

IMPLICIT Interconception Care Toolkit

Incorporating maternal risk assessment into well-child visits to improve health outcomes



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- Daniel Frayne, MD
- Sue Stigleman, MLS
- Jessica Brubach, MPA

We appreciate the work of the team who completed the revisions in this updated version.

Author

- Stacy Bartlett, MD

Contributing Authors

- Mario DeMarco, MD, MPH
- Anna Fetterolf, MPH
- Carolyn Kirby, MPH
- Kendall Roseboro, MPH
- Maha Shafqat, MPH

IMPLICIT Network Leadership Council

- Stacy Bartlett, MD
- Mario DeMarco, MD, MPH
- Narges Farahi, MD
- Scott Hartman, MD
- Sarah Jones, MD
- Brianna Moyer, MD
- Aimee Smith, DO

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Executive Summary

Maternal and child health have not benefited greatly from the same types of advances and innovations found elsewhere in healthcare. For decades, advocates across healthcare have been working on ways to improve infant and maternal morbidity and mortality: defining key issues, developing evidence for recommendations, and creating guiding coalitions for improvements in care delivery. Despite these efforts, infant mortality in the U.S. lags behind most economically-similar countries around the world, and U.S. maternal mortality is increasing. Critically, the racial disparity in maternal and infant health is worsening.

There is reason for optimism. Federal, state, and local governments, healthcare organizations, and the media are devoting more resources to maternal and infant health, with a particular focus on improving racial equity. In June 2022, the Biden administration released the Blueprint for Addressing the Maternal Health Crisis that proposes society-wide approaches to improving maternal health in the U.S. The American Rescue Plan Act (2021) provided states with the option to extend Medicaid coverage through 12 months postpartum (Hill et al., 2022). Foundations have increasingly included maternal health as a funding priority (“Maternal Health: What Funders Have Been Supporting,” 2021).

The IMPLICIT (Interventions to Minimize Preterm and Low birthweight Infants through Continuous Improvement Techniques) Network began in 2003 as a collaborative of family medicine residencies focused on developing continuous quality improvement (QI) techniques to deliver evidence-based interventions during prenatal care. The Network recognized the value of QI in improving care delivery with collective data sharing and that poor birth outcomes, particularly those related to preterm birth and birth defects, require interventions and risk reduction before pregnancy. Pediatric well-child visits are an ideal time for providers to assess maternal risk and deliver interconception interventions. With this in mind, the IMPLICIT Interconception Care (ICC) Model was developed. It's since been successfully implemented in a variety of sites across 10 states and shows promising results to reduce maternal risk factors.



This toolkit provides the necessary background, evidence, and resources to successfully implement the IMPLICIT ICC Model in the context of well-child visits. Because no two clinical sites are identical, each practice can tailor the Model to meet its needs and those of the population it serves. The Model is adaptable in a variety of settings, including family medicine practices, pediatric care, health departments, community health centers, and public health programs. The toolkit offers strategies, workflows, and guidance to implement the Model and presents solutions that have worked for others.

The national landscape has changed since the original Toolkit was produced in 2015. The COVID-19 pandemic was devastating to healthcare workers and patients alike but brought new opportunities in technology that can be leveraged for both patient care and stakeholder

collaboration. The increased awareness of systemic racial injustice has shone a spotlight on the persistent inequity in maternal and infant health.

This revised toolkit includes updated data, new workflow possibilities, and additional sections highlighting the opportunity ICC provides for improving health equity as well as tips for implementation into pediatric practices. Finally, we have adjusted the language used to refer to our patient populations in recognition of the gender diversity of people who give birth. The term Mother/ Birthing Person (MBP) has in some places replaced “woman” or “mother” and “their” is used rather than “she/her” where appropriate. If a term was used in a cited study or statistic, we have retained that wording for consistency. In the absence of a widely accepted alternative, we have continued to use the word “maternal” and “mom.”

The IMPLICIT Network is committed to using QI as a way to ensure that patients receive high-quality standardized care. QI offers established tools for evaluating practice improvements, and we recommend it as part of implementing the IMPLICIT ICC Model. Working on QI collaboratively with other organizations enables sharing best practices and assistance with solving problems. We encourage practices to join an existing collaborative, like the IMPLICIT Network, or form new ones to support their work. Membership in the IMPLICIT Network has given us the opportunity to establish evidence for interconception care delivery and provided a forum for professional collaboration and development, resident education, and advancement of the field. More information about the Network can be found at <https://www.fmec.net/implicit>.

IMPLICIT Interconception Care Toolkit

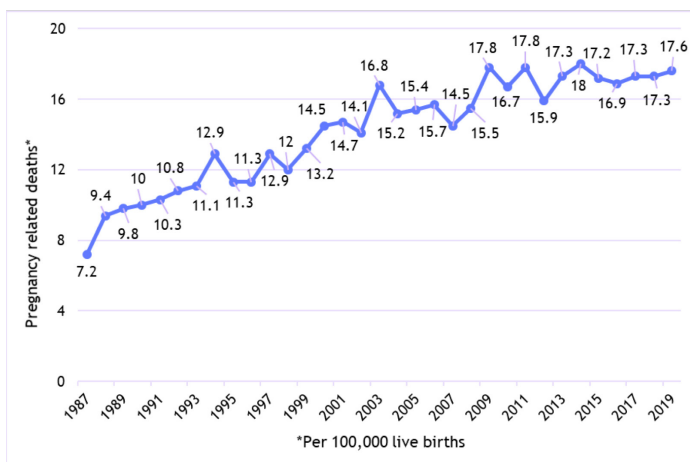
Incorporating maternal risk assessment into well-child visits to improve health outcomes

Making the case for a new model of interconception care

Every year in the U.S., more than 800 women die of pregnancy-related causes and almost 20,000 infants die before their first birthday (Hoyert, 2023; Ely, 2022). The U.S. ranks 34th out of 47 developed countries in infant mortality and 33rd out of 40 developed countries in maternal mortality (OECD, 2020). Despite a number of strategies aimed at the prenatal period, the U.S. infant mortality rate has dropped only slightly and the maternal mortality rate continues to rise (Figure 1; Figure 2).

Almost half of the pregnancies in our country are unintended (Finer & Zolna, 2016). By the time a person knows they're pregnant or begins prenatal care, it's often too late to change many of the factors that lead to poor birth outcomes. The most crucial period for modifying birth outcomes is before a person becomes pregnant (Toivonen, 2017; Hemsing, 2017).

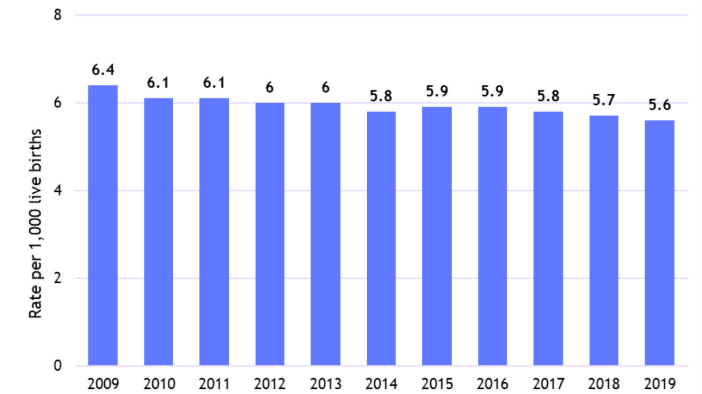
Figure 1: Trends in pregnancy-related mortality ratios in the United States: 1987-2019



Source: Centers for Disease Control and Prevention, Pregnancy Mortality Surveillance System, 1987-2019.

Unfortunately, multiple barriers prevent widespread delivery of effective interventions in the preconception period (Steel, 2016; M'hamdi, 2017).

Figure 2: Infant Mortality Rates: United States, 2009-2019



Note: An infant death occurs within the first year of life
Source: National Center for Health Statistics, period linked birth/infant death data, 2009-2019.

