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# COVID-19 and the Momentum for Better Maternal Health Care

Obstetrics COVID Innovation Collaborative

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DELIVERY DECISIONS INITIATIVE



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# Executive Summary

## The Challenge

The COVID-19 pandemic has put the limitations of our health system into stark relief. It has also created a new set of extraordinary challenges.

Across the country, clinicians are responding to rising COVID-19 cases amid shifting guidance, strained capacity, and personal risk. Hospitals have had to restrict visitors, postpone scheduled appointments and surgeries, and take other drastic measures that have left many people underserved. As the nation confronts a “third wave” of infections, Black, Indigenous, and People of Color have been disproportionately impacted, highlighting the ways in which structural and systemic racism affect who is most exposed to the virus. Many living in the United States are frightened and frustrated.

Leaders of health systems are facing wrenching decisions to keep their communities and their staff safe, and maintaining the status quo is not an option. Bold, anti-racist, and inclusive leadership is required to drive progress. And the trustworthiness of our health systems hangs in the balance.

The wellbeing of pregnant and birthing people has emerged as both a leading indicator and a bellwether for the wellbeing of all of us, especially those who are most vulnerable. Nearly every societal injustice is evident in the health of those who are pregnant, from racial inequities to geographic inequities. Before the pandemic, the state of maternal health in the United States was already concerning. People living in the United States today are 50% more likely to die in childbirth than their own mothers were, risks that are even starker for Black and Indigenous people. Latinx people, immigrants, those living in rural areas of the United States, and many other groups also suffer disproportionately during pregnancy and birth.

At the behest of Congress, in January 2020 the National Academies of Science, Engineering and Medicine (NASEM) produced a consensus committee report on Birth Settings in America that articulated the ways the current design of our maternity system “is fraught with **inequities** in access and quality and high costs, and there is growing recognition of the **mismatch** between the collective expectations of the care and support people giving birth deserve and what they actually receive.”

The ways the COVID-19 pandemic has disrupted the care of pregnant people, and the ways health systems have been responding, offer important lessons for health system leaders to both mitigate the immediate harms and work toward the long-term opportunities for equitable systems improvement as highlighted in the NASEM report. This report translates these lessons into actionable recommendations for investing in innovations that have promise for sustained impact.

## Our Approach

With an eye towards generalizable lessons, Ariadne Labs convened clinicians and people who recently gave birth, as well as health care administrators, researchers, and others from across the United States, to characterize how health systems and communities have responded to challenges in maternity care during the COVID-19 pandemic. Our goal was to provide health system leaders and policymakers with a better understanding of what investments are likely to be most impactful in achieving their missions and what changes are likely to be sustained beyond the COVID-19 pandemic.

Over four segmented sessions, we virtually convened 244 obstetricians, midwives, registered nurses, doulas, health administrators, investors, community leaders and people who gave birth. Participants joined from 37 US states in addition to the UK, with 63% of participants joining from urban areas, 27% joining from suburban areas, and 10% joining from rural areas. With their combined insights, we aimed to assess shared challenges in providing care, as well as emerging innovations to meeting those challenges.

We focused our attention on changes to the market forces of supply and demand in order to collectively identify innovations with “momentum” for sustained impact. We aim to make recommendations that mitigate regressions in care caused by the pandemic as well as those that provide opportunities for progress. We prioritize approaches with potential to eliminate systemic racism, geographic inequities, and anti-Blackness in care.

## Our Values

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Systemic inequities underlie all of the challenges this report and our research aim to address. Therefore, rather than treating equity as a separate need, we embedded this focus throughout the process. In bringing people together across professional perspectives and intersectional identities, we brought forward creativity by creating safe and inclusive spaces for discussions. To do this we were particularly attentive to the need to be inclusive of Black and Indigenous People of Color (BIPOC), Asian-Americans and Latinx people, LGBTQIA+ people, neurodiverse individuals, and people of diverse ages, socio-economic status, professional disciplines, and walks of life. In the discussions, we respected lived and embodied experience, alongside technical expertise. In naming and unpacking painful injustices such as racism and anti-Blackness, we recognized that impact matters, regardless of intent.



## Our Recommendations

From listening to the voices of those on the frontlines of delivering and receiving care for childbirth during COVID-19, we recommend that leaders of health systems consider a three step approach to improving care:

- 1) Focus investments to address priority challenges driving emerging trends in the marketplace,
- 2) Identify innovations that meet the needs of your community, critical gaps in care, and assets of your organization, and
- 3) “Accelerate” the existing momentum by reinforcing the market tradewinds.

These recommendations were based upon the three top challenges that participants across all roles (birthing people, doulas, nurses, midwives, physicians, and healthcare administrators) prioritized as critical to address during and beyond the COVID-19 pandemic: **continuum of care & support, family & support, and patient-provider relationships.**

Many of the promising innovations during the pandemic that participants surfaced appear positioned for sustainable change because they address multiple, if not all three, of these challenges at once.

Collectively, the innovations fell into six categories:

- 1) Leverage Virtual Access
- 2) Build Trust & Enhance Communication
- 3) Customize Care Planning & Support
- 4) Coordinate Existing Services & Needs
- 5) Adapt Roles & Responsibilities
- 6) Utilize Alternate Care Settings

These innovations both align with long-term recommendations for improving maternity care systems and fall within a current window of opportunity to implement during the COVID-19 pandemic. Health system leaders can further support the momentum created by this window of opportunity through reinforcing the “demand” among birthing people or health system stakeholders and the “supply” of enabling factors to promote successful and sustainable implementation.

## Our Hope

By revealing the gaps and injustices in our health systems, the COVID-19 pandemic has accelerated advocacy for change and required providers to not only adapt but innovate. There is a window of opportunity to create a higher performing, more equitable, and anti-racist health system by investing wisely in innovations with existing momentum that are likely to be sustained in the years to come. This report is intended to provide a road map for health systems leaders to select where to invest in the near term to help bring these systems changes into reality.

# 1. Motivation

Before the COVID-19 pandemic, the state of maternal health among people living in the United States was deeply concerning and among the leading indicators of eroding wellness in our country. People living in the United States today are 50% more likely to die in childbirth than their own mothers were, risks that are even starker for Black and Indigenous people.<sup>2</sup> Latinx people, immigrants, those living in rural areas, and many other groups also suffer disproportionately during pregnancy and birth.<sup>3</sup>

The pandemic has revealed the degree to which the wellbeing of pregnant people<sup>4</sup> is a bellwether for the wellbeing of all of us, especially those who are most vulnerable. Nearly every societal injustice is evident in the health of those who are pregnant, from racial to geographic inequities. As the nation prepares to confront a “third wave” of infections, the challenges faced by pregnant people and the ways health systems have been responding offer important lessons for health system leaders.

At the behest of Congress, in January 2020 the National Academies of Science, Engineering and Medicine (NASEM) produced a consensus committee report on Birth Settings in America that articulated the ways the current design of our maternity system “is fraught with **inequities** in access and quality and high costs, and there is growing recognition of the **mismatch** between the collective expectations of the care and support people giving birth deserve and what they actually receive.”<sup>5</sup> It also provides the set of evidence-based solutions necessary for progress.

The COVID-19 pandemic has put the limitations of this system into stark relief, while also creating new challenges. Across the country, clinicians are responding to rising COVID-19 cases amid shifting data, strained capacity, and personal risk. Scheduled surgical procedures along with elective procedures were immediately cancelled. Hospitals closed their doors to all non-essential foot traffic. Employees were redeployed and many transitioned to remote work. At the same time, pregnant Black, Indigenous and Latinx people are disproportionately bearing the burden of infection, negative outcomes, and disrupted services.<sup>6</sup> Health system leaders are seeking insights on how to best protect their staff as well as the patients and communities they serve. Failures to organize a well-coordinated response and

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<sup>2</sup> Shah N. A soaring maternal mortality rate: What does it mean for you? Harvard Health Publishing website. [https://www.health.harvard.edu/blog/a-soaring-maternal-mortality-rate-what-does-it-mean-for-you-2018101614914?utm\\_content=buffer6eca6&utm\\_medium=social&utm\\_source=twitter&utm\\_campaign=buffer](https://www.health.harvard.edu/blog/a-soaring-maternal-mortality-rate-what-does-it-mean-for-you-2018101614914?utm_content=buffer6eca6&utm_medium=social&utm_source=twitter&utm_campaign=buffer). Published October 16, 2018. Accessed November 6, 2020.

