

CareBridge Spring-Summer 2023 Business Plan: A Comprehensive Strategy for Sustainable Growth and Success in the Upcoming Season

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Description of Business- CareBridge is a novel online platform that connects expectant mothers of color to care advocates that provide support outside of physician visits.

I. PROBLEM AND MARKET SIZE

Problem Statement Underlying the Business Plan

Black The stark racial and ethnic disparities in pregnancy-related mortality rates are a troubling reality in the United States. According to the Kaiser Family Foundation, Black and Hispanic women face significantly higher pregnancy-related mortality rates, approximately three and two times higher, respectively, in comparison to White women (41.4 and 26.5 vs. 13.7 per 100,000 live births). Moreover, these disparities tend to escalate with maternal age, further underscoring the urgency of addressing the issue (Kaiser Family Foundation, 2020).

These disparities are alarming, with Black women being three times more likely to die from pregnancy-related causes than their White counterparts. Multiple factors converge to create this stark divide. Variations in the quality of healthcare, the burden of underlying chronic health conditions, structural racism, and implicit biases in the healthcare system all play a significant role (Kaiser Family Foundation, 2020). Structural racism, in particular, leads to unequal access to healthcare, and implicit biases often result in unequal treatment, both of which disproportionately affect Black and Hispanic women (Fiscella et al., 2000).

Additionally, social determinants of health play a pivotal role in creating disparities. These determinants encompass various factors, including economic, physical, and emotional health, and they prevent many individuals from racial and ethnic minority groups from having equitable opportunities for health and well-being (Centers for Disease Control and Prevention, 2020). Disparities in socioeconomic status, educational attainment, and access to resources can all contribute to these inequities in healthcare.

The financial burden of addressing these disparities is also substantial. Approximately \$200 billion is spent annually in Medicaid costs on women's health services for reproductive-age women. Despite this significant expenditure, there are still 38 million underserved women who face barriers to healthcare access. These barriers can range from negative clinician experiences to a lack of proper education on healthcare options and resources (Gottlieb et al., 2019).

The Market and Existing Solutions

The women's health market has experienced a surge in innovation in response to the compelling needs expressed by the community. Many of these solutions are characterized as point solutions, focusing on addressing specific needs or challenges faced by women during different phases of their lives. While

these point solutions undoubtedly serve valuable purposes, it's essential to recognize that women's health is a complex and interconnected web of factors. Therefore, a holistic approach to women's health is crucial in achieving the desired outcomes. This is precisely where CareBridge shines, as it aspires to build a comprehensive women's health platform that not only addresses specific needs but also takes into account the overall health and well-being of women. Furthermore, CareBridge seeks to integrate with other solutions, recognizing that women's health is influenced by various social and medical factors that evolve throughout different phases of life (Smith et al., 2020).

In the current landscape, the majority of women's health solutions are marketed as direct-to-consumer products, which often require women to pay out of pocket for access. Regrettably, this pricing structure can be prohibitive for underserved populations, making these solutions predominantly accessible to middle and high-income individuals. Low-income women, historically underprivileged in accessing healthcare services, face barriers to entry. However, CareBridge differentiates itself by offering services that are largely fully reimbursed, eliminating the financial burden for women seeking care. This accessibility approach effectively bridges the gap, making healthcare services more inclusive for a population that has historically struggled to access them (Johnson & Brown, 2021).

II. SOLUTION AND PRODUCT OFFERING

The CareBridge represents a targeted and innovative solution designed to empower minority expectant mothers as they navigate the intricate journey of pregnancy with confidence and control. At the heart of this initiative is the immediate assignment of a dedicated "Advocate" – a compassionate and knowledgeable care manager, who serves as a steadfast companion throughout the entire process. Patients, hailing from both employer and Medicaid acquisition channels, benefit from a comprehensive support system.

Throughout the pregnancy, the Advocate engages in weekly meetings with the expectant mother, collaboratively developing a personalized patient plan. This not only ensures a structured approach but also holds the patient accountable for essential tasks such as medication adherence and attendance at crucial doctor's appointments. The Advocate plays a pivotal role in bridging communication gaps with healthcare providers to guarantee that all patient queries are met with timely and comprehensive responses.

One of the key differentiators of CareBridge is its round-the-clock availability, enabling the on-call patient advocate to address immediate concerns and inquiries, providing peace of mind to expectant mothers. The support extends well beyond pregnancy, with the Advocate conducting weekly follow-ups

during the critical initial three weeks post-birth. After this period, the torch is passed to a specialized pediatric advocate who conducts monthly check-ins during the child's first year.

To further enhance positive outcomes in the post-birth phase, CareBridge extends its commitment by crafting an action plan and a comprehensive resource guide for both the patient and her child during the formative early years. CareBridge is not just a tool; it's a partner in the journey to ensuring the health and well-being of both mother and child.

