

IMPLICIT NETWORK

A BRIEF HISTORY &
PATH FORWARD



MISSION

The IMPLICIT Network is a family medicine maternal child health learning collaborative focused on improving birth outcomes and promoting the health of women, birthing people, infants, and families through innovative models of care, quality improvement and professional development for future physicians.

VISION

To envision a future where all women/birthing people are fully supported to attain optimal health and wellness for themselves and their babies.



VALUES

- **Commitment:** Improving maternal health one woman/birthing person at a time.
- **Innovation:** Developing methods to improve the health of women, birthing people, children and families.
- **Education:** Training future physicians and health care providers to positively impact the health of women/birthing people in their communities.
- **Collaboration:** Fostering a synergistic environment where all specialties can work towards birth and health equity for all.
- **Cultural Humility:** Amplifying the expert voices of all women/birthing people to create trustworthy therapeutic alliances.
- **Justice:** Promoting respect, empathy and shared decision making as well as protecting dignity and safety for everyone.



FAMILY MEDICINE EDUCATION CONSORTIUM (FMEC)

The Family Medicine Education Consortium (FMEC) is a not-for-profit organization designed to foster interest in family medicine among medical students in the Northeastern United States and to support the overall growth of the discipline of family medicine. The FMEC sponsors an annual fall conference that brings together 400 family medicine faculty and residents and 300 medical students to explore cutting edge medical topics in a collegial setting. Learn more about the FMEC at <http://www.fmec.net>.



CONCEPTION OF THE IMPLICIT NETWORK

At the 2003 Northeast Regional FMEC Meeting in Pittsburgh, the idea of creating a network of family medicine residencies using continuous quality improvement (CQI) methods to collectively work to reduce the incidence of premature and low birth weight babies was launched. The following year, with seed funding provided by the National March of Dimes, the Network was formally created.

The Network began by recruiting family medicine faculty members to review their prenatal care curriculum and conduct comprehensive literature reviews in the area of prematurity prevention. Based on this review, the Network developed a shared strategy to implement evidence-based prenatal interventions, known as IMPLICIT Pregnancy, aimed at improving the care of pregnant women/birthing people and educating residents on best practices.



IMPLICIT PREGNANCY

In 2004, from evidence-based reviews of 13 conditions associated with an increased risk of prematurity, a working group identified five areas of focused intervention to use as the basis of the prematurity prevention strategy: 1) asymptomatic bacteriuria 2) bacterial vaginosis screening for women/birthing people with a history of preterm birth (later removed based on current data) 3) depression 4) smoking 5) family planning. In 2006, the use of 17-hydroxyprogesterone for women with a prior history of spontaneous preterm delivery was added. Network collaborators collected data at four points in the pregnancy (by 15 weeks, third trimester, delivery, and postpartum), performed CQI for the chosen interventions, and measured improvements in prenatal care quality measures.

Since 2004, the Network has reviewed the records from 10,000 pregnancies to track improvement in care and pregnancy outcomes. After nearly a decade, most Network programs shifted from IMPLICIT Pregnancy to IMPLICIT ICC. In 2015, the Network began the development of a more simplified approach to IMPLICIT Pregnancy, known as IMPLICIT Lite; although, some IMPLICIT Network sites are still using IMPLICIT Pregnancy to improve the care of pregnant women/birthing people in their practices.

Other scholarly projects developed through IMPLICIT Pregnancy include the validation of a two-step (2- item or PHQ2) depression screening strategy during pregnancy and the postpartum period, and evaluation of postpartum depression screening and interventions.