Fewer than 40% of women received preconception counseling, where they talked with a doctor, nurse, or other healthcare worker about five or more of the 11 lifestyle behaviors and prevention strategies, in the year before their pregnancy (CDC, 2019). Many women of reproductive age see multiple providers and have short relationships with them, especially women already at highest risk for poor birth outcomes (Salganicoff, Ranji & Wyn, 2005). The general health of reproductive-aged women is declining: 58% are overweight or obese, 15% smoke, 10% have hypertension, and 1% have preeclampsia (Osterman et al., 2023; CDC, 2019; Azeez et al., 2019; Robbins et al., 2018).

After the birth of a child, many people who had been getting regular prenatal care stop seeing providers for their own healthcare or return to the pattern of fragmented care with multiple short-term providers (DiBari, Yu, Chao & Lu, 2014; Jack, Atrash, Bickmore & Johnson, 2008; Liberto, 2012; McGarry, Kim, Sheng,

Egger & Baksh, 2009; Moos, 2010; Salganicoff et al., 2005). After pregnancy, people often revert to behaviors, like smoking and substance use, that put them and their future pregnancies at risk (Su & Buttenheim, 2014). In addition, the maternal and family focus often shifts from caring for the MBP to caring for the infant, ignoring the healthcare needs of the MBP (Bloom, Cohen & Freeman, 2009; Salganicoff et al., 2005).

Nearly two decades ago, the CDC Work Group and Select Panel of Preconception Care recommended maternal risk assessment and intervention in the interconception period, especially for people with a previous poor birth outcome (Johnson et al., 2006). Recommendations for preconception screening and intervention for maternal family planning, birth spacing, depression, smoking, and multivitamin/folic acid use have a robust base of evidence (Bukowski et al., 2009; Conde-Agudelo, Rosas-Bermudez & Kafury-Goeta, 2006; Floyd et al., 2008; Frieder, Dunlop, Culpepper & Bernstein, 2008; Wilson et al., 2007). Interconception care (ICC) is care for people of childbearing age between pregnancies (from the end of one pregnancy to conception of the next), with the aim of improving health outcomes for MBPs, their newborns and their other children (March of Dimes, The Partnership for Maternal, Newborn & Child Health, Save the Children & the World Health Organization, 2012; American College of Obstetricians and Gynecologists & Society for Maternal-Fetal Medicine, 2019). ICC uses medical and psychological interventions to modify risk factors and promote healthier outcomes in any subsequent pregnancy (Yonekura, French, Johnson, McGregor & Reyes, 2009). Table 1 identifies various ICC models described in the literature.

IMPLICIT (Interventions to Minimize Preterm & Low Birthweight Infants through Continuous Improvement Techniques) is a collaboration of family medicine and pediatric practices, most of which are residency practices, under the auspices of the Family Medicine Education Consortium. See Appendix 1 for more information about the IMPLICIT Network. In 2003, IMPLICIT began recruiting family medicine residencies to review their current prenatal care processes and resident training curricula. Faculty

members from these programs conducted a comprehensive literature review on prematurity prevention. Based on this review, project participants developed a collective strategy to implement evidence-based prenatal interventions aimed at decreasing the rates of preterm birth and low birthweight (LBW).

Table 1. Other ICC models

- Encouraging more than one postpartum visit with the maternity care provider (at least one by 3 weeks postpartum) (ACOG, 2021)
- Expanding the scope of the postpartum visit by providing guidelines focused on reducing risk factors to improve outcomes of subsequent pregnancies (Preconception Health Council of California, 2011)
- Offering group parenting visits for well-child visits and maternal education and support (Centering Healthcare Institute, 2016)
- Providing maternal health screening within the context of well-child visits (Lumley, Watson, Watson & Bower, 2001)
- Providing preconception and interconception care during routine primary care visits (Dunlop, Jack & Frey, 2007; Muchowski & Paladine, 2004)
- Using group interventions like Strong Healthy Women that focus on behavior change (Downs et al., 2009)

Realizing that intervention during pregnancy is often too late to improve outcomes, IMPLICIT became interested in interconception care and developed the ICC Model (Figure 2) to address at every well-child visit an MBP's health risks that affect their child and family.

Not only do these interventions improve delivery of interconception care and associated outcomes, they also can help decrease health disparities. Non-Hispanic Black infants have more than twice the infant mortality rate (death within the first year of life) than non-Hispanic White infants (Ely & Driscoll, 2022). Compared to non-Hispanic White women, rates of severe maternal morbidity are 2.1 times higher for Black women, 1.3 times higher for Hispanic women, 1.2 times higher for Asian/Pacific Islander women, and 1.7 times higher for American Indian/Alaska

Native women (Mehta, 2014). Minority women have twice the rate of unintended pregnancy than non-minority women, and low-income women have five times the rate of unintended pregnancy compared to women with higher incomes (Mehta, 2014). Women in populations with fewer economic and social support resources are less likely to attend mental health visits during pregnancy and are less likely to resume antidepressant use following pregnancy than women in better-resourced populations (Dietz et al., 2007). Consumption of folic acid supplements varies from a low of 9% among non-Hispanic Black women to a high of 30% of non-Hispanic White women (Tinker, Cogswell, Devine & Berry, 2010).

IMPLICIT ICC Model Rationale

Even if MBPs don't have primary care of their own, many regularly take their infants to pediatric healthcare visits (Bloom et al., 2009; Gjerdingen, Crow, McGovern, Miner & Center, 2009). This is why the IMPLICIT ICC Model focuses on screening and intervention during well-child visits. Well-child visits in the first 2 years of life occur frequently (at 1 week and at 1, 2, 4, 6, 9, 12, 15, 18, and 24 months of age), offering multiple opportunities to identify and address interconception health risks.

Addressing an MBP's health in the context of their child's health is an ideal and appropriate way to provide interconception care. Many maternal behaviors and conditions affect children's health. Most MBPs respond positively to screening and referral for services for their own emotional and health behaviors (Feinberg et al., 2006; Freeman et al., 2005; Gjerdingen et al., 2009; Heneghan, Mercer & DeLeone, 2004; Kahn et al., 1999; Rosener et al., 2016; Trussell et al., 2013; Wilson et al., 2008).

The American Academy of Family Physicians (AAFP) position paper on preconception care, released in 2015 and updated in 2022, states that preconception care is primary care. They recommend incorporating the elements of preconception/interconception care into routine care for all MBP (AAFP, 2022). Other professional medical organizations validate this approach. The American Medical Association (AMA), in its statement of physician responsibilities for smoking cessation, calls for collaborative treatment across all points of contact with a patient, in any clinical



context, and by any appropriately licensed health care professional (Policy Finder | AMA, n.d.). The American Academy of Pediatrics (AAP), recognizing that the course of routine well-child visits gives the primary care provider and the family a chance to develop an ongoing relationship, recommends that pediatricians routinely screen MBPs for depression and tobacco use and follow any positive screens by supporting and facilitating their access to resources to help the MBP-child dyad (Jenssen et al., 2023; Rafferty et al., 2018).

The IMPLICIT ICC Model builds on the familiar 5 As of smoking cessation (Figure 3), a model recommended for more than 25 years by the National Cancer Institute (Glynn & Manley, 1997) and the U.S. Department of Health and Human Services (Fiore et al., 2008). The 5 As are based in behavioral change theory and research and are also used for obesity screening and counseling (Jay et al., 2008; Sesrdula, Khan & Dietz, 2003; Vallis, Piccinini- Vallis, Sharma & Freedhoff, 2013).

