On June 22, 2022, the HIMSS Global Health Policy Connection (GHPC) hosted its first roundtable discussion convening experts in maternal and women’s health from across the globe. Panelists discussed various areas that touch upon the issues affecting women before, during and post-pregnancy. Panelists highlighted ways in which their organizations, states, and countries are attempting to lower the rates of maternal mortality and health issues affecting mothers and women. Following the panelists’ presentations, audience members engaged in a dialogue reacting to the presentations, furthering the question: where do we go next?

The overarching purpose of this roundtable was to utilize the GHPC community as a space to bring together HIMSS members from each sector (federal, state, and provincial) to discuss ideas, share experiences and connect on the issues that matter. A current HIMSS priority is addressing the topic of maternal health globally, which is why a collection of perspectives with no preference for geographical borders is significant.

The following resource highlights key portions of the panelists’ discussion and critical takeaways for future debate and deliberation on the topic.

**Who Are We?**

The HIMSS Global Health Policy Connection (formerly the Federal Health Community) is a network of professionals from federal, state, and provincial government sectors working to leverage health information and technology to improve care delivery through government initiatives. This community provides a gathering place for HIMSS members working at all levels of government worldwide,. This group is dedicated to advancing the HIMSS vision to realize the full health potential of every human, everywhere, and our mission to reform the global health ecosystem through the power of information and technology.

**Overview of Roundtable**

Maternal health continues to be a topic that is important to both HIMSS and governments from around the world. Issues are not looked at in isolation but from different lenses and pathways to find ways of achieving better overall health outcomes. While governments do their part, it is also of paramount importance that those in the nonprofit and private sectors continue to introduce innovations that address the problems that exist at each stage of a woman’s pregnancy, and long after it.
Hannah Galvin, MD, FAAP, FAMIA  
Chief Medical Information Officer, Cambridge Health Alliance

The Complexities of Privacy and Equitable Interoperability: What can arise before, during, and after birth that may affect positive maternal health outcomes?

When a woman’s health data is accessible through multiple pathways, there the potential that certain circumstances can cause a negative impact on her, and her child’s safety and well-being. This may be the result of multiple legitimate access points to a mother’s health information by virtue of the mother’s relationship to a separate individual or entity. Therefore, guardrails must be put in place to ensure that individuals in each stage of their life post-pregnancy are carefully considered.

To demonstrate the potential consequences of multiple access points to a woman’s maternal health record, we have the following case study:

A female patient presents following a standard vaginal delivery of a full-term healthy baby girl. The female patient record includes extensive health history, including but not limited to factors such as:

· Social determinants of health (SDoH) implications
· Domestic violence history with child’s father
· Medical procedure history, including a previous abortion
· History of mental health issues, including depression that is also being monitored

The female patient utilizes third-party applications that have FHIR integration with an Electronic Health Record (EHR). If we fast-forward, add another layer of complexity to include the baby’s chart that notes specific components of the mother’s health that are visible and accessible to the baby’s father.

Potential opportunities for privacy leaks are likely to occur:

· In a patient’s Portal, consider the husband a proxy. The female patient’s EHR functionality can hide certain things but cannot guarantee hidden appointments. Regarding the child’s chart – the mother and her husband are co-proxies. In this instance, there is no way to limit access; therefore the husband can also gain access to health information.

· Payer-related communications can potentially expose information to those who overlap with the primary policy holder’s coverage, i.e., overlap in who receives and can view a standard Explanation of Benefits.
Other providers’ records, e.g., urgent care providers, may not hide a patient’s problem lists which could pose a risk to mom and baby safety, as it would likely list health history that may not be preferably shareable.

Pharmacy (and other ancillary services) may provide reminders about refilling prescriptions that are visible through automated text messages.

Third party apps may fund free services by selling data to a market research firm. Suppose the female patient acknowledges the app’s Terms & Conditions. In that case, she may begin receiving emails with resources related to her health conditions which are visible to anyone else with access to her email.

Shared patient record (e.g., fast forward to the child’s record – mom’s information and documented health history may be information that is present on the child’s record. This information may include the question of paternity and the female patient’s history of depression).

