From Pregnancy To Motherhood:

A Personalized Wellbeing Model to Improve the Maternal Health Outcomes of Black and Brown Women
Maternal health disparities for Black and brown women in the U.S. are both unacceptable and preventable.

U.S. rates of pregnancy complications, including dying from childbirth, for Black women are among the worst in developed nations and two to three times higher than for white women. Additionally, both Black and brown women face alarming rates of preterm births.

Dying in childbirth, facing a life threatening complication, or giving birth prematurely, can have a traumatic, generational impact on both women and their families’ social-emotional and financial standing.

In order to address this inequity, the Business Innovation Factory (BIF) is prototyping a new personalized wellbeing model with Black and brown women to support them in improving their maternal health outcomes.
The key drivers of poor maternal health outcomes in the U.S. healthcare system are becoming better recognized.

<table>
<thead>
<tr>
<th>Institutions are at the center of the model, not individuals</th>
<th>A culture of distrust and bias between patients and providers</th>
<th>A society that doesn’t value the lived experiences of black and brown women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimal patient agency and growing frustration with a poor experience and escalating costs</td>
<td>Lack of integration between clinical care and social services that doesn’t address the individual holistically</td>
<td>Over-reliance on medical expertise with little consideration for social determinants</td>
</tr>
</tbody>
</table>
The solution isn’t about just providing treatment, it’s about enabling agency and support.

It isn’t about point solutions offering incremental change - it’s about transformation.

The solution is a new model, prioritizing wellbeing.
OUR PMxD HYPOTHESIS: A PERSONALIZED WELLBEING MODEL WILL LEAD TO IMPROVED MATERNAL HEALTH OUTCOMES

<table>
<thead>
<tr>
<th>WE BELIEVE THAT IF WE...</th>
<th>THEN...</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Focus on wellbeing and provide seamless integration of care when needed</td>
<td>● Women will be empowered in their pregnancy journey to take earlier necessary actions, when needed</td>
</tr>
<tr>
<td>● Center women in the model and equip them with what they need to lead a healthy pregnancy</td>
<td>● Women will have improved heart and mental health</td>
</tr>
<tr>
<td></td>
<td>● Women will have increased agency and confidence to change outcomes</td>
</tr>
<tr>
<td></td>
<td>● Increased equity in care will reduce racial disparities in maternal health outcomes</td>
</tr>
</tbody>
</table>
A NEW MATERNAL HEALTH MODEL IS BASED ON THE FOUNDATION OF UNDERSTANDING THE VOICE AND EXPERIENCE OF WOMEN

“And I feel like it’s helping me push myself even though she’s not like ‘hey, you better do what you said you were going to do.’ She’s not doing that. It’s having someone who’s there who’s saying “Hey, how’s it going?”

Mother in Dallas

“Every concern was a concern. Pregnancy nearly killed me. I was worried about blood pressure, preeclampsia, and gestational diabetes during many of my pregnancies”

Mother in Cincinnati

“And so we are a nation not only divided by race but by socioeconomic status... and nothing’s gonna ever change that, but it can be better and you have to invest across the board... it’s the exclusion that has caused a lot of disparity.”

Mother in Plano

“Not all doctors are so willing to put power back in your hands. Because, you know, power is a funny thing. But these doctors were, and they empowered me to take ownership of my health care and my self care for me and my family.”

Mother in Philadelphia
70 projects over 14 years at BIF have highlighted must-have superpowers of a personalized wellbeing model

- Unleashing personal agency
- Understanding patterns of wellness
- Activating personal networks of wellbeing
- Integrating diversity, equity & inclusion
A real-world prototype, starting in Rhode Island, that co-creates opportunities with 25 Black and brown pregnant women to access the information, practices, and support needed to achieve better maternal health outcomes for themselves and their babies.

Unleashing Personal Agency
Empowering women to take charge of her health and lead her pregnancy, with the confidence that she can influence better outcomes.

Integrating Diversity, Equity, & Inclusion
Catalyzing a culture of respect and honest communication, with personal reflection and celebration of what makes each woman unique.

Understanding Patterns of Wellness
Providing direct access to a real-time flow of information relevant to a woman's health and wellbeing, and her pregnancy.

Activating Personal Networks of Wellbeing
Gathering a small group of trusted individuals to support and affirm her maternal health goals.

Our Commitment:
We promise to support you during this transformational time to improve the health and wellbeing of you and your baby.
**CORE CAPABILITY:**

**UNLEASHING PERSONAL AGENCY**

Empowering women to take charge of her health and lead her pregnancy, with the confidence that she can influence better outcomes.