<sup>3</sup> Taylor J, Novoa C, Hamm K, Phadke S. Eliminating Racial Disparities in Maternal and Infant Mortality. Center for American Progress website. <https://www.americanprogress.org/issues/women/reports/2019/05/02/469186/eliminating-racial-disparities-maternal-infant-mortality/>. Published May 2, 2019. Accessed November 6, 2020.

<sup>4</sup> We use the gender-neutral language “pregnant people” and “birthing people” to be inclusive and affirming across gender identities (cis women, trans men, and people who are non-binary or gender-fluid) and intersex people.

<sup>5</sup> Scrimshaw SC, Backes EP, ed. *Birth Settings in America: Improving Outcomes, Quality, Access, and Choice*. Washington, DC: The National Academies Press; 2020. <https://doi.org/10.17226/25636>. Accessed November 6, 2020.

<sup>6</sup> APM Research Lab Staff. The Color of Coronavirus: COVID-19 Deaths by Race and Ethnicity in the U.S. APM Research Lab website. <https://www.apmresearchlab.org/covid/deaths-by-race>. Published October 15, 2020. Accessed November 6, 2020.

make timely investments have already cost the United States hundreds of thousands of lives and billions of dollars.

These needs have significantly altered the context for providing care, as well as the supply and demand for both new and long sought innovations, such as those highlighted in the NASEM report. Our recommendations draw from a synthesis of these market dynamics in order to provide leaders with guidance on which near-term investments are likely to be both impactful and sustainable.

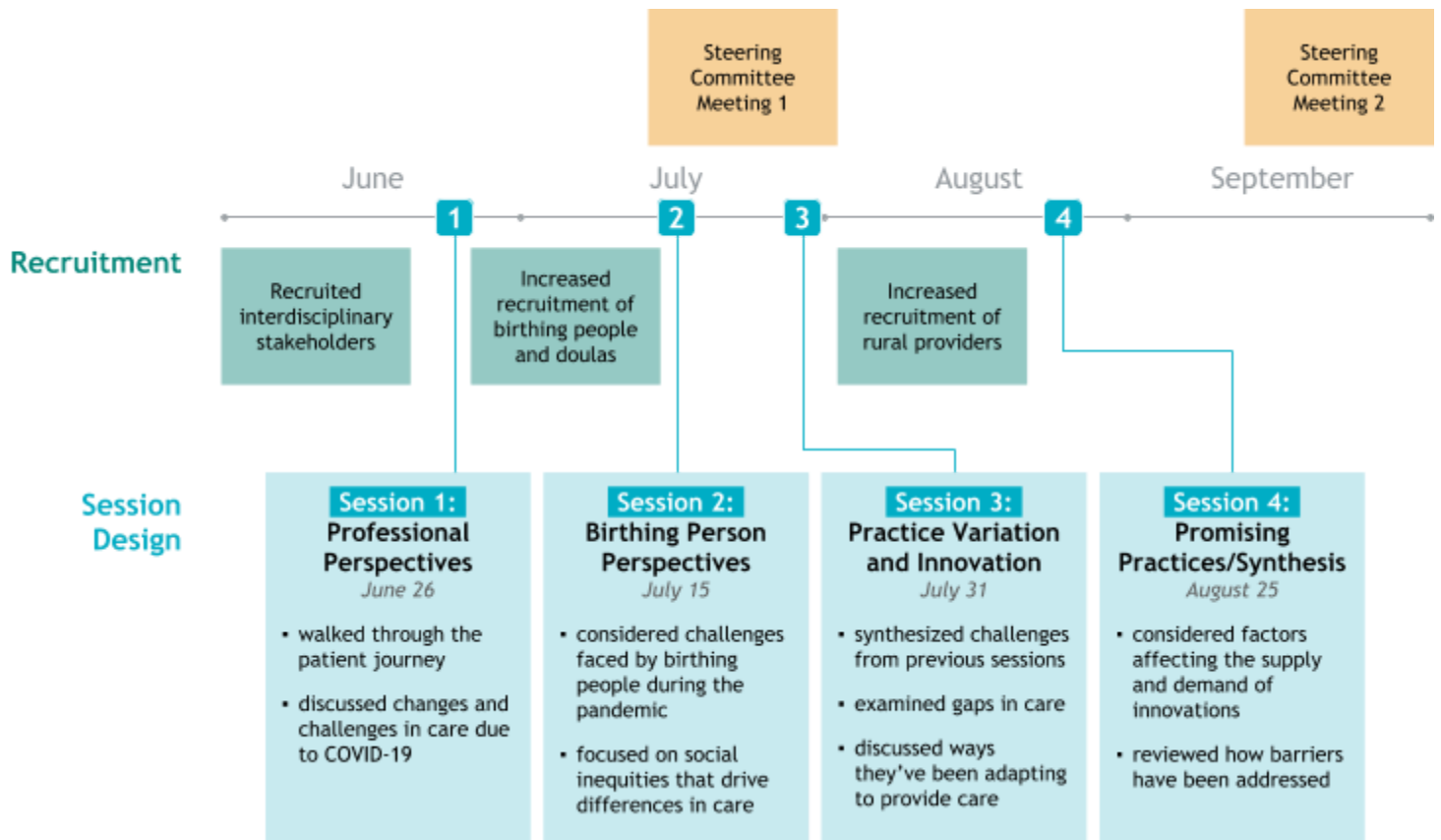
This document reviews

- 1) our motivation,
- 2) our process of consulting clinicians, health system leaders, birthing people, and other stakeholders to gather information on these market dynamics,
- 3) the shared challenges we identified, organized into a set of “prioritized problems,” that required focused investment,
- 4) key innovations with immediate impact and momentum to be sustained beyond the pandemic,
- 5) suggestions for each type of innovation on how health systems might accelerate this momentum, and
- 6) opportunities ahead.

We hope this report will be a resource for anyone involved in delivering maternity care, but we have focused our recommendations on those system leaders having to make difficult decisions about where to invest time and resources on adapting to these changing circumstances and delivering the best care for their communities.

## 2. Methodology

We convened an interdisciplinary group of maternal health stakeholders in a series of virtual dialogues to identify challenges and innovations in maternity care during COVID-19 and to develop recommendations on which strategies may be most scalable, impactful, and equitable to promote long-term systems improvements. Through four sessions, we focused on the professional and birthing person's experience, variation in practices related to the pandemic, and potential innovations.



### 2.1 Session Structure & Design

Community members, clinicians, healthcare administrators, and leaders in public health came together in a series of four virtual sessions to identify and synthesize shared challenges and innovations in caring for birthing people during COVID-19. The sessions were designed and planned by a joint team at Ariadne Labs, UC Davis Betty Irene Moore School of Nursing, and Spring Impact. We formed an interdisciplinary and intersectional steering committee to draw together experts both within and outside of maternal health, with knowledge of community-informed research methods, health system

management constraints, and health systems innovation. The steering committee guided our synthesis of both the shared challenges among the participants as well as the identified innovations.

Each session featured brief presentations from the project team, stories or examples from participants to spark discussion, and breakout groups for virtual synchronous work. In the opening presentation of each session, we included slides and discussion of our values of inclusivity, transparency, respect, and equity; we communicated our respect for lived and embodied experiences; and we asked that participants not share on social media or identify speakers after the session without their permission (see Our Community Engagement Guidance). By starting each session with this level-setting, we aimed to create a safe and inclusive space for fruitful discussion.