Why is it such a challenge to protect Mom’s sensitive data?
The following are common barriers to navigating complex privacy issues such as the ones raised in the case study:
- “Sensitive” is a subjective term
- Many different types/flows of data (both internal and external)
- Many different stakeholders with skin in the game
- Questions about data ownership
- Access control definitions
- Questions of patient safety vs. right to individual privacy
- State laws differ

Fortunately, from an equitable interoperability perspective, we have come leaps and bounds. However, when gauging this, it’s important to assess how previous efforts have lagged and how we are doing things differently.

Where have previous efforts lagged?
- There has been an inability to meet many high-priority use cases, specifically around a shared record for maternal health
- Implementation is not easily scalable across organizations
- Pilots have not adequately addressed issues relating to patient safety and usability
- There has been a lack of financial or regulatory stimulus

What are we doing differently?
One example is the work by the Protecting Privacy to Promote Interoperability Workgroup (PP2PI), now SHIFT, the independent health care task force for equitable interoperability. This workgroup is a national multidisciplinary interest group of expert stakeholders across the industry assembled to address the problem of how to granularly segment sensitive data to protect patient privacy, promote interoperability and care equity. The workgroup was formalized in May, 2020, and is supported by HIMSS, IHE USA and Drummond Group. It remains an independent group of volunteer stakeholders and
PP2PI’s work is focused around:

- The development of nationally acceptable use cases
- Standards revision and stewardship of a national terminology value set
- Consensus-driven implementation guidance with consideration of patient safety and usability
- Partnering with the Office of the National Coordinator for Health IT (ONC) on policy drivers to spur widespread adoption

Ethel Massing, MSHI, SHIMSS
Innovation Program Leader
Mirro Center for Research & Innovation | Parkview Health
Past President Indiana Chapter & Board member

How Parkview Health and the HIMSS Indiana Chapter have come together to support Mothers and Infants and toward a brighter future with lower mortality rates in the state of Indiana

Brief Overview of Parkview Health Innovation

Three main tasks

- Internal Innovation: collaborating with clinicians and co-workers to incubate their ideas through commercialization
- Startup Services: supporting startup companies with connections to clinicians and research
- Innovation Competition: running a global health challenge to find solutions to major healthcare issues

The impetus to begin this work was Indiana’s high infant and maternal mortality rates. According to data from 2017, Indiana was the worst state in the midwest for infant mortality rates and the 7th worst in the United States.

Indiana Governor Holcomb set the goal of making Indiana the best in the Midwest by 2024, which translates to saving 200 babies a year. Achieving this goal requires a tremendous effort from everyone. This challenge led Massing to think about what Parkview and the HIMSS Indiana chapter could do to create an impact in this area.

Healthy Mom + Baby Competition
A year-long competition cycle consisting of three components: Datapalooza, an innovation competition, and a pitch competition.

Healthy Mom + Baby Datapalooza: The goal was to create a competition to unlock the power of data, and improve health outcomes for Indiana’s mothers and infants. This component of the competition took a significant number of partnerships (e.g., Indiana State Department of Health, Indiana Family & Social Services Administration, and outside consulting groups).

The result was a day of collaboration and presentations of data visualizations to help judges hone in on the problems in Indiana.

Healthy Mom + Baby Innovation Competition: This competition component took that data and created challenge statements.

The challenge statements that came out as a product included:
• How might we equip pregnant mothers with innovative solutions or programs to ensure a healthy pregnancy and postpartum experience?
• How might we help babies become and stay healthy and safe postpartum?

Organizers received competitors from all over the globe. Some of the examples of innovative devices included:
• SnugLit wearable treatment for infant jaundice
• Candlelit mental health app
• Nua surgical C-Section retractor device

The finalists’ designs were then entered into an Accelerator phase. Here, they had unprecedented access to a health system and mentorship from Matter Health, Parkview, and other subject-matter experts.

Healthy Mom + Baby Pitch Competition: A competition component to empower innovators to improve health outcomes for Indiana’s mothers and infants. The winner receives the opportunity to bring their ideas to life in a paid pilot project with Parkview Health and continued mentorship from Matter Health. This competition is in its third year with Healthy Mom & Baby Innovation Competition 3.0!