### PROCESS

<table>
<thead>
<tr>
<th>INPUT</th>
<th>KEY ACTIVITIES</th>
<th>OUTPUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prototype participants motivated to improve personal agency</td>
<td>Build self awareness and confidence to improve agency</td>
<td>Ongoing agency measurement</td>
</tr>
<tr>
<td></td>
<td>Establish personal agency baseline and goals</td>
<td>Ongoing in-person and virtual storytelling and engagement</td>
</tr>
</tbody>
</table>

### PEOPLE

- 25 women participants at the core
- Prototype Core Support Roles
  - Wellbeing program delivery and navigation
  - Clinical care integration
  - Prototype enablement
  - Subject matter experts

### TOOLS

- Agency measurement and monitoring
- Expressive arts programming
- Storytelling enablement, capture and sharing
- Network engagement
**CORE CAPABILITY:**

**UNDERSTANDING PATTERNS OF WELLNESS**

Providing direct access to a real-time flow of information relevant to her health and wellbeing, and her pregnancy.

**INPUT**

Motivation to monitor and act upon relevant personalized wellbeing data

**PROCESS**

Identifying relevant personal patterns of wellbeing and data sources

Accessing actionable data

Monitoring and acting on relevant data early

**OUTPUT**

Personalized data monitoring enabling timely action and intervention

**PEOPLE**

25 women participants at the core

Data modeler and IT architect

Permission-based data sharing with appropriate prototype participants

Navigation support as needed

**TOOLS**

Patterns of maternal health and wellbeing secondary data

Personalized data measurement, tracking and sharing

Personalized data dashboard

Smart alerts and reminders
**CORE CAPABILITY:**

**ACTIVATING PERSONAL NETWORKS OF WELLBEING**

Gathering a small group of trusted individuals to support and affirm her maternal health goals.

**PROCESS**

**INPUT**
- Prototype participants who recognize that wellbeing is collaborative

**KEY ACTIVITIES**
- Establish network goals and selection criteria
- Populate wellbeing network
- Engage and adjust network throughout prototype in achieving goals

**OUTPUT**
- A personal network committed to help participants achieve better maternal health outcomes

**PEOPLE**
- 25 women participants at the core
- Network members curated by each woman
- Network enablers/navigation as needed

**TOOLS**
- Network selection criteria and recruitment
- Network enrollment, communication, engagement and sharing platform
- Data sharing and integration
- Network mapping
**CORE CAPABILITY:**

**INTEGRATING DIVERSITY, EQUITY, & INCLUSION**

Catalyzing a culture of respect and honest communication, with personal reflection and celebration of what makes each woman unique.

### PROCESS

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<tr>
<th>INPUT</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Willingness to build consciousness around DEI</td>
<td>Facilitate experiential learning on race, diversity, equity and inclusion</td>
<td>Track ongoing progress in strengthening responsiveness</td>
</tr>
<tr>
<td></td>
<td>Develop process to learn and practice cultural responsiveness</td>
<td>Increase in prototype interactions that acknowledges intersectionality</td>
</tr>
<tr>
<td></td>
<td>Apply new mindsets and practices to prototype</td>
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<td></td>
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</tbody>
</table>

### PEOPLE

- 25 women participants at the core
- DEI facilitator and coaching roles
- All prototype and network participants engaged

### TOOLS

- 4 I’s of Oppression Framework
- Everyday Discrimination Scale
- Training Materials/Guides/Frameworks to Follow
- Protocols around behaviors, processes
# MY JOURNEY AS A PREGNANT MOM IN THE PMxD MATERNAL HEALTH PROTOTYPE

<table>
<thead>
<tr>
<th>Entering The Experience</th>
<th>Building Trust &amp; Setting Goals</th>
<th>Engaging In My Pregnancy</th>
<th>Giving Birth To My Baby</th>
<th>Moving Forward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hearing about the prototype from a trusted advisor or friend</td>
<td>Meeting other women like me</td>
<td>Working towards my personal goals</td>
<td>Experiencing a seamless transition into a clinical setting</td>
<td>Celebrating life</td>
</tr>
<tr>
<td>Learning more about an opportunity to improve my own maternal health and wellbeing</td>
<td>Becoming familiar with the blended (in person and online) experience and tools</td>
<td>Monitoring and tracking my patterns of wellness to identify and act on early warning signs</td>
<td>Believing in my own strength</td>
<td>Continuing to monitor health and respond to signs</td>
</tr>
<tr>
<td>Deciding this experience would be right for me and committing to participate</td>
<td>Curating a personal wellbeing network</td>
<td>Interacting regularly with my personal wellbeing network</td>
<td>Implementing my birth plan</td>
<td>Paying close attention during transitions home for both me and my baby</td>
</tr>
<tr>
<td>Celebrating myself by enrolling in the PMxD Maternal Health Prototype</td>
<td>Building trust and relationships through initial prototype interactions</td>
<td>Reflecting on my life and embracing the journey</td>
<td>Engaging my caregivers and support system if I experience any warning signs</td>
<td>Taking time to reflect and adjust to my new life</td>
</tr>
<tr>
<td>Setting personal maternal wellbeing goals</td>
<td></td>
<td></td>
<td></td>
<td>Resetting goals to continue healthy habits</td>
</tr>
</tbody>
</table>
TECHNOLOGY IN SERVICE OF PEOPLE