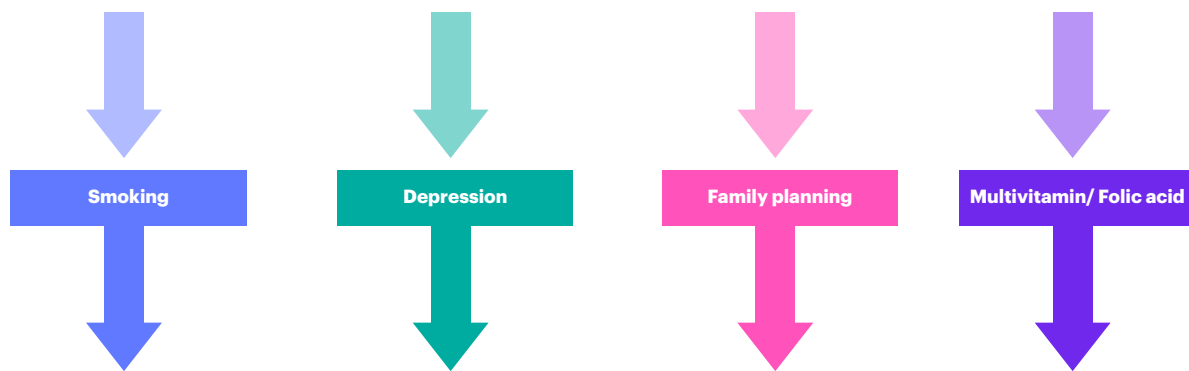
To make screening and intervention feasible in the context of an already-busy well-child visit, the IMPLICIT ICC Model relies on six key concepts (Table 2).

Figure 3: IMPLICIT ICC Model

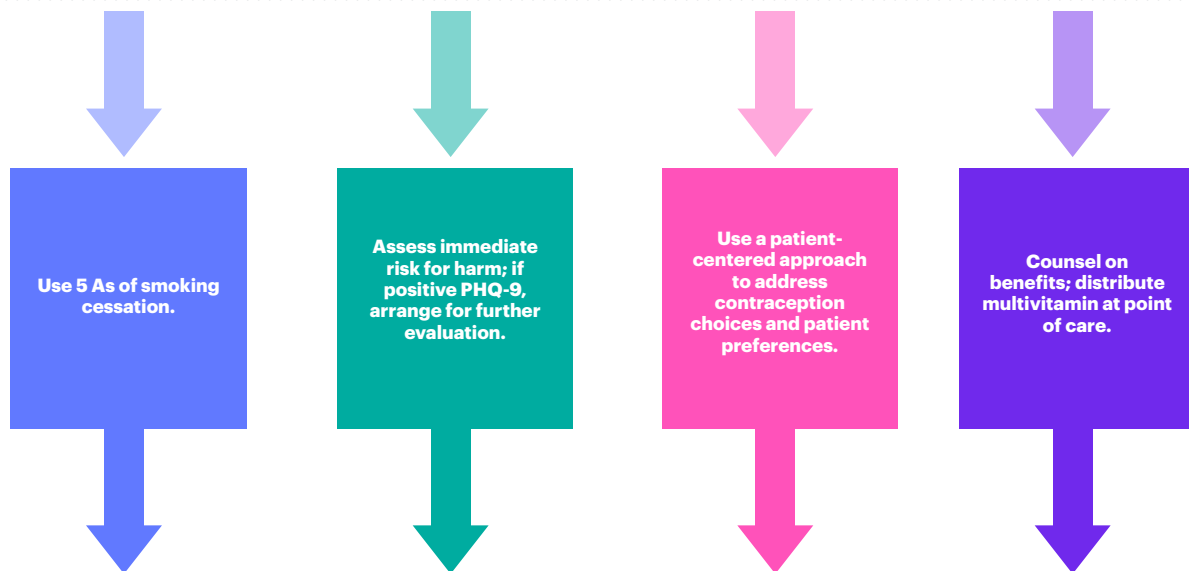
5 As of ICC

At **every** well-child visit from birth to 24 months of age

- Ask the MBP about smoking, depression, family planning, and multivitamin/folic acid. Advise and educate them about desired healthy behaviors.
- Assess any positive screens.
- Assist in and arrange for interventions.
- Analyze collected data for QI research to develop strategies to improve care delivery and patient outcomes.



If any positive risk is present, perform an intervention to address the risk.



- Reinforce positive behaviors.
- Refer to other resources for further evaluation or follow up as needed.
- Repeat screening at next well-child visit.
- Document screening and interventions in the child's chart for QI activities.

Table 2. Screening and intervention concepts

- 1. The screening needs to be brief.** Two major barriers to providing evidence-based screening interventions are lack of time and competing priorities of both provider and patient.
- 2. The screening needs to be performable within the context of a well-child visit and relate to the child’s health and well-being, not requiring a separate visit that focuses solely on maternal health.** This model builds on age-specific recommendations for routine health prevention screenings and anticipatory guidance that affect the child’s health.
- 3. The screening and intervention needs to have strong evidence for improving future birth outcomes.** Relying on strong evidence-based recommendations and guidelines is a cornerstone to the IMPLICIT Network QI work.
- 4. The intervention for at-risk MBPs needs to be brief and straightforward.** The intervention can be as simple as scheduling a follow-up appointment to address the concern or referring the MBP to an appropriate provider for further care.
- 5. The screening and intervention should be team-based and staff-driven, rather than depend solely on the provider.** As often as possible, clinical assistants, care managers or other office staff should perform them.
- 6. The model should be performable in all clinical and nonclinical environments where preventive health care for children is offered.** Not all providers or practices have the education, resources or financial ability to address all a MBP’s needs themselves, but all are capable of screening and arranging/referring for needed services.

The following information addresses each of the four intervention areas of the IMPLICIT ICC Model, including scope of the problem and evidence for improved outcomes in pediatric/postpartum care, best screening method and best intervention.

Smoking

Scope of the problem (rates, relapses, burden of disease)

- Tobacco smoking in pregnancy remains one of the few preventable factors associated with complications in pregnancy (Chamberlain et al., 2013).

- Twenty-one percent of reproductive-age women currently smoke (Lopez et al., 2018).
- Half of pregnant people who stop smoking during pregnancy return to smoking within 1 year postpartum (De Genna et al., 2023).
- Prenatal smoking is associated with 5 to 8% of preterm births, 13 to 19% of term infants with growth restriction, 5 to 7% of preterm-related deaths, and 23 to 34% of sudden infant death syndrome (SIDS) deaths (Tong et al., 2013).
- Table 3 identifies complications associated with smoking.
- Smoking adds \$1,142 to \$1,358 per MBP who smokes to estimated birth and first-year costs for MBPs and infants. The cost for infants of MBPs who smoke are approximately 10 times the maternal costs (Chamberlain et al., 2013).

Table 3. Health complications associated with maternal smoking during pregnancy

Pregnancy	Infancy	Childhood
<ul style="list-style-type: none"> • Ectopic pregnancy • Placental abruption • Placental previa • Preterm birth 	<ul style="list-style-type: none"> • Low birth weight • Stillbirth • SIDS 	<ul style="list-style-type: none"> • Obesity • Intellectual impairment • Asthma
Avşar, et al., 2021		

Evidence for improved outcomes (in pregnancy, for mom, for child)

- Smoking cessation during pregnancy reduces risk of preterm birth, LBW, stillbirth, early neonatal mortality, and SIDS (Baba, Wikstrom, Stephansson & Cnattingius, 2014; Bailey, 2015; Batech et al., 2013).

Evidence in pediatric/postpartum care

- AAP (2022), AMA (2012), and U.S. Preventive Services Task Force (USPSTF) (2021) recommend maternal tobacco screening and intervention in the context of caring for children.
- AAP (2022) recommends asking about tobacco use at every clinical encounter, including well- and sick-child visits.
- Interventions during routine child care can be effective in preventing smoking relapse rates in moms (Daly et al., 2016).

Evidence for best screening method

- AAP recommends establishing office systems and workflows that promote screening and documentation in the electronic health record (EHR) (Screening Office Systems for Practice Transformation, n.d.).

Evidence for best intervention

- USPSTF (2021) guidelines recognize that tobacco dependence is a chronic disease and, therefore, recommend that tobacco status be consistently documented and that every patient be offered recommended treatments.
- The 5 As model has been effective and is recommended by AAFP (2022), AAP (2022), American College of Obstetricians and Gynecologists (ACOG) (2023), and USPSTF (2021).