History of the competition:
Year 1 - Infant mortality
Year 2 - Maternal health – healthy moms have healthy babies
Year 3 - (This year) Maternal health before pregnancy, and to their children up to 12

Healthy Mom + Baby has become a Globally Recognized Competition! The last event included 129 submissions from 14 countries and 22 states (as of the date of this roundtable discussion).
Veronica Berry
TruDiary Founder & CEO
Atlanta, Georgia

How TruDiary is filling in the gaps for a more inclusive, culturally relevant pregnancy experience to positively impact common social determinants of health challenges for mothers

TruDiary is a tool aimed at providing equitable, quality prenatal care for all moms. Currently, the company has both private and public partnerships to push forward its mission to be at the forefront of a new era of maternal solutions that change the face of maternal mortality.

Background of TruDiary and Veronica’s “Why”

When TruDiary’s Founder & CEO, Veronica Berry, was pregnant, she experienced extreme pregnancy complications. She found it very difficult to navigate the healthcare system during this critical time in her life. She did not have a relationship with her doctor and, as a result, did not have the support services needed for a successful pregnancy and delivery. When her son was born, the doctors noted that when he became of school age, he would have learning disabilities, which proved to be true. The feelings of isolation that her son experienced in school were like those she felt when pregnant, and she knew she did not want other moms to go through a similar experience.

TruDiary is an Atlanta-based digital health company that provides culturally relevant curated content by moms and Social Determinants of Health (SDoH) services for all moms with an intentional emphasis on Black and Brown moms in under-resourced communities. Her work is geared towards eliminating the barriers associated with pregnancy complications.

Negative maternal outcomes can be prevented with a holistic care approach that takes into account a patient’s:
- Social needs
- Physical needs
- Mental needs
- Spiritual needs

What does this HIPAA compliant web app community do for moms?
- Targets and connects moms to SDoH services
- Gives access to a library of curated content by moms
- Highlights clear action items moms can execute for better health results
• Provides a shared community among moms to gather key insights to prepare moms for a successful pregnancy and delivery

Market-opportunity Focus

$7B 18-24 Month Market Expansion with specific attention towards Alabama, Mississippi, Arkansas, Louisiana, South Carolina, Tennessee, Kentucky, and Florida. These states were awarded a D or F rating for maternal outcomes per the March of Dimes.

Current initiatives

TruDiary is engaging several organizations to help offer quality prenatal care for all moms. TruDiary services 2500 patients by providing culturally curated content and social determinants of health services
• Emory Healthcare is one partnership example. Emory partnered with TruDiary because the company is rooted in the communities it serves and has partnerships with different community organizations at the heart of SDoH. They also wanted key insights into the patient population.
• Additionally, TruDiary is discussing partnership opportunities with the University of Alabama Medical Center and BCBS of Alabama.

TruDiary’s Predictions For the Future of Maternal Health

More women will be given the opportunity to take ownership of their pregnancy journey
✓ Better health information will be available that can better equip them to ask questions and be advocates for themselves

SDoH resources for women will become the norm for prenatal care
✓ Health systems will work more closely with the community

Remote work and support are here to stay
✓ As more and more pregnant patients struggle, remote work will help women not have to make the stressful decisions of choosing between work and family

Employers will need to step up to support for parents
✓ More services, group parenting and therapy classes
✓ More resources will be allocated into maternal mortality initiatives at the local level where these patients live and exist.
Deborah Maufi, MBBS, MBA
Founder of DPM Health Consultancy
Netherlands/Tanzania

How DPM Health Consultancy supports organizations that seek to transform healthcare globally by leveraging information, communication, and technology to improve maternal & newborn health outcomes

DPM’s approach to realizing health equity includes the following critical components:

1. **(Digital) Health Literacy** is critical to helping people feel empowered to make positive and informed health choices.
   - To strengthen the quality of healthcare and health-seeking behaviors, people need to understand what their health needs are.