## Our Community Engagement Guidance

**Participation Goals:** To bring forward creativity and innovations in practice that improve the quality and experience of maternal/child care

**Values:** Community, inclusivity, transparency, respect, equity

**Respect & Inclusion:**

- We intend to foster a safe, inclusive space for everyone, especially for Black and Indigenous People of Color (BIPOC), Asian-Americans and Latinx people, LGBTQIA+ people, neurodiverse individuals and people of diverse ages, status, professional disciplines, and walks of life.
- We respect lived and embodied experience.
- We recognize that impact matters, regardless of intent.

Each breakout group was facilitated by members of the project team. In breakout groups, participants had the opportunity to collaborate and document their discussions in virtual workspaces. A more detailed summary of the planning for these sessions is available in [Appendix 1](#).

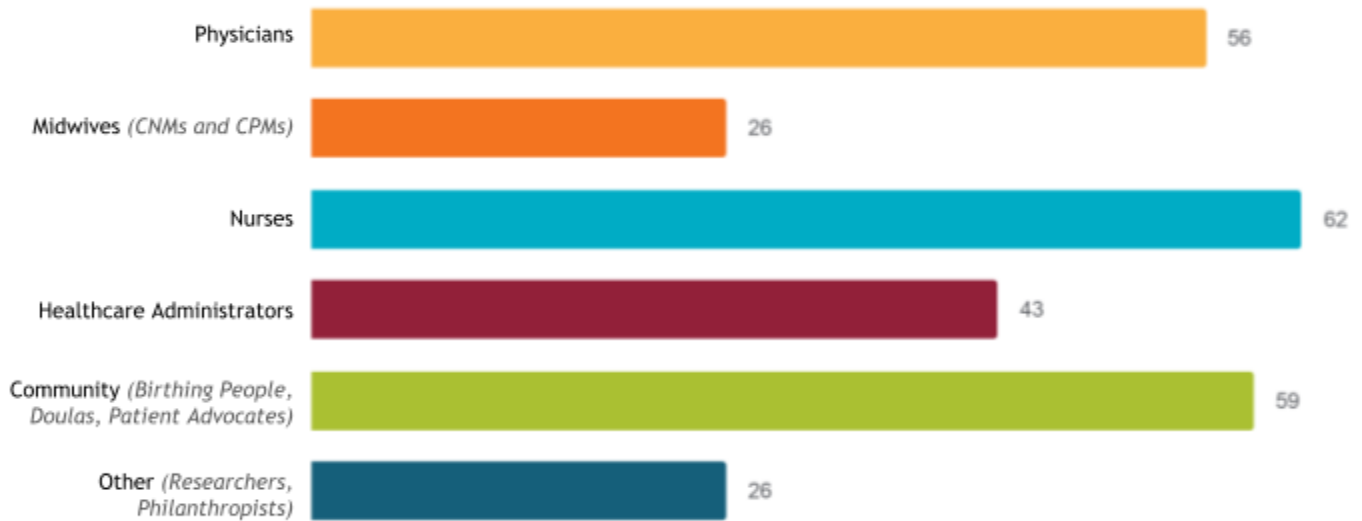
## 2.2 Recruitment & Participants

We utilized the virtual format to engage a broad set of community members and clinicians from across the country. To recruit participants, we partnered with an obstetric staffing organization, as well as nursing, midwifery, and doula organizations—these organizations helped us also reach out to client-community members, including people who gave birth during the pandemic. Those who joined in non-professional capacity were compensated for their time, as were members of the steering committee.

We brought together a diverse group of 244 unique participants (not including facilitators). Participants

represented multiple stakeholders (Figure 1) and spanned 37 US states in addition to the UK, with 63% of participants joining from urban areas, 27% joining from suburban areas, and 10% joining from rural areas. Between each session, we evaluated the content and attendee demographics, and made additional recruitment efforts to increase the diversity of voices and center our focus on equity for vulnerable and marginalized populations. The sessions averaged about 80 non-facilitating participants per session.

Figure 1: Breakdown of Participants by Role.\*



\*The participant count in this graph will not add to 244 as some participants were counted in multiple categories.

## 2.3 Synthesis of Findings

Our interdisciplinary project team synthesized the results captured through the virtual workspaces and surveys into three primary recommendations: focus investments on prioritized challenges (section 3), identify innovations with momentum (section 4), and accelerate momentum for targeted innovations (section 5). While this full report is not written with the intention of being read from top to bottom, these three recommendations are meant to build on each other and ideally be read together across selected innovation categories that health system leaders are considering implementing. Recognizing the many differences across settings, we recommend readers consider their own context and interrogate potential biases while deciding how to prioritize and advocate for the innovations discussed in the sections below.

# 3. Focus Investments

**Recommendation**

Focus investments on innovations that address challenges related to the continuum of care, family and support for birthing people, and patient-provider relationships.

Health system leaders facing limited resources and capacity need to focus their investments and efforts. We aimed to identify and prioritize the set of shared challenges that resonate across the broad spectrum of stakeholders in maternity care. The universality of these challenges influenced both the demand for solutions, and the supply of resources to address them, thereby motivating many of the innovations with the most promise for sustained impact.

Our participant community started by generating a shared understanding of the overall problem space in maternity care delivery throughout the COVID-19 pandemic. We synthesized the discussion into ten themes across the places, people, and processes involved in maternity care delivery from triage through postpartum during the pandemic (Figure 2), recognizing that the themes are not mutually exclusive, and in many cases are deeply intertwined.

*Figure 2. Themes among the Challenges Faced in Delivering Care for Birthing People During COVID-19*

Places	People	Processes
Flow of Care	Community Expectations	Infection Control
Location of Care	Family & Support	Care for COVID+ Patients
	Patient-Provider Relationships	Maintaining Routine Care
	Interdisciplinary Collaboration	Continuum of Care & Support

Based on this shared set of themes, participants ranked the top three with the greatest potential to have longer-term impact on maternal health, particularly for people who experience racial and geographic inequities (full survey results in [Appendix 2](#)). Participants across roles overwhelmingly prioritized **continuity of care, family and support for the birthing person, and relationships with the clinical team.**

Within the prioritized themes, we reviewed notes from discussions to identify problem statements that capture the specific ways that these general themes impact maternity care. The problem statements illustrate how the pandemic has disrupted maternity care and support, and we include them below to facilitate reflection about local impacts.

# Problem Statements Among the Prioritized Themes

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## Continuum of Care & Support

- Disconnected care and support across pregnancy, birth, and postpartum
- Misalignment between care and individual risks/needs across pregnancy, birth, and postpartum
- Inadequate access to both virtual and physical care, due to language, technology, distance, employment shifts, and other barriers



## Family & Support

- Inadequate labor support due to visitor restrictions, masking, physical contact limitations, and other barriers
- Inadequate advocacy for the birthing person during pregnancy, birth, and postpartum, especially for more vulnerable people
- Insufficient inclusion of family members and other preferred support people in birthing experience



## Patient-Provider Relationships

- Lack of clarity for both clinicians and birthing people about what care should look like during the pandemic
- Unreliable teamwork and team communication that does not facilitate informed consent and fully respect the birthing person's preferred role in shared decision-making
- Barriers to building trusting relationships between birthing people and clinicians, particularly for people who have been historically marginalized by the healthcare system

These problem statements were based on challenges identified by birthing people, support people<sup>7</sup>, and clinicians. The consensus from notes during breakout group discussions and from participant surveys suggests that these problem statements present an opportunity for widely impactful innovations in maternity care delivery to promote quality and equity.

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<sup>7</sup> We use the term “support person” or “support people” throughout this document to include the non-clinical people a birthing person may rely on for support during pregnancy, labor, and postpartum. This can include partners, spouses, friends, family members, patient advocates, and doulas.



# 4. Identify Innovations

## Recommendation

Identify the innovations that address these challenges and align best with the needs of your community, critical gaps in care, and the assets of your organization.