Depression

Scope of the problem

- One in 8 women is affected by perinatal depression (depression during pregnancy or in first 12 months after delivery) (Bauman et al., 2020).
- Mental health conditions were the underlying cause of 22% of pregnancy-related deaths (Trost et al., 2022).
- USPSTF (2023) guidelines recommend screening for depression in adults, including during pregnancy and the postpartum period.
- In the United States, 400,000 infants are born each year to depressed MBPs (Earls & AAP Committee on Psychosocial Aspects of Child and Family Health, 2010).
- Major depression peaks 6 weeks after birth and minor depression 2 to 3 months after birth; another peak in depression occurs 6 months after birth (Earls et al., 2018).
- MBPs often change their primary healthcare providers when they begin prenatal care, and the relationship with their pre-pregnancy providers may not resume after giving birth. This period of transition can stretch from pregnancy through the first year postpartum, potentially creating an 18- to 24-month disruption in usual care providers (Dietrich et al., 2003; Hill, Greenberg, Holzman & Schulkin, 2001; LaRocco-Cockburn, Melville, Bell & Katon, 2003; Katon, et al, 2017).

- Competing demands make it more difficult for MBPs to maintain ongoing relationships with specialty mental health providers.

Evidence for association of maternal depression and child outcomes

- Maternal depression can create an environment that places the child at higher risk of language, cognitive, social, and emotional delays (Sutherland et al., 2022; Earls et al., 2018, Netsi et al., 2018).
- Effective treatment of depression in MBPs reduces the risk of problem behavior and psychopathology in children (Earls et al., 2018; Weissman et al., 2006).

Evidence in pediatric/postpartum care

- The USPSTF (2019) recommends referring postpartum people who are at increased risk of perinatal depression to counseling.
- AAP states that pediatric medical homes should establish a system to screen for depression at the 1-, 2-, 4-, and 6-month well-child visits and provide referrals when necessary (Earls et al., 2018).
- Many pediatricians can screen for and address maternal depression (Earls et al., 2018; USPSTF, 2016).
- The benefits of screening MBPs outweigh the risks legally, ethically, and practically (Earls et al., 2018).
- Randomized trials show benefit of implementing team-based care for perinatal depression in sites providing non-specialty mental health services (Grote et al., 2015; Melville et al., 2014; Reist et al., 2022).

Evidence for best screening method

Table 4 includes validated screening methods for pregnancy and postpartum depression.

- The AAP, ACOG, and USPSTF all endorse the Edinburgh Postnatal Depression Scale and the two-question Patient Health Questionnaire (PHQ-2) screen for depression. (AAP, 2022; ACOG, 2015; USPSTF, 2023).
- Bennett and colleagues (2008) compared the Edinburgh Postnatal Depression Scale with a 2-item screen (Spitzer et al., 1994) modified from the PHQ-2. The authors found that the simpler 2-item screen is efficient in ruling out depression and can

be used as a pre-screen for a longer tool, such as the PHQ-9 (9-question depression screen; Table 4). See Table 5 for a comparison of the two-question screens.

Table 4. Validated screening methods for depression during pregnancy and postpartum depression

- Beck Depression Inventory
- Beck Depression Inventory-II
- Center for Epidemiologic Studies Depression Scale
- Edinburgh Postnatal Depression Scale
- Patient Health Questionnaire 2 and 9 (PHQ-2 and PHQ-9)
- Postpartum Depression Screening Scale
- Zung Self-rating Depression Scale

ACOG, 2015

- After initial screening at 1 month, repeated screening at 6 and 12 months postpartum identifies an additional 13 percent of women at high risk of depression (Yawn, Bertram, Kurland & Wollan, 2015).
- Screening should be nonstigmatizing, assuage an MBP's fear of being reported to authorities, and use language that frames questions about the MBP's well-being in terms of their child's health (Byatt, Biebel, Friedman, Debordes-Jackson & Ziedonis, 2013).

Evidence for best intervention

- The Motivating Our Mothers (MOM) trial screened MBPs at well-child visits, followed by an educational intervention with motivational and destigmatizing language, followed by a telephone booster. The outcome of the randomized controlled study was an increase in MBPs who reported attempting to contact identified resources: 73 percent intervention vs. 53 percent control (Fernandez y Garcia et al., 2015).
- Engaging with community partners can reveal public and private resources for follow-up and treatment (Earls & AAP Committee on Psychosocial Aspects of Child and Family Health, 2010).

Family Planning

Scope of the problem (rates, relapses, burden of disease)

- Almost half of pregnancies in the United States are unintended (Finer & Zolna, 2016).

Table 5. Depression screening comparison: PHQ-2 and 2-item screen

<p>PHQ-2 (Pfizer, 2016)</p>	<p>The first two questions of the PHQ-9: Over the last 2 weeks, how often has the person been bothered by any of the following?</p> <ul style="list-style-type: none"> • Having little interest or pleasure in doing things • Feeling down, depressed or hopeless <p>The answers are scored 0 to 3. (scored 0 = not at all; 1 = several days; 2 = more than half the days; 3 = nearly every day)</p>
<p>2-item screen (Spitzer et al., 1994)</p>	<ul style="list-style-type: none"> • During the past month have you often been bothered by feeling down, depressed or hopeless? • During the past month have you often been bothered by little interest or pleasure in doing things? <p>The questions are yes/no.</p>

- Consequences of unintended pregnancy include delayed prenatal care, LBW, and preterm birth (Zapata et al., 2015).
- An interpregnancy interval (IPI) of <18 months is associated with increased risk of adverse perinatal outcomes with a more significant risk of adverse outcomes in intervals less than 6 months (ACOG & Society for Maternal-Fetal Medicine, 2021).
- Approximately 29% of U.S. MBPs had a second or higher-order birth with an IPI of less than 18 months (Jackson et al., 2017).
- Rapid repeat pregnancies are associated with preterm birth, LBW, early infant death, congenital malformations, poor control of maternal chronic conditions, maternal nutritional depletion, incomplete healing, suboptimal lactation, infection transmission, and sibling competition (Association of Maternal & Child Health Programs, 2014; Conde-Agudelo, Rosas- Bermudez, Castano & Norton, 2012; Zapata et al., 2015).
- In 2018-2019, 65.3% of women aged 15-49 in the U.S. were currently using contraception (Daniels & Abma, 2020).

Evidence for improved outcomes (in pregnancy, for MBP, for child)

- Postpartum contraception reduces unintended pregnancy and preterm births (Rodriguez, Chang & Thiel de Bocanegra, 2015; White, Teal & Potter, 2015).
- AAP and ACOG recommend that routine postpartum care focus on contraception options and prompt initiation (Zapata et al., 2015).
- Contraception counseling that focuses on the quality of interaction, personalized discussions, and addressing psychosocial barriers to use have the highest impact on contraception uptake (Zapata, et al., 2018).

Evidence in pediatric/postpartum care

- Although antenatal counseling or counseling prior to hospital discharge after childbirth does not improve postpartum contraceptive use or increase IPI (Zerden et al., 2015), postpartum counseling does improve contraception use, in general, as well as use of more effective methods (Zapata et al., 2015).
- Women welcome inquiry and are comfortable talking with their infant's provider about contraception at well-child visits (Fagan, Rodman, Sorensen, Landis & Colvin, 2009; Kumaraswami, 2013).

Evidence for best screening method

- The CDC and the U.S. Office of Population Affairs recommend communication about contraception that establishes and maintains rapport with the client (Gavin et al., 2014).