III. PRODUCT VALIDATION

This is a three-arm, parallel, survey design conducted to comprehensively aggregate the needs and technology adoption analysis of clinicians, informal caregivers/ partners, and minority expectant mothers. The study was organized by the CareBridge team alongside lead partners from MIT Innovation Initiative, Advancing Innovation in Dermatology, and BostonLanding.us.

The study duration extended from December 2022 to February 2023 and collected 356 responses from the 3 responder groups. 3 separate surveys were developed on the Qualtrics platform for each responder group (see Table 1, Table 2, and Table 3). Each survey reportedly took responders from 5-10 minutes to complete. Each responder group was also provided links to a brief offering write-up on CareBridge along with links to the 3 most recent key news articles on BIPOC expectant mother oximeter outcomes and leading support tools.

1) Arm 1: Healthcare Clinicians

Healthcare clinicians were primarily sourced from Massachusetts General Hospital, Boston's Children's Hospital, CHOP, Penn Medicine/ Princeton Health, Mayo Clinic Health Systems, and some additional stand-alone clinics. Healthcare clinicians were surveyed to understand first-hand recognition of the targeted problem and issues managing care for expectant mothers, specifically those from minority backgrounds. 76% of the clinicians reported that roughly 3x-4x of their minority patients had difficulty keeping to their care plan compared to white expectant mothers. 84% also reported that the minority expectant mother group had 2x-5x more difficulty attending appointments. 88% of clinicians reported that they see a clinical need for some third party support tool for this underserved community. 72%, and 67% of clinicians additionally reported that CareBridge could save their practice time and money, respectively. Dr. Bradley from Mass General Hospital, additionally commented that "A tool such as CareBridge has the ability to support these minority patients who are falling through the care gap in ways that clinicians are unable to and family members are untrained to do.

TABLE I
HEALTHCARE
CLINICIANS
SURVEY ON QUALTRICS
(N=52)

Question Number	Question	Response Type	Responses
1	How many more times minority women than white women do you notice having difficulty keeping to their care plans?	0x, 1x, 2x, 3x, 4x, 5x	0x: 3% 1x- 4x: 86% 5x: 11%

2	How many more times minority women than white women do you notice having difficulty attending appointments?	0x, 1x, 2x, 3x, 4x, 5x	0x: 11% 1x- 4x: 80% 5x: 9%
3	Do you see a clinical need for a third party, beyond family caregivers, to intervene in supporting minority women during pregnancy?	Yes/ No	Yes: 88% No: 12%
4	Do you see the CareBridge offering saving you time during your practice?	Yes/ No	Yes: 72% No: 28%
5	Do you see the CareBridge offering saving you money due to unnecessary costs?	Yes/ No	Yes: 67% No: 33%

2) Arm 2: Informal Caregivers/ Partners

Informal caregivers and partners play a crucial role in supporting expectant mothers, often without formal training. This survey sought to better understand the challenges they face and how they perceive the need for improved care workflows. A significant majority, 76%, indicated they were aware of the challenges and needs of expectant mothers during pregnancy and early motherhood. Additionally, 61% reported encountering difficulties in coordinating and managing the expectant mother's healthcare needs and appointments. These findings highlight the critical role that informal caregivers play in the support system for expectant mothers and suggest that there is a clear need for improved tools and resources. Furthermore, 86% of respondents recognized that expectant mothers from minority backgrounds face unique challenges during pregnancy, reinforcing the importance of tailored support. An overwhelming 89% of caregivers expressed that they considered having a dedicated advocate who offers weekly support, medication adherence assistance, and appointment coordination to be beneficial, underscoring the potential value of a service like CareBridge in their eyes. The open-ended responses regarding specific roles and communication methods are being used for internal development to fine-tune the CareBridge program to align better with the needs and preferences of informal caregivers and family members. Some of the compelling responses that further validate some need for CareBridge are "I use google to try and search for pregnancy information and I ask community members for other resources. It's hard to find resources because there is a lot of information on the web and I don't know what to trust." and "I try my best to attend doctor's appointments with her, so I stay in the loop by talking to the doctors. We try to update a shared document with all the important medical information. But I know I still miss information because she forgets to tell me and I get very busy and miss appointments."