Interdisciplinary groups of participants discussed innovations based on the specific problem statements for the three prioritized themes:



Continuum of Care and Support






Family and Support






Patient Provider Relationships

and identified that innovations frequently impact multiple, if not all, of the three. We therefore sorted the innovations into six action-oriented categories based not on *what* problem statement they solve, but on *how* they could innovate to address these challenges. Below we have summarized each of the categories and provided specific innovation examples cross-referenced with the prioritized problem themes they impact:




1. **Leverage Virtual Access:** Innovations that provide opportunities to deliver clinical care, education, or support through virtual methods, including:

			
<i>Virtual connections throughout care with support people, including interpreters, patient advocates, and doulas</i>			
<i>Virtual support and education groups for prenatal and postpartum care</i>			
<i>Telehealth options embedded into the existing health care delivery system for full perinatal spectrum of care</i>			




2. **Build Trust & Enhance Communication:** Innovations that improve connections between birthing people and clinicians, including:

			
<i>New methods for personal connection with contact limitations (e.g. transparent face masks, add name to PPE)</i>			
<i>Team communication and shared decision making, including acknowledging systemic racism and inequities in care</i>			
<i>Effective communication and transparency about evolving guidelines for clinicians and birthing people around PPE, testing, and visitation</i>			
<i>Coordinated multidisciplinary teams (e.g. partnerships across disciplines, huddles, standardized documentation)</i>			




3. **Customize Care Planning & Support:** Innovations that adapt existing care approaches for routine prenatal and postpartum care to better meet birthing peoples’ unique needs, including:

			
<i>Changed timing (i.e. interval and frequency) of prenatal and postpartum care</i>			
<i>Adapted practices for existing routine prenatal and postpartum care</i>			




4. **Coordinate Existing Services & Needs:** Innovations that integrate clinical and social services to help avoid disjointed care for birthing people, including:

			
<i>Improved screenings for SDOH in prenatal, labor and delivery, and postpartum care</i>			
<i>Coordination and connection with clinical, community, and social services to close gaps in service provision</i>			
<i>Direct support for SDOH (e.g. shuttles for transportation issues, hotspots for internet access)</i>			

5. **Adapt Roles & Responsibilities:** Innovations that promote non-clinical and clinical capacity for providing emotional, informational, and physical support for birthing people, including:

			
<i>Formalized roles for doulas and support people as essential team members in clinics and birthing settings</i>			
<i>Expanded support capacity (i.e. training and employing more doulas, developing new advocate and navigation roles)</i>			
<i>Supportive practices emphasized as core competencies in clinical care for nurses, midwives, and physicians</i>			

6. **Utilize Alternate Care Settings:** Innovations that facilitate the availability and accessibility of alternate care settings, including:

			
<i>Alternate settings for the continuum of care (e.g. “drive through” care, birth centers, and home visits)</i>			
<i>Collaboration between birth centers and hospitals for safe, reliable, and respectful transfers</i>			
<i>New care settings (e.g. new community health centers and auxiliary maternity units)</i>			

While all six of the innovation categories are familiar, participants identified ways in which there is new momentum for long-term impact in these areas due to shifts created by the pandemic, including increased perceived need, as well as changes in payment policies and regulation as the health system aimed to rapidly increase capacity. Specific considerations in choosing to invest in these innovations included:

- **Culture:** Values and norms underlying care delivery and team relationships (e.g. dynamics across clinicians and settings, commitment to cultural humility and anti-racism)

- **Knowledge:** Communication, training, and/or research to promote confidence, build competencies, or make the case for investing in innovations
- **Processes:** Methods for care delivery (e.g. workflows, interactions, coordination of care)
- **Infrastructure:** Resources and supplies required for care delivery (e.g. internet, technology, software systems, COVID tests/screening, PPE)
- **People:** Availability and characteristics of people supporting and providing care (e.g. staff recruiting, representativeness of doulas and clinicians)
- **Funding:** Systems for reimbursement and payment for care and support (e.g. changes in bundled payments, payments for doulas)
- **Regulation:** Policies that set the rules for care delivery (e.g. accreditation for care settings or clinicians, certification and licensing, medico-legal risk)
- **Place:** Settings for care delivery and the locations of these care settings

The return on investment and the feasibility for each innovation type will depend on the needs of your community as well as the existing assets of your organization. Health system leaders should review existing information on their systems, such as community needs assessments and changes in utilization during the pandemic, and connect with a broad range of stakeholders (e.g., clinicians, patient and family advisory councils, and community members) to help supplement these data and interpret their direction, as well as potential biases.

## 5. Accelerate Momentum

### Recommendation

Accelerate momentum for your priority innovations through reinforcing the “demand” among birthing people or health system stakeholders and the “supply” of enabling factors.

The pandemic has created substantive shifts in momentum for long-term maternity care improvements, and health systems can further accelerate the momentum for implementing these innovations by promoting demand or supply to support these changes. Demand represents the will for change and should be assessed and fostered across all stakeholders in the system, including birthing people, their support people, clinicians, and health system leaders. In many cases, reinforcing demand involves ongoing, multi-directional interactions – providing information and education for stakeholders about potential innovations as well as listening to and engaging with all groups involved, especially those from underserved or marginalized communities, to ensure that these innovations are designed to meet their needs. Supply represents the people, processes, and enabling environment required to make an innovation happen in practice. These considerations should account for supply factors involved in reaching all birthing people and birth settings with innovations, not only those most easily positioned to be early adopters, as well as supply factors that promote not only launching innovations, but also sustaining their improvements in the long-term.

We developed sections 5.1 - 5.6 as standalone documentation of how to accelerate the growing momentum for each innovation category including, how the context for each innovation category has changed during the pandemic, the ways potential innovations within each category address the three prioritized problem themes, and strategies for accelerating momentum for the innovations to leverage the moment for change. This section is not meant to be read linearly; after prioritizing the innovations that align with the needs of your community, critical gap areas, and the assets of your organization in section 4, use the links below to navigate to the specific sections for your priority innovation categories:

- [5.1 Leverage Virtual Access](#)
- [5.2 Build Trust & Enhance Communication](#)
- [5.3 Customize Care Planning & Support](#)
- [5.4 Coordinate Existing Services & Needs](#)
- [5.5 Adapt Roles & Responsibilities](#)
- [5.6 Utilize Alternate Care Settings](#)

## 5.1 Leverage Virtual Access

Leveraging virtual access includes innovations that provide opportunities to deliver clinical care, education, or support through virtual methods, such as video conferencing, phone calls, or text messages. Our participants reported that there was already great perceived need for virtual access (e.g. increasing access for people who are primary caregivers and face conflicts between their own caregiving responsibilities and their ability to access care for themselves), but social distancing during the COVID-19 pandemic made this need acute. Many payers agreed to at least temporarily reimburse virtual services at parity, and many health systems made investments in virtual care platforms. These shifts have future implications for both parity of payment and quality of services in obstetric healthcare.

Participants believed the need and desire for virtual access will be sustained due to heightened demand across the board, and may be particularly important for pregnant people who face transportation and other social and economic challenges, including many living in rural areas of the United States as well as those living in underserved urban areas. While telehealth and other virtual solutions cannot fully replace in-person care, it provides a valuable means of delivering essential services.

Participants highlighted that innovations that leverage virtual access can be particularly helpful for:

- Connecting with doulas, family, and support networks
- Screening, such as triaging in early labor or semi-urgent care
- Strengthening maternal mental health care
- Providing lactation counseling and other educational support, with sensitivity to the competing demands placed upon pregnant people (e.g. childcare, work, etc.)
- Connecting birthing people with more representative providers and supporters (e.g. people who look like them, speak their language)
- Promoting access to postpartum services, triaging for concerns, classes, and support groups

### Strategies for Leveraging Virtual Access

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Health system leaders interested in innovations that leverage virtual access should consider the following strategies for building demand among birthing people and health system stakeholders and augmenting the supply of enabling factors to support successful and sustainable implementation. These strategies summarize key action steps recommended by participants for building momentum, but they are not intended to be comprehensive or required for all settings depending on your local context.