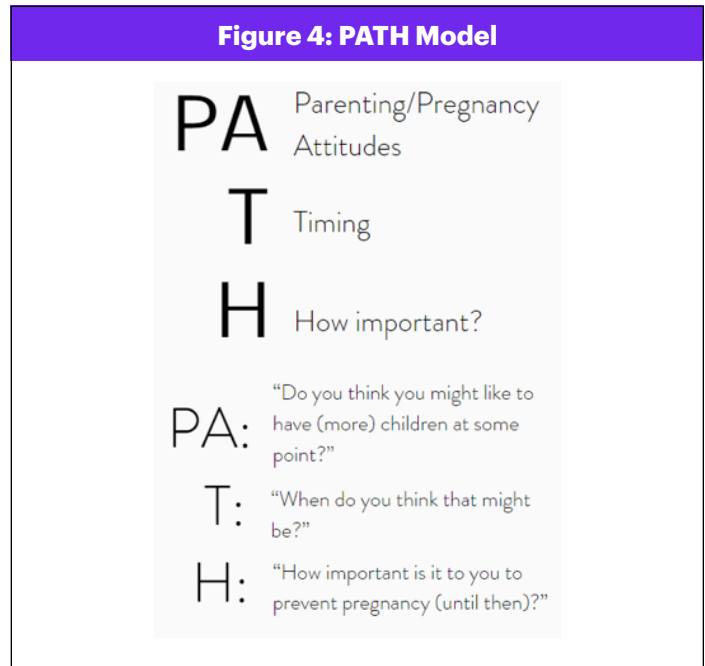
Evidence for best intervention

- Contraception counseling should keep the pillars of reproductive justice and bodily autonomy at the forefront (Dehlendorf, Krawjewski, & Borrero, 2014; Fox et al., 2018; Jones et al., 2023).
- Patient-centered contraception counseling is recommended by ACOG (ACOG, 2022).
- A shared decision-making model takes into account the role of the provider as a medical expert and the value of the patient's experience as an expert in their own body (Dehlendorf, Krawjewski, & Borrero, 2014; Fox et al., 2018; Jones et al., 2023).
- A shared decision-making model improves trust,

understanding, and satisfaction (Dehlendorf, Krawjewski, Borrero, 2014; Fox et al., 2018).

- The PATH framework is a person-centered model to help providers engage in conversations with patients that respects their experiences and preferences, (Figure 4; Geist et al., 2019).

Figure 4: PATH Model



Multivitamin/Folic acid

Scope of the problem (rates, relapses, burden of disease)

- In the United States, three percent of infants are born with a congenital malformation (CDC, 2018).
- Each year in the U.S., 3,000 fetuses have neural tube defects (March of Dimes, 2022).
- Estimated mean direct lifetime medical cost per patient for spina bifida comorbidities was \$791,900 in 2016 (Grosse et al., 2016).
- Periconceptional folic acid supplementation reduces the rate of neural tube defects by 72 percent (Figo Working Group On Best Practice In Maternal-Fetal Medicine & International Federation of Gynecology and Obstetrics, 2015).
- Folic acid supplementation is needed by 4 weeks after conception, before many women realize they are pregnant (CDC, 2018).
- Seventy percent of U.S. women don't take a multivitamin or folic acid supplement in the month before pregnancy (Robbins et al., 2014).

- Sixty-one percent of women who don't use multivitamins say they're not planning to get pregnant, and 41 percent say they don't think they need to take them (Bixenstine, Cheng, Cheng, Connor & Mistry, 2015).
- Twenty-nine million opportunities to recommend folic acid are missed each year (Burris & Werler, 2011).



Evidence for improved outcomes (in pregnancy, for MBP, for child)

- New table 6 identifies professional medical groups that recommend daily use of 400 mcg of folic acid.
- Multivitamins reduce the rate of neural tube defects from 70 to 90% over folic acid alone; they also reduce the rates of cardiovascular, urinary tract and limb defects (Czeizel & Banhidy, 2011; Goh, Bollano, Einarson & Koren, 2007; van Beynum et al., 2010).

Table 6. Professional medical organizations that recommend daily folic acid consumption
<ul style="list-style-type: none"> • AAFP (2022) • AAP (2017) • ACOG (2017) • USPSTF (2023) • International Federation of Gynecology and Obstetrics (FIGO) (2015) • American College of Medical Genetics and Genomics (ACMG) (2021) • Society of Obstetricians and Gynecologists' of Canada (2022)

Evidence in pediatric/postpartum care

- Counseling MBPs about folic acid at the 6-month well-child visit increases use or intention to use by 23% at 11 months postpartum (DeMarco, et al., 2021).

Evidence for best intervention

- Women who are counseled about taking vitamins with folic acid are more likely to take vitamins than women who are not counseled (Oza-Frank, Kachoria, Keim & Klebanoff, 2015).
- Providing multivitamins with folic acid to women of childbearing age increases consumption of daily multivitamins from 30 to 70% (DeMarco et al., 2021).

The 5 As of the IMPLICIT ICC Model

Table 7 provides an overview of the 5 As used in the IMPLICIT ICC Model. Providers use the 5 As of the IMPLICIT ICC Model at every well-child visit from birth to 24 months of age.

Table 7. The 5 As of the IMPLICIT ICC Model

At every well-child visit from birth to 24 months of age:

- 1. Ask**
 - Screen the MBP for smoking, depression, family planning and multivitamin/folic acid use.
 - Document the screening results.
 - Obtain maternal demographic information (first visit only).
- 2. Advise**
 - Reinforce the MBP's desired behaviors.
 - Educate them about recommended behaviors.
- 3. Assess**
 - Evaluate any positive screens.
- 4. Assist/Arrange**
 - Determine interventions and billing.
- 5. Analyze**
 - Collect and analyze data for QI to develop strategies

Any MBP who brings their child to a well-child visit from birth to age 2 is eligible for ICC. Table 8 identifies a typical schedule for well-child visits; this schedule offers numerous opportunities for interaction between MBPs and providers.

1. Ask

The IMPLICIT ICC Model uses screening questions at each well-child visit from birth to age 2 (Figure 5). This screening can take less than a minute to complete if all responses are negative.

The IMPLICIT ICC Model recommends documenting maternal screening results in the child's health record. An MBP's risks may change; by using their child's health record, providers can track patient trends and successful interventions. Documenting in the child's record also provides the ability to extract data, compare it over time, and share it for QI. If the MBP is not a patient, the child's chart is the only place to document this information.

Clinicians have documented parental health factors that can impact the health of a child in the child's chart

Table 8. Well-child visits

Typical well-child visits	Newborn	9 months
	1 month	12 months
	2 months	15 months
	4 months	18 months
	6 months	24 months

(e.g. gestational diabetes, smoke exposure, depression) for many years. While this may be a widely used practice in your institution, we advise consulting with your legal department as you consider incorporating ICC into your practice.

A paper ICC form or an EHR can be used to document screening results. If using an EHR, consider using the well-child visit template to create order sets or reminders within the record.

Documenting maternal demographic information can help you understand your patient population. While you screen the MBP for smoking, depression, family planning and multivitamin/folic acid use at every child visit, you collect demographic information only once at the first visit. Figure 6 is the IMPLICIT ICC Model maternal demographic questionnaire.

Collecting demographic information can serve as the basis for a discussion with an MBP about why you're asking questions about their health at their child's visits. It also allows you to emphasize the importance of their health to their child's health and any future children they may have.

2. Advise

The IMPLICIT ICC Model is based on the belief that a healthy MBP is crucial to a healthy family. Most women believe that their health can affect the health of their child and any future children they may have (Byatt et al., 2013).

Establishing rapport with an MBP and making the connection between their health and their child's health are important entries into discussion of interconception care recommendations. Framing the

Figure 5: IMPLICIT ICC Model Screening Questions

Age of child at visit (in months) _____

1. Is MBP present at today's visit?

Yes No

2. What is MBP's smoking status?

Current Former Never

3. If current smoker, was an intervention done?

Yes: Reinforced cessation or advised mother to quit

Yes: Provided education materials

Yes: Referral (Fax2Quit, f/u appt, or community program)

Yes: Rx for medication to assist cessation (NRT, varenicline, bupropion)

No

4. Does MBP have a past or current diagnosis of depression?

Yes No

5. Results of 2-item or PHQ2 screen?

Positive Negative Used EPDS Used PHQ9 Only

6. Was PHQ9 or EPDS positive (≥ 10 or suicide risk present)?

Yes No (Negative) Not done

7. Since this child's birth has MBP been pregnant?

Yes No

8. How many months old was the current child when the MBP became pregnant?

9. Is MBP using contraception?

Yes: IUD or implant

Yes: Permanent sterilization

Yes: Depo, pills, patch, ring, diaphragm

Yes: Barrier, withdrawal, sponge, spermicide, fertility awareness, emergency contraception

No: Currently pregnant

No: Trying to conceive

No: Abstinence or not sexually active with men

No: No method

10. If not using contraception, was an intervention done?

Yes: Reviewed current method satisfaction

Yes: Provided education/materials on birth spacing and/or family planning options

Yes: Referral to follow-up appointment

Yes: Provided birth control during the visit

No

11. Is MBP currently taking a multivitamin, prenatal vitamin or folic acid at the time of this visit?

Yes No

12. If no, was a multivitamin, prenatal vitamin or folic acid recommended?

Yes: Recommended

Yes: Recommended and provided Rx or voucher

Yes: Recommended and provided vitamins

No

screening and advice as routine parts of family care can help reduce fears the MBP may have about stigma, judgment, and the possibility of being reported to social service agencies (Byatt et al., 2013). Educating them about why the risk screen is important and how it relates to their child’s health (e.g. the impact of smoking and depression) and the health of future pregnancies (e.g. risk of unintended pregnancy and benefits of birth spacing and preconception multivitamin/folic acid) can set the stage for shared decision-making around behavior change and intervention.