TABLE 2
INFORMAL CAREGIVERS
SURVEY ON QUALTRICS
(N=165)

Question Number	Question	Response Type	Responses
1	Are you aware of the challenges and needs of the expectant mother during her pregnancy and the early stages of motherhood?	Yes/ No	Yes: 76% No: 24%
2	Have you encountered any difficulties in coordinating or managing the expectant mother's healthcare needs and appointments?	Yes/ No	Yes: 61% No: 39%
3	Do you believe that expectant mothers from minority backgrounds face unique challenges during pregnancy that require additional support?	Yes/ No	Yes: 86% No: 14%

4	Would you consider it beneficial for the expectant mother to have a dedicated advocate who meets with her weekly, helps with medication adherence, and coordinates doctor's appointments?	Yes/ No	Yes: 89% No: 11%
5	What specific roles or tasks do you typically perform as an informal caregiver or family member during this period?	Open Ended	Responses used for internal development
6	How do you currently stay informed about the expectant mother's health and pregnancy progress?	Open Ended	Responses used for internal development

3) Arm 3: Minority Expectant Mothers

Through our discussions with patients in the people of color (POC) category, primarily sourced from clinician referrals and medical mailing lists in Boston, Philadelphia, and New York City, we gained valuable insights into their healthcare experiences. A total of 129 responses were collected, with 42% of responders hailing from low socioeconomic backgrounds. It was striking to find that a significant 84% of this community mentioned experiencing challenges in managing their care during pregnancy. Moreover, 70% of respondents felt there was a lack of culturally competent support tools available to them for managing their pregnancy and postnatal care. A noteworthy 75% revealed that they found it difficult to locate and access resources independently to support their pregnancy and early motherhood journey as people of color. The survey further revealed that 97% of respondents expressed concern for their outcomes or the outcomes of others based on the information provided about the state of care for minority pregnant women. Interestingly, despite the challenges, only 51% mentioned receiving additional support or resources from their healthcare providers to address the unique needs of expectant mothers who are people of color. However, an overwhelming 91% of respondents expressed interest in having a dedicated advocate who could provide weekly support, assist with medication adherence, and coordinate doctor's appointments, taking into account their unique needs as people of color. These findings underscore the pressing need for a solution like CareBridge to bridge the gaps in care and support for this underserved population, as well as their strong willingness to adopt such a service..

TABLE 3
POC PATIENTS
SURVEY ON QUALTRICS
(N=139)

Question Number	Question	Response Type	Responses
1	Have you experienced challenges in managing your healthcare and care coordination during your pregnancy as a person of color?	Yes/ No	Yes: 84% No: 16%
2	Do you feel that there is a lack of culturally competent support tools available to you for managing your pregnancy and postnatal care?	Yes/ No	Yes: 70% No: 30%
3	Have you found it difficult to locate and access resources on your own to support your pregnancy and early motherhood journey as a person of color?	Yes/No	Yes: 75% No: 25%
4	Based on the information provided on the state of care for minority pregnant women, are you concerned for your outcomes or others'?	Select Multiple	97% chose 'concerned'
5	Are you currently receiving any additional support or resources from your healthcare providers to address the unique needs of	Yes/ No	Yes: 51% No: 49%

	expectant mothers who are people of color?		
6	Would you be interested in a dedicated advocate who can meet with you weekly, help with medication adherence, and coordinate doctor's appointments, considering your unique needs as a person of color?	Yes/ No	Yes: 91% No: 9%

IV. TEAM AND ADVISORY BOARD

CareBridge is powered by a dynamic and diverse team that brings together talent from various academic backgrounds and professional experiences to make a meaningful social impact. Udgita Pamidigantam, a high school junior simultaneously pursuing her associate degree in environmental sciences, brings her expertise in robotics and policy-centered work. She has garnered recognition at state and national levels in robotics competitions and has played a pivotal role in driving key health law publications to support underserved populations. Ujjayi Pamidigantam, a second-year student in the Life Sciences and Management Dual Degree Program, has a strong background in med-tech devices, having honed her skills in medical hackathons and previously launched the health-equity-focused venture, Equimeter, which successfully raised \$50K in funding through academic grants and additional support. Sofia Steinberger, a first-year MBA student, leverages her industry experience from Goldman Sachs to lead the legal and strategic aspects of the team. Chelsea Perry, also a first-year MBA student, with a background in platform development, has taken the helm in technology development. Alongside this core team, we have assembled a dedicated group of advisors and stakeholders who share our passion and continue to drive our solution forward.

Over the past year, we've engaged in conversations with approximately 95 industry professionals who have contributed greatly to building our advisory board. Among these 95 individuals, 58 of them related to us since our collaboration with the MIT Idea2 program. Notably, we've had insightful discussions with key figures like Dr. Eric Fleeger, Co-founder of the HelpSteps and TriVox platforms, a longstanding influencer in the health equity space. We've also had the privilege of connecting with Dr. Jason Hwang and Dr. Cindy Tsai, both affiliated with Harvard Medical School, who bring a unique perspective as physicians and entrepreneurs in the health equity field and are now dedicated supporters and advocates of the CareBridge platform. Engaging with experts from prestigious institutions such as MassGen Hospital, Harvard, UPenn, and MIT has enriched our understanding of the challenges faced by BIPOC expectant mothers and underscored the significant potential impact that CareBridge can offer. Through conversations with BIPOC expectant mothers and prospective patient advocates, we are more prepared than ever to address these challenges and bridge the information gaps within this community, striving to enhance the flow of essential information.

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