## Educate birthing people and clinicians on telehealth and virtual support considerations

- ❑ Build awareness and access among birthing people for how to use technology, privacy considerations, and out-of-pocket costs compared to in-person appointments
- ❑ Normalize that any settings birthing people or their support connect from are acceptable, while also being sensitive to ways in which work schedules, presence of roommates or family members may inhibit privacy
- ❑ Train clinicians on technology platforms, including privacy protection strategies and how to utilize flexible approaches when there are technology barriers
- ❑ Educate birthing people and clinicians on the risks and benefits of home monitoring (i.e. fetal monitoring)

## Ensure virtual services can be accessible for all birthing people and support people

- ❑ Ensure telehealth resources are accessible across different languages and interpreters can be incorporated into virtual appointments
- ❑ Develop multi-modal systems to reach people with varying levels of technology access (e.g. no wifi access) and privacy concerns (e.g. not having access to a private/safe space to attend virtual visits)
- ❑ Support initiatives to address the digital divide and increase access to technology and high-speed internet for birthing people, especially in rural areas (e.g. supporting the costs of prepaid phones or data or supporting legislation related to the development of telecommunication infrastructure)
- ❑ Provide technology for virtual access to care and support within inpatient settings (e.g. tablets) and ensure technology systems have the bandwidth to support demand
- ❑ Ensure reimbursement and funding is available for both services and technology needed to provide those services (e.g. iPads)
- ❑ Leverage telehealth for people who are comfortable using virtual services to create capacity for those for whom it is not appropriate or preferred

## Redesign care processes to be optimized for virtual delivery

- ❑ Solicit feedback from birthing people on how technology and virtual access can be most helpful in their care and support

- ❑ Develop system for appropriately identifying people for whom virtual access is appropriate and those for whom other methods are better to meet their needs (e.g. high risk) or meet them where they are (e.g. drive through appointments in their car)
- ❑ Bring “situational awareness” to virtual interactions acknowledging the context for the patient and any privacy concerns
- ❑ Promote patient satisfaction by addressing increased isolation and perceptions of receiving worse care through virtual appointments
- ❑ Provide tools for self-monitoring and risk-appropriate guidelines for in-person visits
- ❑ Provide a “warm hand off” and educational materials to assist people on how to use technology and other equipment

## Integrate virtual access and adapt technologies within standard operating systems

- ❑ Incorporate or designate virtual appointments within the scheduling system and electronic health record
- ❑ Ensure virtual technologies and processes comply with all federal and state regulations, accrediting agencies, and policies, such as HIPAA (e.g. privacy protection for breastfeeding and lactation consulting)
- ❑ Leverage opportunities around telehealth and eConsults with maternal-fetal medicine or other specialists, especially in rural settings

## 5.2 Build Trust & Enhance Communication

Building trust and enhancing communication includes innovations that provide opportunities to address the longstanding breach of trust between health systems and communities, especially for those who have been historically oppressed, marginalized, and underserved by health systems. This breach has been exacerbated by the disproportionate impact of the pandemic on communities of color, as well as many of the necessary policies put in place, including new spatial protections, PPE, and limitations on hospital visitation.

These policy shifts require novel innovations, such as new methods for establishing personal connections through PPE, along with renewed commitment toward essential long-term improvements, such as acknowledging systemic racism and inequities in care, promoting shared decision making, and coordinating effective interdisciplinary team care. Participants highlighted how these innovations have the potential to benefit birthing people and their clinical and support teams both during and after the COVID-19 pandemic. Person-centered team communication, shared decision-making, and informed



consent provide the foundation for the trustworthy, respectful, and dignified care that all birthing people deserve.

Participants highlighted that innovations that build trust and enhance communication can be particularly helpful for:

- Filling in communication gaps created by contact limitations (e.g. lack of non-verbal cues from facial expressions under PPE)
- Communicating with birthing people with positive or suspected COVID cases regarding potential changes in recommendations or care
- Providing people from diverse communities, people with limited English proficiency, and people with sensory disabilities a clearer understanding of their clinical status to ensure informed consent, shared decision making and expectations for perceived outcomes of care.
- Continuing intentional communication practices after the pandemic to improve trust, engagement, and shared decision-making with birthing people and their support

## Strategies for Building Trust and Enhance Communication

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Health system leaders interested in innovations that build trust and enhance communication should consider the following strategies for building demand among birthing people and health system stakeholders and augmenting the supply of enabling factors to support successful and sustainable implementation. These strategies summarize key action steps recommended by participants for building momentum, but they are not intended to be comprehensive or required for all settings depending on your local context.

### Promote direct communication with communities to build a foundation for trust and collaboration in care

- Connect with groups who are advocating on behalf of birthing people
- Create spaces for community conversations to build trust and promote communication, with particular attention to listening to community concerns
- Establish consistent two-way communication channels with communities to assure health systems hear from stakeholders and to promote transparency and collaboration
- Develop clear, shared policies for community access to hospital information and health records
- Solicit community input through varied methods to reach a broad range of stakeholders
- Supplement quantitative data on improvement opportunities with community stories to understand the full picture of needs and gaps
- Engage the community to co-design quality improvement ideas that work best for them

## Educate clinical teams on communication gaps and improvement strategies

- ❑ Increase awareness among clinicians about gaps in communication and trust with birthing people, especially with added barriers from PPE and COVID-19 restrictions
- ❑ Consider bias and anti-racism training, as well as educational programming for providers to understand the historical causes of community mistrust
- ❑ Reinforce the need for more communication with birthing people and across clinical teams
- ❑ Promote a culture of true shared decision-making, including conveying a full understanding of both the benefits and risks of different care options
- ❑ Train clinicians on strategies for improving communication (e.g. using key words to verbalize thought processes with birthing people, using more words when communicating through masks)
- ❑ Train clinicians on how to recognize explicit and implicit biases and assist in ensuring culturally competent, equitable care

## Adapt communication and relationship-building methods for PPE and other contact limitations

- ❑ Post reminders outside rooms to add extra human elements into care when birthing people and their support people cannot see their clinical team's faces
- ❑ Focus on conveying expressions through eye contact over masks (e.g. "happy eyes")
- ❑ Add names and photos to PPE or expanded name badges to increase visibility and legibility
- ❑ Post laminated photos of the care teams in birthing people's rooms
- ❑ Procure transparent face masks for showing facial expressions and facilitating lip reading for birthing people who are hard of hearing
- ❑ Leverage technology, such as iPads with FaceTime, for conversations that benefit from visible facial expressions (e.g. initial introductions, informed consent discussions)

## Increase the representativeness and cultural concordance of clinical teams and services

- ❑ Enable access to clinical career paths for people from diverse backgrounds and cultures, including hiring, training, and advancement opportunities
- ❑ Increase access to representative and culturally concordant birth education

## 5.3 Customize Care Planning & Support

Customizing care planning and support includes innovations that adapt existing care approaches for routine prenatal and postpartum care to better meet birthing peoples' unique needs. Professional societies have recently highlighted that current practices and visit schedules are not based on strong evidence for what produces the best experiences and outcomes for birthing people. There is and has been demand for this change, and disruptions to routine modes of care during COVID-19 has created an opportunity among some systems to take new approaches, including revisiting the frequency, duration, interval, format, and location of appointments. While so much of maternal health work is about empowering birthing people, these systems are not always designed with the clients' voices in mind. COVID has highlighted both the need and opportunity to meet the demand of each birthing person, whether that is addressing their needs at home, or streamlining their care to all be in the same place.

Participants highlighted that innovations that customize care planning and support can be particularly helpful for:

- Shifting focus of care toward social connection and understanding for lower risk birthing people who may not benefit from as many clinically-focused appointments
- Providing more customization, flexibility, and efficiency to adapt to generational shifts in expectations among some younger birthing people
- Creating more opportunities to address maternal mental health
- Providing additional postpartum support in between birth and the standard six-week visit
- Adapting support to meet the needs of birthing people who are socially vulnerable (e.g. those in need of support around transportation, childcare, or healthcare access)
- Providing additional clinical support and care coordination for birthing people with medically complex issues

### Strategies for Customizing Care Planning & Support

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Health system leaders interested in innovations that customize care planning and support should consider the following strategies for building demand among birthing people and health system stakeholders and augmenting the supply of enabling factors to support successful and sustainable implementation. These strategies summarize key action steps recommended by participants for building momentum, but they are not intended to be comprehensive or required for all settings depending on your local context.