3. Assess: Evaluate any positive screens

For each of the four screening areas, clearly outline pathways to deal with positive screens. Identify staff (e.g. provider, medical assistant, care manager, project coordinator) to be responsible for documenting interventions and staff (e.g. nurse, nurse manager, medical assistant) to be responsible for follow-up with the MBP.

Smoking

Quitting smoking is one of the most impactful things an MBP can do to improve their own health, the health of their infant, the health of other people in their household, their health during future pregnancies, and the health of their future children. The U.S DHHS recommends using the 5 As model for smoking screening and counseling (Table 9) (Fiore et al., 2008).

Table 9. 5 As model for smoking screening and counseling

1. **Ask** about the patient’s current smoking status.
2. **Advise** the patient to quit and provide information on the benefits of quitting.
3. **Assess** the patient’s willingness to quit.
4. **Assist** the patient with finding resources and making a plan to quit.
5. **Arrange** for follow-up to help the patient follow through and quit for good.

Depression

Most IMPLICIT sites use PHQ-2 or PHQ-9 (Table 10) to screen for depression because of its widespread use in general primary care (Constantini et al., 2021). Using a common measure simplifies communication,

training, and monitoring of adults with depression, whether or not they are pregnant. In addition, a larger set of clinical and training resources linked to the PHQ-9 are available than for other measures, such as the Edinburgh Postnatal Depression Scale. Both the PHQ-2 and PHQ-9 have a high negative predictive value. The 2-item screen may be easier to use because the answers are yes or no, instead of scores from 0 to 3. Identifying MBPs at immediate risk of harm to

Table 10. PHQ-9

Score: 0 = not at all; 1 = several days; 2 = more than half the days; 3 = nearly every day

Over the last 2 weeks, how often has the person been bothered by any of the following?

-
- 1. Little interest or pleasure in doing things?
- 2. Feeling down, depressed or hopeless?
- 3. Trouble falling or staying asleep, or sleeping too much?
- 4. Feeling tired or having little energy?
- 5. Poor appetite or overeating?
- 6. Feeling bad about yourself; that you are a failure or have let people down?
- 7. Trouble concentrating on things, like newspaper or TV?
- 8. Moving and speaking unusually slowly, or being unusually fidgety and restless ?
- 9. Thoughts that you would be better off dead or of hurting yourself?

Pfizer, 2016

themselves or others is critical. If an MBP’s responses are positive on the PHQ-2 or the 2-item depression screen, use the PHQ-9. If they answer question 9 with “none of the time,” the maternal safety screen is complete. If they give any other answer, further assessment is indicated. If their screen indicates that they are at immediate risk for harm to themselves or others, activate procedures to address a mental health crisis, such as sending them to the emergency room or calling a mental health hotline. A PHQ-9 score of 10 or higher indicates a positive depression screen and requires further evaluation; the PHQ-9 is a screening tool and does not diagnose depression. If the MBP has no previous history of depression, complete a diagnostic interview with them to identify possible major depressive disorder and rule out other they are currently on birth control. Placing family planning in the context of a reproductive life plan for an MBP and their family is a well-established way of having an informed discussion. All people capable of pregnancy deserve education about

Figure 6: IMPLICIT ICC Model Demographic Questionnaire

Year of this child's birth _____

Month of this child's birth _____

Maternal education level

- Less than high school degree or equivalent (GED)
- High school degree or equivalent (GED)
- More than high school degree or equivalent (GED)

Insurance type

- Medical assistance
- Private insurance
- Self-pay
- Unknown

MBP's age at this child's birth _____

Number of living children

(including this child)

Maternal race/ethnicity

(Select all that apply)

- White
- Hispanic, Latino, or Spanish
- Black or African American
- Asian
- American Indian or Alaska Native
- Middle Eastern or North African
- Native Hawaiian or other Pacific Islander
- Other race or ethnicity
- Unknown/Prefer not to answer

Is MBP a patient at this practice?

- Yes
- No
- Unknown



and access to all forms of contraception. Providers should ask the patient about their reproductive goals and contraception experiences. The discussion should be patient-centered, taking into account the person’s desires, the efficacy of each method, and any health risks that affect their contraception decision. psychopathology. If they have a history of depression, evaluate them for recurrence and the need to reinitiate or modify treatment. Ideally, the MBP works with a primary care or behavioral health provider to develop a depression care plan that details how treatment is to be handled in the event of a future pregnancy.

Implementing evidence-based enhancements of depression care in the primary care setting requires a significant investment of effort that goes beyond the scope of this toolkit.

Family planning

Include these three key concepts in the conversation with an MBP around family planning and contraception:

- Family planning conversations can be sensitive. Providers should ensure they use a patient-centered counseling model (Table 11)
- Nearly half of all pregnancies in the United States are unintended (Finer & Zolna, 2016)
- ACOG recommends counseling against IPI less than 6 months and counseling about risks and benefits of IPI less than 18 months (American

Table 11. Recommendations for patient-centered counseling:
<ul style="list-style-type: none"> • Before providing information on contraception options, determine the patient’s values and preferences regarding contraception • Providers must find a balance between correcting misinformation around contraceptives and dismissing negative experiences around prior use • Patients are allowed to have conflicting views between their pregnancy intention and good use of contraception • Screening for contraceptive use should be used to initiate a conversation about deeper values around reproductive goals • It is important for providers to use tools, such as Implicit Bias training to learn about their own biases and how these may factor into contraceptive counseling • Providers should incorporate reproductive justice tenets and use shared decision making as a model for counseling versus one-size-fits-all counseling scripts
(Brandi & Fuentes, 2020)

College of Obstetricians and Gynecologists & Society for Maternal-Fetal Medicine, 2019)

Counseling new MBPs about the risk of a short IPI and recommending appropriate birth spacing in accordance with their future pregnancy desires is vital. It’s important to assess an MBP’s comfort with their chosen birth control method, even if they state they are currently on birth control. Placing family planning in the context of a reproductive life plan for an MBP and their family is a well-established way of having an informed discussion. All people capable of pregnancy deserve education about and access to all forms of contraception. Providers should ask the patient about their reproductive goals and contraception experiences. The discussion should be patient-centered, taking into account the person’s desires, the efficacy of each method, and any health risks that affect their contraception decision.

Each practice has different abilities and resources and can determine a process to provide contraception that best suits the practice and its patients. Many patients encounter barriers—cost, lack of insurance, transportation, social pressure—that may make getting their chosen contraception method difficult. Each practice can establish a process that minimizes these barriers and enables patients to receive appropriate contraception without social or racial coercion (Higgins, 2014).

Multivitamin/Folic acid

Despite recommendations from both the USPSTF and the CDC that all people capable of pregnancy take 400 mcg of folic acid daily, daily multivitamin use among women of reproductive age in the U.S. declined from 2006 to 2016 (CDC, 2018). Almost half of all unintended pregnancies are to women on some form of birth control (Guttmacher Institute, 2016). Tailoring messaging around this counseling is important for obtaining buy-in from a patient. Even if an MBP at a well-child visit has no plans to become pregnant again, multivitamins are beneficial and recommended for this age group. Multivitamin use is also recommended through the breastfeeding period.

