2	0.8	3	1.2
	Demand	0.2	2	0.4	2	0.4	2	0.4	3	0.6	3	0.6
	Cost	0.1	1	0.1	1	0.1	2	0.2	3	0.3	2	0.2
LOOM	Administrative Burden	0.2	1	0.2	3	0.6	2	0.4	2	0.4	2	0.4
	Benefit	0.1	3	0.3	2	0.2	3	0.3	1	0.1	3	0.3
	Total Score		2.2		2.1		2.1		2.2		2.7	

Table 19. Target Population (40%) and LOOM (60%)

Criteria		Weight	Policy Options									
			Sliding Scale Bilingual LOOM Classes		Sliding Scale English LOOM Classes		Bilingual Digital Content		Transportation Fund for Rideshare Partnership		Community Educator Training Program	
			Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score
Target Population	Impact	0.1	3.0	0.3	2.0	0.2	2.0	0.2	2.0	0.2	3.0	0.3
	Demand	0.2	2.0	0.4	2.0	0.4	2.0	0.4	3.0	0.6	3.0	0.6
	Cost	0.1	1.0	0.1	1.0	0.1	2.0	0.2	3.0	0.3	2.0	0.2
LOOM	Administrative Burden	0.3	1.0	0.3	3.0	0.9	2.0	0.6	2.0	0.6	2.0	0.6
	Benefit	0.3	3.0	0.9	2.0	0.6	3.0	0.9	1.0	0.3	3.0	0.9
	Total Score		2.0		2.2		2.3		2.0		2.6	

Table 20. Equal Weights

Criteria		Weight	Policy Options									
			Sliding Scale Bilingual LOOM Classes		Sliding Scale English LOOM Classes		Bilingual Digital Content		Transportation Fund for Rideshare Partnership		Community Educator Training Program	
			Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score
Target Population	Impact	0.2	3	0.6	2	0.4	2	0.4	2	0.4	3	0.6
	Demand	0.2	2	0.4	2	0.4	2	0.4	3	0.6	3	0.6
	Cost	0.2	1	0.2	1	0.2	2	0.4	3	0.6	2	0.4
LOOM	Administrative Burden	0.2	1	0.2	3	0.6	2	0.4	2	0.4	2	0.4
	Benefit	0.2	3	0.6	2	0.4	3	0.6	1	0.2	3	0.6
	Total Score		2		2		2.2		2.2		2.6	

Table 21. Target Population (50%) and LOOM (50%) - Equal Weights

			Policy Options									
			Sliding Scale Bilingual LOOM Classes		Sliding Scale English LOOM Classes		Bilingual Digital Content		Transportation Fund for Rideshare Partnership		Community Educator Training Program	
Criteria	Weight	Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score	
Target Population	Impact	0.166	3.00	0.50	2.00	0.33	2.00	0.33	2.00	0.33	3.00	0.50
	Demand	0.166	2.00	0.33	2.00	0.33	2.00	0.33	3.00	0.50	3.00	0.50
	Cost	0.166	1.00	0.17	1.00	0.17	2.00	0.33	3.00	0.50	2.00	0.33
LOOM	Administrative Burden	0.25	1.00	0.25	3.00	0.75	2.00	0.50	2.00	0.50	2.00	0.50
	Benefit	0.25	3.00	0.75	2.00	0.50	3.00	0.75	1.00	0.25	3.00	0.75
Total Score			2.00		2.08		2.25		2.08		2.58	

Table 22. Target Population (50%) and LOOM (50%) - Varying Weights

			Policy Options									
			Sliding Scale Bilingual LOOM Classes		Sliding Scale English LOOM Classes		Bilingual Digital Content		Transportation Fund for Rideshare Partnership		Community Educator Training Program	
Criteria	Weight	Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score	Raw Score	Weighted Score	
Target Population	Impact	0.2	3.0	0.6	2.0	0.4	2.0	0.4	2.0	0.4	3.0	0.6
	Demand	0.2	2.0	0.4	2.0	0.4	2.0	0.4	3.0	0.6	3.0	0.6
	Cost	0.1	1.0	0.1	1.0	0.1	2.0	0.2	3.0	0.3	2.0	0.2
LOOM	Administrative Burden	0.4	1.0	0.4	3.0	1.2	2.0	0.8	2.0	0.8	2.0	0.8
	Benefit	0.1	3.0	0.3	2.0	0.2	3.0	0.3	1.0	0.1	3.0	0.3
Total Score			1.8		2.3		2.1		2.2		2.5	