#### Encourage birthing people to prioritize their own health and wellbeing

- ❑ Promote the value of birthing people's health as well as their baby's health

## Innovate on alternate models for customizing care and support to meet individual needs

- ❑ Adapt the types and frequencies of appointments to meet the needs and preferences of different birthing people (e.g. lower-touch visits for existing parents, higher frequency of visits for higher risk pregnancies)
- ❑ Integrate discussions about varied support and care options from the beginning of care
- ❑ Identify opportunities to integrate non-clinical support and touch-points (e.g. doulas) to augment prenatal and postpartum care

## Expand the range of options available for accessing prenatal and postpartum care and support

- ❑ Expand open hours for offices and clinics (e.g. evenings, weekends)
- ❑ Coordinate and co-locate support for birthing people and their babies in the postpartum period
- ❑ Identify opportunities addressing birthing people's needs at home, including remote self-monitoring if appropriate (e.g. blood pressure cuff, scale, thermometer, fetal doppler)
- ❑ Leverage telehealth to increase access to clinical and non-clinical care and support for underserved communities, including in rural and urban areas
- ❑ Set up systems to be able to provide care in different modalities depending on individual needs, preferences, and technology capabilities (e.g. with and without video feature of call)

## Promote relationships between birthing people and providers to enhance support

- ❑ Strengthen relationships between birthing people and providers to increase the likelihood of follow-up during the postpartum period
- ❑ Expand access to doulas and community health workers for underserved or socially and economically marginalized communities
- ❑ Recruit clinicians, doulas, and community health workers from the communities they serve to increase representation, especially for underserved or marginalized communities

## Advocate for payment reforms to extend coverage for varied models of care and support

- ❑ Adapt payment models to cover new ways of providing care (e.g. adjustment visit designations)

- ❑ Demonstrate the value for insurers to extend coverage to technology and internet access (e.g. paying for hotspots for people who don't have access to internet)
- ❑ Improve or extend insurance coverage for doulas

## 5.4 Coordinate Existing Services & Needs

Coordinating existing services and needs includes innovations that integrate clinical and social services to help avoid disjointed care for the birthing person. Demand for this coordination existed prior to the pandemic, and this need has been exacerbated by confusion and abrupt changes to hospital policies during COVID-19, increasing isolation, fewer touch-points for screenings for social services, and worsening disparities in low-income communities and communities of color.

More than ever before, participants expressed an increased need in screening for social determinants of health (SDOH), but in parallel with this increasing need, the content, setting, and connection of appointments have changed due to fears of exposure, leading to a reduction in patient follow-ups and the personal connections that would have potentially improved screenings for domestic violence, maternal mental health issues, and SDOH. Participants also expressed a need to strengthen the connections between the clinical sphere and social services that already exist within the communities where birthing people live.

Participants highlighted that innovations that coordinate existing services and needs can be particularly helpful for:

- Targeting feelings of isolation, mistrust, and misinformation during prenatal care and connecting patients with support systems
- Expanding postpartum resources (mental health and infant feeding) and continuity of care
- Checking in on partners, support persons, and other children who are currently not being included
- Connecting survivors of domestic violence with resources
- Harnessing increased options for virtual connectivity
- Promoting non-clinical collaboration with childcare and faith-based partners who are mobilizing with maternal health linkages
- Standardizing processes with Departments of Health that are interested in expanding screening

## Strategies for Coordinating Existing Services & Needs

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Health system leaders interested in innovations that coordinate existing services and needs should consider the following strategies for building demand among birthing people and health system stakeholders and augmenting the supply of enabling factors to support successful and sustainable

implementation. These strategies summarize key action steps recommended by participants for building momentum, but they are not intended to be comprehensive or required for all settings depending on your local context.

## Build buy-in from all stakeholders for addressing social determinants of health, including birthing people, support people, and clinicians

- Normalize screening for social determinants of health as a part of the standard course of care and support for birthing people
- Provide mass communication and education for birthing people to understand different support services and roles available to them (e.g. midwifery services)
- Listen to birthing people and their families to build trust before discussing potentially sensitive aspects of their lives and to ensure that services align with their needs
- Engage all disciplines in prioritizing care coordination and developing shared solutions

## Adopt standardized tools and processes for screening and connecting birthing people with appropriate services

- Ensure risk profiles incorporate multifaceted data on wellbeing beyond physical health
- Clearly articulate the “why” for screenings and services (i.e. the value and challenges to be solved) in addition to practical questions and steps
- Identify or develop tools that are practical to implement, structurally integrate questions about social determinants of health into standard care processes, and center birthing people’s voices in the screening process
- Build clinician comfort and confidence in asking birthing people questions about social determinants of health through education and training
- Establish a clear landscape of resources and services available within the health system and community partners so clinicians have actionable next steps for supporting birthing people

## Expand and diversify roles involved in screening, connecting, or providing for support needs

- Staff advocates, care coordinators, social workers, and/or community health workers in all care facilities (e.g. birth center, clinic, hospital) to connect birthing people to the resources that they need
- Engage interpreters to provide culturally and linguistically-appropriate care and services for birthing people with limited English proficiency

- ❑ Connect birthing people with peer advocates or care coordinators who are representative of their communities and have experienced birth themselves to provide education, support, and connections with health or social services
- ❑ Incorporate midwives as partners with other clinical roles to provide low-risk care and connect birthing people with prenatal and postpartum resources and support
- ❑ Engage clinicians in thinking about the broader context of health and continuum of care beyond individual interactions or procedures (e.g. prescriptions, surgeries)
- ❑ Increase partnerships and collaborations with community-based organizations and other stakeholders to provide support and services (e.g. food access, transportation, internet)

### Provide multi-modal access to care, social services, and support

- ❑ Leverage virtual connections and remote screenings as a way to increase access (e.g. for those who don't get paid time off or face transportation barriers)
- ❑ Expand home health services (e.g. home visits, home outreach) to meet birthing people where they are, especially for those for whom transportation is an issue

### Advocate for increased funding for social services screening and provision

- ❑ Demonstrate the cost effectiveness of social services and support
- ❑ Increase funding for more time and staff to be dedicated to screening and support
- ❑ Expand financial support to ensure all birthing people can access the services they need

## 5.5 Adapt Roles & Responsibilities

Adapting roles and responsibilities includes innovations that promote non-clinical and clinical capacity for providing emotional, informational, and physical support for birthing people throughout their pregnancy, childbirth, and postpartum. During the first wave of COVID-19, many clinicians were redeployed to new services, and staffing models were adapted to both meet capacity and limit staff exposure. These changes required flexibility in roles and responsibilities and also revealed potential to adapt going forward.

There was already demand for greater non-clinical support before COVID-19 among birthing people, particularly from doulas. This demand has only increased in the wake of isolation and anxiety during the pandemic. Clinicians, whose bandwidth was stretched during the pandemic, expressed greater willingness to work alongside doulas in supporting care. Groups long affected by systemic and interpersonal racism may benefit from doulas or other support the most.

Recognizing that doula support is not always available because of financial, social, or informational barriers, there is also a need for an exchange of ideas and training between nurses, providers, and doulas, particularly for reimagining how to integrate patient advocacy and the support of a doula into the nursing or patient advocate role. Participants also acknowledged the need to more formally integrate doulas and professional advocates into the health system to address coordination, inequitable access to support, and relationships across all non-clinical and clinical roles.