DEVELOPMENT OF IMPLICIT MODELS OF CARE

Through experiences with IMPLICIT Pregnancy, the Network recognized that pregnancy outcomes often depend on the health and lifestyle of a woman before the first prenatal visit. Thus, interventions aimed at improving prenatal care alone often fail to significantly reduce low birth weight and premature births. In 2006, the Centers for Disease Control Select Panel recommended using the interconception period, the time between pregnancies, to improve maternal health prior to the subsequent pregnancy, although no widely accepted model of providing this care existed. Knowing that many women/birthing people didn't seek care for themselves between pregnancies, yet brought their babies to well child visits, the IMPLICIT Network wanted to use this opportune time to reach women/birthing people who may not otherwise receive care. In 2010, the IMPLICIT Network shifted its focus from the prenatal period and developed a model of interconception care known as IMPLICIT Interconception Care (ICC).



IMPLICIT INTERCONCEPTION CARE (ICC)

The IMPLICIT ICC model, came from knowledge learned during the IMPLICIT Pregnancy project, on how trying to address risks and influence behavior change during pregnancies is too late. The ICC model addresses potential risks, that have evidence to show their impact on birth outcomes, using interconception care by screening and promoting behavior change for mothers/birthing people who accompany their children to well child visits. The model adapts the familiar 5 A's of Behavioral Change Theory, a model recommended for smoking cessation for more than 20 years by the National Cancer Institute, to target risk factors associated with poor pregnancy outcomes and address them prior to subsequent pregnancies.

IMPLICIT ICC incorporates brief screening and interventions that are feasible to perform within the context of a well child visit and have strong evidence for improving future birth outcomes. IMPLICIT ICC targets four perinatal risk factors:

Tobacco use

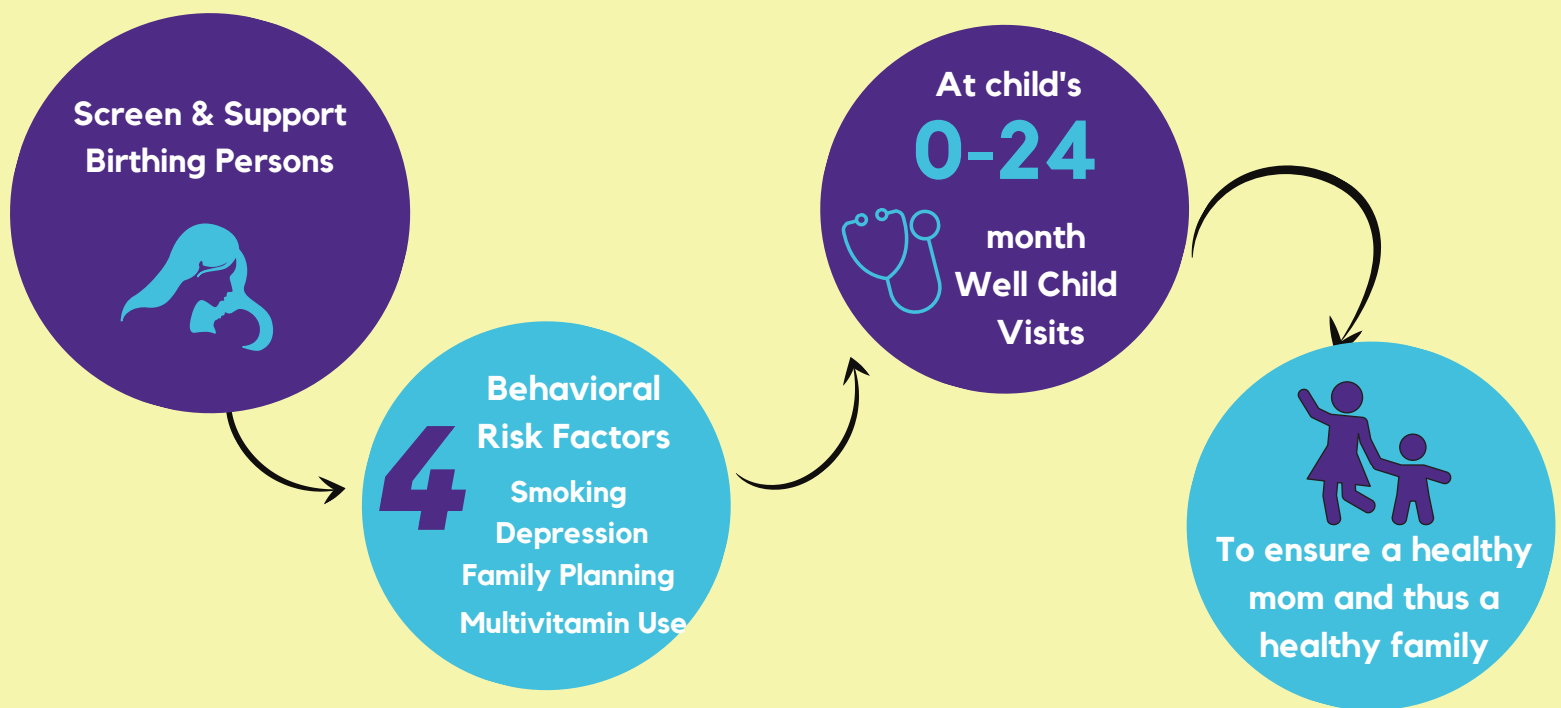
Depression risk

Lack of contraception use

Lack of multivitamin with folic acid intake



IMPLICIT INTERCONCEPTION CARE (ICC)



IMPLICIT INTERCONCEPTION CARE (ICC)

IMPLICIT recommends screening for ICC at every well child visit 0-24 months to maximize the opportunity to improve maternal and family health. **As of October 2024, 44 Network sites are actively implementing ICC as a standard of care, 29 of which are sharing data in the Network's data management system, REDCap.**

Initial IMPLICIT ICC outcomes have shown that mothers/birthing people attend more than 94% of well child visits, indicating that these visits are opportune times to reach mothers/birthing people for interconception care.

Mothers/birthing people screened positive for one or more ICC risk factor at more than 65% of well child visits, making this model successful in its ability to identify modifiable perinatal risk factors. Given high rates of the four risk factors, the Network is currently developing additional strategies to improve perinatal behaviors associated with poor pregnancy outcomes with the goal of improving future birth outcomes.

Other initiatives developed by IMPLICIT Network local sites that have grown out of IMPLICIT ICC include the development of novel strategies for reducing rapid repeat pregnancies and lengthening interpregnancy intervals, promotion of pregnancy intention screening, and promotion of patient centered contraception counseling.



IMPLICIT ICC & FUTURE DIRECTIONS

IMPLICIT ICC uses baby's well child visits as opportunities to identify and reduce mother's/birthing people's risks for poor outcomes with any future pregnancy.

The Network has conducted ongoing evidence-based literature reviews and adjusted IMPLICIT Pregnancy and IMPLICIT ICC protocols based upon the best current evidence. Using results from these initiatives, the Network has collaborated to publish a variety of papers, as well as present models and outcomes at national meetings. The Network has grown beyond its initial geographical region of the Northeastern United States and its membership is no longer limited to family medicine residencies. The Network now includes practices in the Southeastern and Great Lakes regions and engages a variety of primary care providers, including pediatricians.

As of 2019, the IMPLICIT Network expanded its efforts to improve maternal care to include a 4th Trimester Initiative. This initiative emphasizes the importance of an early postpartum, within 21 days of delivery, in order to improve maternal outcomes.



IMPLICIT 4TH TRIMESTER (4TM)

In May 2018, the American College of Obstetricians and Gynecologists (ACOG) called for a new paradigm for postpartum care that addresses the current needs of women/birthing people and protects against morbidity and mortality for individuals after pregnancy. In response, the IMPLICIT Network developed the 4th Trimester Model that aims to:

- **Identify patients at risk**
- **Implement an early postpartum visit between 7 and 21 days after delivery.**
- **Streamline postpartum care for new parents**

This initiative would allow providers to identify high-risk mothers and provide postpartum care for all women within 3 weeks after giving birth instead of a typical 6-week postpartum visit.