2. **Sexual and reproductive health** rights are vital components of maternal health. We must not neglect that. We must keep promoting and practicing these rights to ensure safer pregnancy and newborn experience for everyone.

3. **A diverse and inclusive approach** to ensure that currently underserved communities have access to, and understand what, their health care needs signify. This inclusivity component only happens if the health literacy is satisfied and they are included in the conversation in the solution-making process.

**Current collaborative projects have focused on preterm labor/preterm birth outcomes**

The following examples demonstrate how DPM Healthcare tackles actionable diagnostics with Innitius and works towards revolutionizing infant care with Babymoon Care medical devices.

**Company #1: Innitius**
A Spanish start-up focused on providing actionable diagnostics for women’s health. The company develops medical devices (hardware + software) that combine a novel technology (torsional waves) with artificial intelligence, for diagnosing pathologies with an associated change in a woman’s cervical tissue consistency.

**Why is the focus today on threatened preterm labor?**
• 38 million pregnant women are unnecessarily hospitalized yearly due to a false positive result of threatened preterm birth (TPTL) test.

• 85% of patients hospitalized for TPTL will not give birth within the next seven days.

**Product #1:** Fine Birth by Innitius (currently in the clinical evaluation stage, with plans to enter the market by the end of 2023)
The Fine Birth clinical target is Threatened Preterm Labor. The aim of the device is to differentiate between false pre-term labor and true pre-term labor events at the point-of-care with portable & stand-alone technology.

**Product #2:** Babymoon Care’s solutions for safe, ergonomic, sustainable and minimalistic babywearing for Kangaroo mother care.

Results from a clinical validation study in Tanzania 2021 proved that:
• An average 254.7g weight gain in two weeks, as opposed to control group gaining 150g over the same amount of time.
• Thermoregulation: the carriers produce enough temperature to satisfy the practice due to the material composition of the textile buckled carriers, which is friendlier to the mothers and the babies. Maufi emphasized that significance must be placed on a safe pregnancy and newborn experience. Considerations should be given towards:
  o Non-complex, comprehensive tech tools to support a positive pregnancy
experience and reduce adverse outcomes.

- Investment in innovations and awareness creation, friendlier policies, and multisectoral collaborations.
- Mental health support for families experiencing preterm labor threats.
- Promotion of non-invasive innovation for premature babies.

Georgia Kontosoru
Program Delivery Manager
Maternity Transformation Program
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A look into NHS’ Digital Strategy for Maternity Services

Background on the Digital Strategy for Maternity Services

The Maternity Transformation programme

This programme aims to make wide-ranging improvements to maternity services following the National Maternity Review. It is an important part of the NHS Long Term plan, which recommends that “…by 2023/2024, all women will be able to access their maternity notes and information through their smartphones or other devices.”

The maternity transformation programme was set up as an NHS programme with nine work streams and sought to achieve the vision set out in Better Births by bringing organizations together to lead and implement the change.

Focus: Harnessing Digital Technology workstream

Projects within the workstream include:
- The Digital Maternity Interoperability project
- Women’s Digital Care Record project
- Digital Toolset – allowing access from one access point
- Digital Maturity Assessment

In addition to these projects, NHS hosts a Local Maternity Systems Digital Leaders Forum and the Digital Midwives Expert Reference Group to convene service leaders interested in this space.

NW London Strategy
Four key objectives of NW London Strategy:
- improving outcomes in population health,
- prevent ill health and tackle inequities in outcomes, experience, and access
- enhance productivity and value for money,
- support broader economic and social development

Four delivery programmes
- improving health and reducing inequities in health,
- local care including primary care,
- mental health and care for people with learning disabilities and autism,
- Acute care including urgent and emergency, elective, critical care and specialist care

Five enablers
- Workforce
- Research and innovation
- Digital
- Data
- Finance and estates

NW London Strategy Challenges and Priorities
Challenges:
- Public Funding
- Paper based Trusts
• Leadership team that traditionally did not have support
• Equity and equality - digital exclusion
• Infrastructure
• Multiple systems – trust wide system

Priorities:
• DM Digital leadership training
• MSDS – improve national reporting systems
• Region/sector wide solutions
• Digital exclusion – translation systems