Participants highlighted that innovations that adapt roles and responsibilities can be particularly helpful for:

- Augmenting support for people whose other potential support people are not available (e.g. partner needed for childcare for other children)
- Providing support for birthing people who have limited prenatal care or interactions with the care team prior to delivery
- Lowering rates of unnecessary intervention in settings aiming to reduce the need for complex care and healthcare costs
- Building on and sharing learning from healthcare cultures where doulas are already welcomed as birthing options
- Educating hospital-based clinical teams on their respective roles, benefits, and productive teamwork skills to foster positive working relationships with doulas

## Strategies for Adapting Roles & Responsibilities

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Health system leaders interested in innovations that adapt roles and responsibilities should consider the following strategies for building demand among birthing people and health system stakeholders and augmenting the supply of enabling factors to support successful and sustainable implementation. These strategies summarize key action steps recommended by participants for building momentum, but they are not intended to be comprehensive or required for all settings depending on your local context.

### Ensure doulas and other support roles are available for all birthing people

- Design and staff doula programs to provide 24/7 availability for birthing people
- Address cost barriers for birthing people through creating reimbursement programs, organizing a volunteer doula program, or hiring doulas directly into the maternity care team
- Research the clinical and cost effectiveness of doula support to communicate the return on investment for doula support with system stakeholders (e.g. payers)
- Recruit diverse doulas and patient advocates who are representative of the communities they serve and their experiences, especially for Black birthing people and those experiencing racism



## Promote teamwork and collaboration between non-clinical support roles and clinical roles

- Encourage a learning mindset where all team members can learn from one another
- Conduct interprofessional training and promote knowledge sharing across disciplines (e.g. doulas training nurses and providers on their techniques and skills and nurses and providers training doulas on aspects of clinical care, such as sterile field training)
- Promote transparent team communication and collaboration to navigate points of tension and build mutual trust across interprofessional teams

## Incorporate support roles, such as doulas, into institutional policies and practices

- Clearly define complementary roles for clinicians, doulas, and other support people
- Designate doulas and support people as essential team members throughout pregnancy, birth, and postpartum care
- Develop orientations and trainings for doulas within the hospital on hospital systems and policies
- Develop referral systems to connect birthing people with doulas and/or advocates, including linking doulas or doula-trained nurses into existing support programs, such as home visits
- Connect hospital quality metrics to support throughout pregnancy, birth, and postpartum

## Ensure doulas and other support roles are incorporated into COVID-19 resource planning

- Allocate PPE and COVID tests for doulas, patient advocates, and other support people
- Train doulas in PPE and fit testing for birthing people with COVID-19
- Provide technology for birthing people who do not have devices for virtual care or support

## Advocate for regulations that promote quality doula care without restricting doula practices

- Develop standards for “Doula Friendly Hospitals”
- Promote regulation that formalize the role of doula support during COVID-19
- Incorporate effectiveness working with birthing people and other healthcare professionals into doula training and certification

## 5.6 Utilize Alternate Care Settings

Utilizing alternate care settings includes innovations that repurpose, convert, or construct new space to deliver care. During the pandemic, particularly during surges in cases, health systems have needed to identify additional spaces for patient care to accommodate increased volume and lengths of stay, while also reducing the density of people within existing spaces. In some cases, there was also a need to centralize essential equipment, such as masks to certain locations, requiring creative use of space. At the same time, some birthing people were increasingly interested in avoiding hospital settings or contact with large numbers of people due to potential COVID exposure. Because of visitor restrictions, doulas and even partners and family members were (and, in some places, are still) not able to be present, which led to people seeking out-of-hospital maternity care.

Participants reported that in some cases birth centers across the country had to put potential clients on waiting lists due to the increased demand exceeding existing capacity. Those with less trust in the existing hospital-based care settings due to poor prior experiences seemed most likely to seek out care in alternate settings.

Participants highlighted that innovations that utilize alternate care settings can be particularly helpful for:

- Reducing the risk of COVID-exposure for birthing people
- Supporting the growing movement of BIPOC seeking out of hospital, and particularly home birth with Black/Brown and Indigenous providers
- Leveraging the ways that barriers to alternate care settings that have been lifted due to COVID to expand access (i.e. midwives having admitting privileges where they previously didn't, restrictions on birth centers easing)

### Strategies for Utilizing Alternate Care Settings

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Health system leaders interested in innovations that utilize alternate care settings should consider the following strategies for building demand among birthing people and health system stakeholders and augmenting the supply of enabling factors to support successful and sustainable implementation. These strategies summarize key action steps recommended by participants for building momentum, but they are not intended to be comprehensive or required for all settings depending on your local context.

#### Promote understanding of alternate care setting options among birthing people

- Educate birthing people about available alternate settings, their qualifications and credentials, their capabilities and services, and their connections to other settings

- Address potential concerns for birthing people about alternate care settings by providing transparent communication about what to expect and how any potential complications will be handled throughout their care
- Highlight opportunities for respectful, dignified, and culturally concordant care and communication in alternate care settings

## Enhance communication and collaboration between hospitals and birth centers

- Establish and integrate relationships and communication channels between healthcare systems and out-of-hospital providers, including birth centers and home birth midwives
- Develop clear criteria for transfer to the hospital setting and a well-coordinated, collaborative transfer process
- Develop shared values and principles for delivering care centered around safety, quality, dignity, and respect
- Collaborate on regulatory matters, including quality assurance, liability, and credentialing
- Established shared electronic health record systems
- Host joint clinical training and professional development opportunities with collaborating out of hospital providers

## Develop policies that support alternate care settings

- Capitalize on relaxed facility fee requirements to establish alternate care sites
- Include alternate care sites in negotiations with payers
- Develop policies for shared reimbursement when labor is primarily managed out of hospital but the delivery occurs at the hospital
- Consider shared financial assistance programs for families with limited means
- Support referring birth centers in pursuing accreditation

## 6. Conclusions

Voices from the field highlight three important lessons:

- a) the pandemic exposed weaknesses in our system and forces of systemic racism are even more palpable in maternity care;
- b) leaders and providers can and will change rapidly even in areas where there have been resistance previously, such as with virtual access and alternative birthing places; and
- c) there is an unprecedented opportunity to advance maternity care by building on positive change.

We recognize that many of the innovations we are recommending are familiar and believe that is their power. We know what we need to do to achieve a higher performing, more equitable and just system, but our health systems have collectively lacked the will and motivation to get started. This guidance aims to highlight where specific opportunities exist and focus attention on where necessary change can have sustainable impact, and ideally leave us better prepared to respond to future disasters.

In synthesizing the observations and diverse perspectives of the stakeholders we convened, we noted that many of the shifts in the healthcare marketplace are driven by a set of fundamental “ingredients”—culture, knowledge, processes, infrastructure, people, funding, regulation, and place. As a result, despite our focus on childbirth as a leading indicator of shifts within healthcare as a whole, the innovation categories surfaced may be generalizable to other health services. Furthermore, other service lines are likely experiencing similar pressures, and changes in one part of a system can affect delivery in other parts of the system. Opportunities to leverage virtual access, build trust and enhance communication, customize care planning, coordinate service, adapt roles, and utilize alternate care settings exist broadly—from primary care and general medicine to critical care and surgery.

We had an opportunity to hear from a broad group of people observing rapid changes to the health system in real time during a once in a century health crisis. This approach clarified which common challenges need to be prioritized and which types of innovations are likely to stick in the long term. In the coming months, we hope to learn more about the specifics of how these innovations are implemented and what enables them to be successful. We will continue working with Spring Impact to document some of the specific innovations that are highlighted in order to generate more practical lessons for health systems leaders and clinicians on the frontlines.

We also witnessed how important it is to be inclusive of multiple perspectives to find our way forward, as well as how our findings were ultimately limited by the perspectives we were able to include. The digital format was enabling for participation for some but may have been a barrier to hearing some of the most underserved voices. After each of the sessions our team revisited the composition of the participants and aimed to grow the diversity and inclusivity of participants, particularly from birthing

people and from people living in rural areas of the United States.

Through these efforts, clinicians had an opportunity to learn from the experiences of people who gave birth during the pandemic and reflect together. Participants could confer about key contextual differences in geography, access to resources, and service needs. We strongly encourage this type of continuous listening, reflecting, and learning as we aim to produce better care systems.