As of October 2024, the IMPLICIT Network has 16 active 4th Trimester sites. The Network is currently working on creating a 4TM Toolkit and disseminating data and insights from the Pilot and Phase 1 periods.



IMPLICIT 4TH TRIMESTER (4TM)

IMPLICIT 4th Trimester Care Model

3rd Trimester Visit (~36 weeks)

- Identify preexisting conditions/risk factors
- Create plan for postpartum period



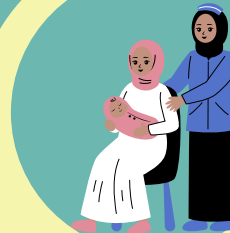
Hospital Discharge (2-3 days from birth)

- Identify delivery/recovery complications
- Communicate with outpatient care team



Early Postpartum Visit (within 21 days from birth)

- Assess signs of biomedical/psychosocial conditions
- Provide support services as indicated



Routine Postpartum Visit (6-8 weeks from birth)

- Review engagement with services
- Comprehensive recovery assessment
- Ensure connection to primary care



FINANCIAL SUPPORT

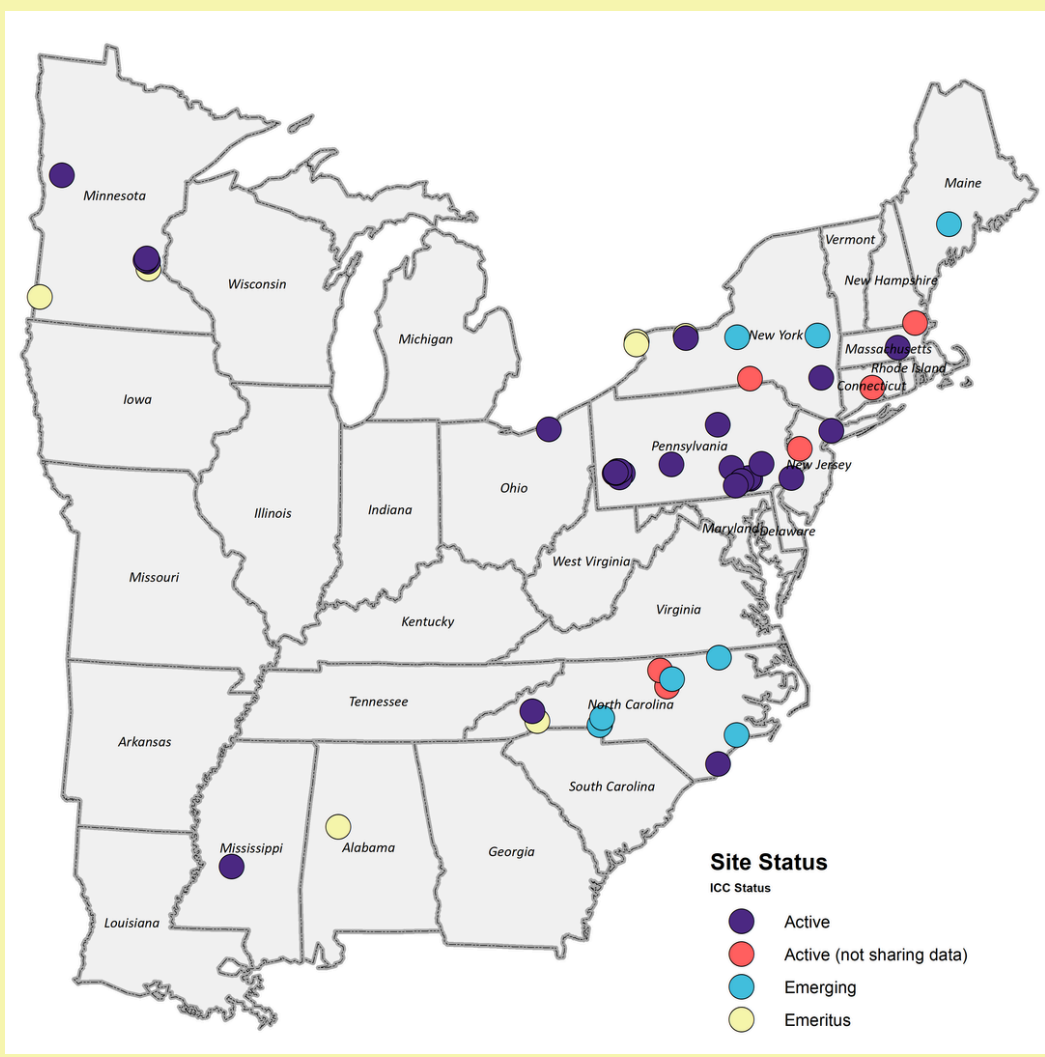
The IMPLICIT Network has been generously supported by the National and Pennsylvania March of Dimes since 2003 through various grants and initiatives. These monies enhanced the maintenance of organizational infrastructure, expansion of programs, and support of dedicated IMPLICIT staff. In addition to these streams of funding, individual Network sites have received a variety grants to improve ICC initiatives at their sites, including March of Dimes support in New York, North Carolina, and Mississippi. Most recently, Pennsylvania programs have greatly benefited from a grant from the Pennsylvania Department of Health for 2020-2025 funding to support ICC initiatives and expansion of personnel and dissemination to new sites in the commonwealth.