The accessibility of technology, when coupled with human centered design, represent a unique opportunity for social system innovation. The PMxD Maternal Healthcare Prototype will incorporate technology to help women in the prototype achieve better personal maternal health and wellbeing outcomes.

**UNLEASHING PERSONAL AGENCY**
- Goal Setting & Tracking tools
- Digital Assistant
- Personalized Guidance & Support Network

**UNDERSTANDING PATTERNS OF WELLNESS**
- Access to personalized & curated information (Mental, Physical and Pregnancy Health)
- Personalized Alerts and notifications
- Planning Tools

**ACTIVATING PERSONAL NETWORKS OF WELLBEING**
- Chat tools
- Shared schedules & goal setting
- Appropriate Information Sharing
- Network Mapper

**INTEGRATING DIVERSITY, EQUITY, & INCLUSION**
- Measure and track DEI consciousness
- Enhance culturally responsive interactions
- Share DEI practices
### PROTOTYPE WORK PLAN

**June 2019-August 2019**  
**Prototype Mobilization**  
Develop PMxD Maternal Health Model and Prototype Plan.  
Discussions with local and national potential collaboration partners.  
Develop key roles, tools, and activities required for the maternal health prototype.  
Develop and map skills and experience to fill key prototype roles.  
Develop data model and enabling technology plan.  
Establish fundraising pipeline.  

**Build Prototype**  
Source core capability components (people, process, technology) of the prototype.  
Develop prototype tools and technology platform for engagement with users.  
Recruit and train individuals for required roles.  
Conduct prototype run-throughs prior to launching enrollment.  
Finalize prototype and support materials prior to launching enrollment.  

**Enrollment Period**  
Initiate outreach and enrollment process.  
Work with community partners to host local community convenings to build awareness and engagement.  
Enable community partners to support recruitment process.  
Host community open houses to talk with interested women individually about the prototype.  
Recruitment and enrollment will be ongoing with staggered starts as women enroll.  

**Run Prototype**  
Prototype begins as individual women enroll.  
Onboard individuals with orientation, enabling technology, and development of personal wellbeing plans.  
Develop and engage with personal wellbeing networks.  
Engage with in-person and virtual wellbeing and care path.  
Hold planned monthly group experiences to build agency and cultural respect.  

**September 2019-August 2020**  
**End of Initial Phase**  
Assess prototype performance and outcomes at both individual prototype participant and group level.  
Develop improvement, sustainability, and scaling plans for the PMxD Maternal Health Model.  
Share individual journey and prototype experience stories and key findings with broader networks.  
Incorporate learnings from the prototype into the PMxD Maternal Health Model.
PROTOTYPE ADVISORY TEAM

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Health Care Alliance, President
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NEXT STEPS

BIF is currently in the mobilization phase for the PMxD Maternal Health Prototype moving towards building out the prototype in the real world. We’re moving forward around the following tasks:

- Talking with potential community partners interested in engaging in and supporting the prototype
- Clarifying key prototype roles and required skills to fulfill them
- Building a data model to measure and track prototype progress and outcomes
- Planning a prototype technology platform
- Detailing the activities, structure, and back-end processes of the prototype experience
- Building a fundraising pipeline to support the prototype
Business Innovation Factory (BIF) has launched a self-initiated project to create a transformational personalized medicine business model — Personalized Medicine by Design (PMxD). A model that helps individuals take charge of their own health and wellbeing.

www.personalizedmedicinebydesign.com

Business Innovation Factory (BIF)

Founded in 2005 with the mission to enable business model transformation, BIF works in areas of high impact; healthcare, education, and public services. BIF believes that business model innovation is on the critical path to transforming our important social systems. Tweaking our existing models and systems won’t work. BIF imagines, prototypes, and tests new models and systems in the real world.

www.businessinnovationfactory.com

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