Ultimately, we found that by revealing the gaps, inequities, and structural racism present in our health systems, the COVID-19 pandemic generated momentum for change. It required providers and communities to not only adapt, but to innovate with courage and creativity. We have a window of opportunity to emerge from a global pandemic as a higher performing, more equitable, and just health system. By investing wisely in innovations that have existing momentum and the greatest potential impact, these changes have the potential to be sustained in the years and generations to come.

# Appendices

## Appendix 1: Breakdown of Sessions

### Session 1

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#### Goals

- Introduce problems and goals from clinicians and community perspectives
- Focus on time points: Admission & Triage; Labor & Delivery; and Postpartum & Discharge
- Identify gaps in care and potential best / “better” practices

#### Output

Identify service design problems and best practice gaps (by discipline group)

#### Prompts for breakout group 1 (grouped by role)

As you walk through this time point from your perspective please discuss:

- How has care changed since the COVID-19 pandemic?
- What have been the greatest gaps or areas for improvement in care during COVID-19?
- What creative problem-solving have you seen or heard of to facilitate care during COVID-19?

Please capture these moments, gaps, challenges, as virtual post-it notes.

#### Prompts for breakout group 2 (interdisciplinary groups)

Think about teaming and how we work together.

- What have been the greatest gaps or areas for improvement in teamwork during COVID-19 (including the patient as a part of the team)?
- What creative problem-solving have you seen or heard of to facilitate teamwork during COVID-19?

Please capture these moments, gaps, challenges, as virtual post-it notes.

# Session 2

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## Goals

- Introduce problems and goals from a patient perspective
- Build informal connections (community) of practice

## Output

Broad list of problems from patient lens and opportunities/themes for service design interventions

## Prompts for breakout group (interdisciplinary)

- From the patient’s story, what opportunities and challenges did you hear?
- Who are the most vulnerable populations that your organization serves? What are potential gaps between patients having good versus poor experiences?
- How do these opportunities and challenges affect the themes surfaced from the first session (below)?

*Reference Table: Themes from Session #1*

Places	People	Processes
Flow of Care	Labor Support	Infection Control
Location of Care	Patient-Provider Relationships	Care for COVID+ Patients
	Community Expectations	Continuum of Care & Support
	Interdisciplinary Collaboration	Maintaining Routine Care

## Prompts for prioritization survey

Prioritize the top three themes that you believe have the greatest potential for innovation and impact on:

- addressing challenges for people who experience systemic inequities
- promoting longer-term systems improvements in maternity care

You may use the themes from the Session #1 synthesis (above) and/or new or modified themes based on your Session #2 discussion today.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

# Session 3

## Goals

- Explore gaps and questions from sessions 1&2 for potential recommendations, best practices, and interventions.

## Output

Elaborated articulation of the gaps and questions as well as possible overcomes.

Prompts for breakout group (self-selected by problem statement theme: C, F, P)

<b>C = Continuum of Care &amp; Support</b>	<b>F = Family &amp; Support</b>	<b>P = Patient-Provider Relationships</b>
1. Disconnected care and support across pregnancy, birth, and postpartum  2. Misalignment between care and individual risks/needs across pregnancy, birth, and postpartum  3. Inadequate access to both virtual and physical care, due to language, technology, distance, employment shifts and other barriers	1. Inadequate labor support due to visitor restrictions, masking, physical contact limitations, and other barriers  2. Inadequate advocacy for the birthing person during pregnancy, birth, and postpartum, especially for more vulnerable people  3. Insufficient inclusion of family members and other preferred support people in birthing experience	1. Lack of clarity for both clinicians and birthing people about what care should look like and why  2. Unreliable teamwork and team communication that does not facilitate informed consent and fully respect the birthing person’s preferred role in shared decision-making  3. Barriers to building trusting relationships between birthing people and clinicians, particularly for people who have been historically marginalized by the healthcare system

Breakout group questions (fill in “Ideal Future State Description” table):

- What could the “best” standard of care look like in this space?
- What are major gaps between ideal future and current state (what aspects of the current system are working? How is this different from the current state?)
- What is the core problem we are trying to solve?
- What ideas can you think of that might move us closer to the ideal future state?
- Is this relevant to both birthing people and clinicians? If so, how?



<p style="text-align: center;"><b>Ideal Future State Description</b>  <i>(What might the “best” standard of care look like in this space?)</i></p>				
<p><b>What are the gaps between the ideal future and current state</b></p> <ul style="list-style-type: none"> <li>• ...</li> <li>• ...</li> <li>• ...</li> </ul>				
Idea	What is the problem this might solve?	Relevant to Birthing person	Relevant to clinical staff	Notes
Idea 1		X		Notes....
Idea 2		X	X	notes....
Idea 3			X	notes...

## Session 4

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### Goals

- Participants will be able to validate, review and edit sections of white paper.

### Output

White paper synthesizing findings from summer convenings.

### Prompts for breakout group (organized by innovation example)

Innovation categories and examples:

1. Leverage Virtual Access
  - a. Telehealth options for full perinatal spectrum of care, including enabling self-care, monitoring and support
  - b. Virtual connections with doulas, interpreters, educators, families and support people
  - c. Virtual support and education groups
2. Leverage Alternate Care Settings
  - a. Alternate settings for care, including birth centers, home visits, and drive through care
  - b. Collaboration between birth centers and hospitals
  - c. New care settings, such as new Auxiliary Maternity Units
3. Adapt Roles & Responsibilities
  - a. Formalize the role of doulas and support people as essential team members in clinics

- and birthing settings
  - b. Expanding support capacity, such as training and employing more doulas and developing new advocate and navigation roles
  - c. Emphasize supportive practices as core competencies in clinical care
4. Customize Care Planning & Support
- a. Change timing (interval and frequency) of prenatal and postpartum care
  - b. Adapt content of existing routine prenatal and postpartum care
5. Coordinate Existing Services & Needs
- a. Improve screenings for social determinants of health
  - b. Coordination and connection with clinical, community, and social services
  - c. Directly provide support for social determinants of health
6. Build Trust & Enhance Communication
- a. New methods for establishing personal connection through PPE and contact limitations
  - b. Promote team communication and shared decision making, including acknowledging racial biases and inequities in care
  - c. Effective communication and transparency about changing guidelines for clinicians, birthing people, and community members
  - d. Coordinate multidisciplinary team care, including partnerships across disciplines, regular care conferences, and standardized documentation

Breakout group questions within organized document:

<i>Specific innovation for breakout discussion: [Example]</i>
<p><b><i>Demand for the innovation:</i></b></p> <p>Is there demand for this innovation?</p> <p>With whom and in what contexts?</p> <p>How has the pandemic enabled or hindered demand for this change?</p> <p>How might you build demand for this change?</p>
<p><b><i>Supply to make the innovation happen:</i></b></p> <p>What would you need to make this innovation work for you as a consumer or implementer (e.g. information, people, resources)?</p> <p>How might it be adapted for different contexts (e.g. urban/rural, clinical/home)?</p> <p>How might it be adapted to meet varied needs (e.g. vulnerable populations, COVID exposure and status)?</p> <p>What else would be needed for this innovation to “stick”?</p>

## Appendix 2: Theme Prioritization Survey Results

Theme	All	Physician	Midwife	Nurse	Healthcare Admin	Doula	Birthing Person
Continuum of Care & Support	105	16	19	39	22	15	27
Family & Support	84	5	4	32	14	16	30
Patient-Provider Relationships	81	20	11	12	13	7	23
Interdisciplinary Collaboration	52	5	11	11	8	7	14
Care for COVID+ Patients	32	8	3	17	4	0	4
Location of Care	27	1	8	8	9	10	8
Infection Control	25	4	5	5	3	0	11
Maintaining Routine Care	24	1	0	8	5	0	14
Flow of Care	22	1	2	13	4	4	3
Community Expectations	20	4	3	4	7	0	4
Other	2	1	0	1	1	0	0
Total Surveys	79	11	11	25	15	10	23

*Note: Total responses by role add up to more than 79 because role was included in the survey as a “select all that apply” question; respondents were included in every role category they selected; dark gray indicates top response by discipline, medium gray second, and light gray third*