IMPLICIT NETWORK MEMBERS

The Network membership has grown significantly since its inception in 2003 and now includes a governing Leadership Council, Data Review Committee, Health Equity Committee and Scholarly Activity Committee.

As of October 2024, there are 44 sites in 11 states who participate in the IMPLICIT Network.



IMPLICIT NETWORK SITES

Alabama:

- University of Alabama FMR*

Connecticut:

- Middlesex Hospital FMR

Maine:

- Maine Dartmouth FMR

Massachusetts:

- Greater Lawrence HC
- University of Massachusetts FMR

Minnesota:

- Dakota Child and Family Clinic HC
- Pipestone Family Clinic HC*
- Southside HC
- Sanford Health Pelican Rapids
- Hennepin Healthcare
- Broadway Family Medicine

Mississippi:

- University of Mississippi Pediatrics

New Jersey

- Hunterdon Medical Center HC

New York:

- Anthony Jordan HC
- University of Rochester Medical Center FMR
- Mid-Hudson Family Practice FMR
- Institute for Family Health Bronx HC
- UHS Family Medicine FMR
- SUNY Update Medical University FMR
- Mount St. Mary Hospital Foundation HC
- Niagara Falls Memorial Medical Center FMR

*Denotes a historical site, no longer active



IMPLICIT NETWORK MEMBERS

North Carolina:

- Blue Ridge Community Health Services HC
- Mountain Area Health Education Center FMR
- New Hanover Regional Medical Center FMR
- University of North Carolina Chapel Hill FMR
- University of North Carolina Prospect Hill FMR
- Duke University Pediatrics
- Duke University Family Medicine
- Rural Health Group
- Novant Health
- Jacksonville Children's Multispecialty Clinic

Ohio:

- MetroHealth FMR

Pennsylvania:

- Forbes Family Medicine FMR
- LGH Downtown Family Medicine FMR
- LGH Family Maternity Medicine HC
- LGH Twin Rose HC
- Penn State Hershey FMR
- Reading Hospital FMR
- University of Pennsylvania FMR
- UPMC Altoona FMR
- UPMC Liberty Ave
- UPMC Matilda Theiss HC
- UPMC McKeesport FMR
- UPMC Renaissance Family Practice
- UPMC Shadyside FMR
- UPMC Squirrel Hill FM
- UPMC St. Margaret FMR
- UPMC Williamsport FMR
- Wellspan York Family Medicine FMR



IMPLICIT NETWORK 2024

For more information about the Network's initiatives or to join the Network, contact implicit@fmec.net.

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