Figure 7: Intervention spectrum

IMPLICIT Interconception Care (ICC): What is an Intervention for a Positive Screen?



Least Intensive

Most Intensive

Smoking	Reinforce cessation or advise to quit	Provide patient education materials	Refer to Quit Line Refer to Community Program Schedule follow-up appointment with provider	Rx for nicotine replacement therapies or medication	5As – Ask, Advise, Assess, Assist, Arrange
Depression	Provide patient education materials	Give emergency crisis phone number	Assess current treatment plan Schedule follow-up appointment Referral to community program	In-visit counseling with provider	Provide warm hand-off to behavioral health provider
Family Planning	Discuss interpregnancy interval	Provide patient education materials Review current method satisfaction	Coordinate with PCP/Schedule appointment to discuss options	Discuss family planning options	Provide birth control
Multivitamin with Folic Acid Use	Recommend taking multivitamin with folic acid daily	Provide patient education materials	Rx or provide coupon, voucher, or information for low-cost multivitamin	Provide a bottle of multivitamins with Folic Acid	

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Table 12. Billing options for ICC interventions*

<p>Part A: Billing the child’s insurance for maternal screening and interventions (Preferred but not always possible)</p>	<p>Screening</p>	<p>Contact your state Medicaid office or other child insurer. Example: MBPs can be screened for depression or tobacco use using the CPT code 96161 (“Caregiver Risk Assessment”) under ICD-10-CM code Z00.121 or Z00.129 for normal screening results.</p>
	<p>Counseling</p>	<p>You cannot report counseling codes (99406-99407) under the child when counseling the parent. The counseling is included in the evaluation & management (E&M) service time.</p>
<p>Part B: Billing the MBP’s insurance (The child’s insurance can’t be billed and the MBP is a patient).</p>	<p>Smoking</p>	<p>If you provide smoking cessation counseling, you can document the encounter using a time-based code:</p> <ul style="list-style-type: none"> • 99406: Intermediate: 3-10 minutes of counseling • 99407: Intensive: > 10 minutes of counseling
	<p>Depression</p>	<p>If you use the PHQ-9 with an MBP, generate an encounter and bill for PHQ-9 screening and for an E&M level visit based on the complexity of the evaluation.</p>
	<p>Family Planning</p>	<p>If you counsel an MBP on contraception options and they decide on an oral contraceptive or a progesterone injection, generate an encounter, perform a brief physical exam and pregnancy testing, as applicable, and administer the prescription or injection. Use E&M code 99213, or higher as appropriate for level of service, to be reimbursed for the visit.</p>
	<p>Multivitamin/ Folic Acid</p>	<p>You can bill for counseling about multivitamins and folic acid in the context of a family planning or preconception visit, even if the only thing covered in that visit is multivitamin/folic acid. There is no code specifically for it.</p>

Coding for Pediatric Preventive Care, 2021; (Tobacco/E-Cigarettes Use/Exposure Coding Fact Sheet for Primary Care Pediatrics Physician Evaluation & Management Services, 2022) *Billing codes are subject to change. Check the AAP coding guide for updates.

4. Assist/Arrange

Provide interventions for positive risks

The IMPLICIT ICC Model provides the opportunity to identify maternal health risks which, if addressed, can improve future birth outcomes. Once you've identified and assessed an MBP's risk, you can offer effective, evidence-based interventions to address it.

The IMPLICIT ICC Model is not designed to be performed just once. An MBP's risks may change over time, and behavior change may be difficult. Screening all MBPs at every well-child visit provides multiple opportunities to assess risk and provide interventions throughout a child's first 2 years of life.

Figure 7 identifies options for handling a positive screen. Each practice designs its own process tailored to local resources and workflows. A well-defined and systematic process addresses each positive screen and provides resources that meet the needs of the patient (whether or not they are established in the practice and whether or not they have access to health insurance). Table 20 (see page 22) includes ICC workflow examples

Document interventions

As with screening results, the IMPLICIT ICC Model recommends documenting interventions in the child's health record.

See Appendix for examples of EHR documentation.

Determine billing options

Billing the child's insurance. Use the established process to bill for care of the child at the well-child visit, unless your state Medicaid or other insurer covers caregiver screening (i.e. screening MBPs and billing the child's insurance). Using the ICC model doesn't otherwise change the billing for care provided to the child.

The May 2016 Informational Bulletin from the Director of the Center for Medicaid and Children's Health Insurance Program (CHIP) highlights that state Medicaid agencies may cover screening non-Medicaid eligible MBPs for depression as part of well-child visits under the child's coverage (Wachino, 2016).

As of March 2023, 46 states including Washington, D.C. allow, recommend or require maternal depression

screening during well-child visits covered by Medicaid (Staff, 2020).

Table 12 lists codes to use when billing for maternal screening and intervention to a child's insurer.

Billing the MBP's insurance. When the MBP is also your patient, you have an opportunity to bill for services provided to them through their insurance coverage. We suggest not billing MBPs when their screens are negative—if they're not smoking, not depressed, are on contraception, or are taking a multivitamin. If they have a positive screen and you are going to intervene, have a way to capture the encounter and appropriately bill their insurance. Examples of interventions are: providing brief counseling for tobacco use, depression, or family planning and/or providing contraception or other medications at the time of the visit. Billing the MBP is done by creating a separate encounter for the MBP. Even though you're seeing the MBP and the child in the same room at the same time, there are two encounters—one for the MBP and one for the child. Table 12 includes details about how to bill MBPs who are your patients.

5. Analyze

Each practice can use its data to assess the strengths and weaknesses of its care delivery processes and identify areas of improvement that can lead to better outcomes for patients.

QI is a structured method of continually identifying and analyzing the strengths and weaknesses of a process, and then developing, testing, revising, and implementing solutions. Any QI activity requires data to review, measure progress and establish benchmarks for success. Table 13 identifies fundamental components of QI.

Table 13. Fundamental components of QI

- A focus on systems and process A focus on being part of the team A focus on patients
- A focus on the use of data
- Use of the Plan-Do-Study-Act (PDSA) model (Deming, 2016) (Figure 6)

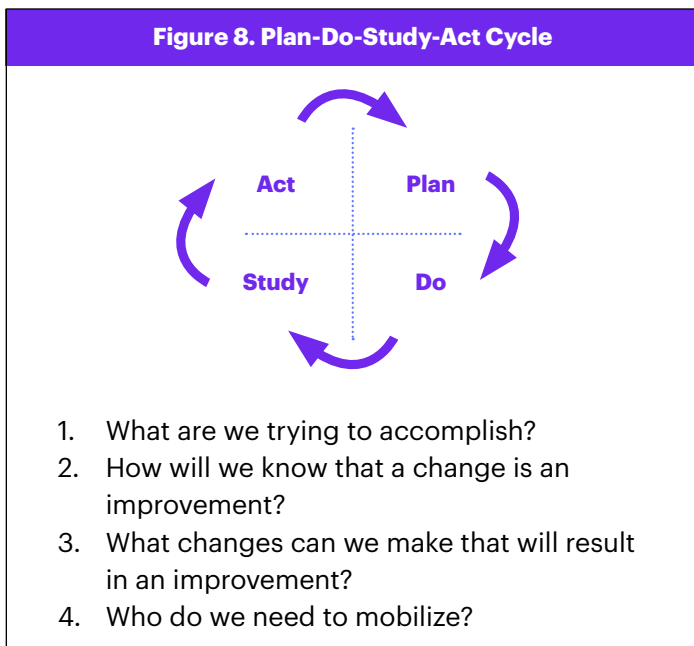
Knox, L., Brach, C., 2015

Deming’s Plan/Do/Study/Act cycle is a primary model for QI (Figure 8). A provider identifies a problem and draws up a plan to test a change in the process or procedure. The test is done, the results are studied, and then a decision is made about how to act—adopt the change, abandon the cycle, or adapt the plan and do a new cycle (U.S. DHHS, 2011).

The IMPLICIT Network encourages providers using the IMPLICIT ICC Model to participate in the QI component. IMPLICIT is committed to the QI process, which ensures that patients receive high-quality, standardized care. QI has the greatest impact when it addresses at the same time what care is provided and **how, when, where,** and by **whom** it’s provided.

Implementing a new QI effort that involves a new model of care can be challenging and may require dedicated administrative support. Although the cost of performing ICC is minimal, many practices apply for grant monies to get started. You may be able to get grant money to pay for administrative support staff for 1 to 3 years or seed money for educational materials or multivitamins. Grant support can help a program get started, but is not required.

Your practice may be involved in more than one QI project. If you find that interconception care is competing with other QI projects, secure a strong and passionate ICC champion who can make the case for ICC in improving infant and maternal mortality and overall family health. Share results to get buy-in from all



levels of your organization, and seek grant support for administrative time.

Working with a QI collaborative provides the opportunity to share experiences about best practices and help solve problems. Providers can use interconception care QI to satisfy the Family Medicine Maintenance of Certification Part IV requirement. Perhaps most importantly, working collaboratively provides the opportunity to share what doesn’t work. QI can be hard work. It can feel overwhelming, but each member of the collaborative doesn’t have this experience at the same time—when one member is down, another is up. A real value of being part of a collaborative is working with people who share the experience and can encourage and inspire one another. Table 14 identifies benefits of working collaboratively.

Table 14. Benefits of working collaboratively
<ul style="list-style-type: none"> • Developing a broad network of colleagues • Gaining a broader perspective from exposure to other programs and practices • Exchanging ideas and intellectual stimulation • Becoming invigorated professionally • Giving and receiving support • Having opportunities for scholarship and publication

A collaborative also provides mutual accountability. Accountability to a group for reporting and sharing progress (or lack thereof) reduces the temptation to give up or scale back; keeps members honest and energized; and reminds members of their common goal. The IMPLICIT Network is an example of such a collaborative. Participation in a learning collaborative is recommended for all Family Medicine residency programs by the Accreditation Council for Graduate Medical Education (ACGME). See Table 15 for details.

Table 15. ACGME Program Requirements
<p>The ACGME Program Requirements for Family Medicine, effective July 2023, states:</p> <p>“Programs are strongly encouraged to participate in learning collaboratives to create and share scholarly activity. Learning collaboratives (also known as communities of practice, learning communities, and learning networks) comprise multiple parties that work together toward a certain set of mutually agreed upon objectives. Learning collaboratives enhance population care across regions by sharing best practices to deliver high quality patient care.”</p>

Implementing the IMPLICIT ICC Model

Several steps are necessary to implement the IMPLICIT ICC Model.

1. Identify a champion provider and leadership team.

Identify a champion to lead a passionate charge for initiating the IMPLICIT ICC Model at your practice. Having a provider leader is integral to the success of a new project that involves clinical and administrative change. Table 16 identifies possible members of your leadership team.

Table 16. Possible leadership team members

- Administrative leaders and support staff
- Behavioral health specialists
- Dietitians
- Information technology (IT) specialists
- Medical students
- Nurse/Medical Assistant champions
- Pharmacists
- Practice managers
- Project coordinators
- Providers
- Residents

2. Educate staff about the importance of the IMPLICIT ICC Model.

The champion and leadership team educate staff, administration, and other providers in your practice via grand rounds, staff meetings, and special education sessions. Table 17 identifies strategies to generate buy-in from staff to implement the IMPLICIT ICC Model.

3. Develop a workflow for each patient visit

Your practice already has a patient-care workflow in place. Add to your workflow to establish procedures for obtaining maternal demographic information at the first visit, completing ICC screenings at every visit and performing and documenting interventions.

Although the IMPLICIT ICC Model is straightforward, successful implementation requires creating a process that works for individual sites. Each site determines its most efficient and effective workflow. Table 18 provides options for providing intervention to MBP. The most appropriate choice is likely dependent on clinic capabilities and the nature of the intervention needed.

Table 17. Getting buy-in to implement the IMPLICIT ICC Model

- Create a sense of urgency. For example, the United States is in a crisis around infant and maternal health, so ICC needs to be a priority
- Share the evidence that ICC benefits family health
- Involve nurses - nurse-driven protocols can lead to greater buy-in.
- Make it the standard of care rather than something additional that needs to be done

Any of these workflow elements can be tailored to best meet your site's needs. See Table 19 (see page 25) for workflow options.

4. Develop a procedure for collecting and documenting data

Documenting results of ICC screening and intervention is key to the ability to retrieve and share data for QI. Ideally, documentation for the IMPLICIT ICC Model is incorporated completely within the child's EHR.

When incorporating data into the EHR is a barrier, some practices use paper-based forms (Appendix 5). Some use a hybrid approach by collecting the information first on paper and then inputting it into a retrievable format in the EHR.

Table 18. Intervention examples

- Provide education and initiate conversation, document using ICC template in well child visit chart
- Provide care for MBP during the child's visit and document in their chart
- Add MBP to the schedule for the same day as child's visit
- Schedule for follow up appointment on a different day with PCP, behavioral health provider, pharmacist, or care manager
- Care manager or other ICC team member follows all positive screens and ensures patient follows through with referral
- Communicate directly with patient's primary care, behavioral health, or obstetric provider

Table 19. Workflow examples

- Manual collection
- MBP completes ICC questionnaire on a tablet provided through a patient portal prior to the visit or at the time of the visit --> answers automatically populate into the note
- Front desk provides paper questionnaire as part of the screening tools provided to the MBP of a < 2-year-old patient
- MA/nurse who rooms patient administers questionnaire --> MA/nurse enters results in the chart
- Provider administers questionnaire during visit --> Provider uploads completed paper questionnaire into child's chart after visit or inputs answers into template that is integrated into the well child visit note

For example, at one IMPLICIT site, maternal demographic information is collected on paper and then transcribed into a template in the child's health record. An Epic template build is available in the national Epic library for sites to download and customize.

ICC as a tool to promote health equity

Inequity is widespread in healthcare and is particularly pervasive in maternal-infant health.

- Black women have a 3x higher rate of maternal mortality than White women. Compared with non-Hispanic White women, African American women are more likely to have preterm births, low birth weight infants, and infants who die before the first year of life (Hill, Artiga, & Ranji, 2022).
- Pregnancies in sexual minority women (e.g. lesbian, bisexual) are more likely to result in miscarriage, stillbirth, LBW, or very preterm deliveries (Everett et al., 2018).
- Transgender and gender-diverse people describe disempowering experiences of pregnancy and postpartum care (Hoffkling et al., 2017).
- Maternal risk factors like smoking and poor healthcare are thought to explain some, but not all, of the socioeconomic disparity in preterm birth (Hill, Artiga, & Ranji, 2022).

By addressing these factors for all MBP who participate in ICC, we seek to mitigate the social and structural influences of health that contribute to health inequity. Beyond the intrinsic components of the ICC program, we encourage IMPLICIT sites to take an active role in improving the healthcare experience for all MBPs. See Table 20 for examples.

Table 20. Health equity advancement examples

- Use inclusive language in office materials
- Ensure community resources are diverse (e.g. by sex, income, race, location)
- Study maternal demographics data to understand disparities
- Conduct patient interviews/focus groups to address barriers to ICC participation
- Continuously assess ICC questionnaires/language to ensure they are patient-centered
- Partner with community organizations

ICC in pediatric practices

ICC is designed to be used in many settings, including pediatric practices. In recognition of the impact of maternal mental health and smoking on infant health, the American Academy of Pediatrics recommends maternal depression screening at well child visits for the first 6 months and smoke exposure screening at all well-child visits. Existing processes for positive maternal depression or smoking can be continued when ICC is implemented. Multivitamin use and family planning, the other risk factors that the Model targets, may be new to some pediatric providers. Incorporating these screenings can help pediatric providers contribute to a healthy interconception period through adequate folic acid supplementation and desired birth spacing. Evidence shows that this can improve the health of a subsequent infant, one who'll likely be the pediatrician's future patient.

The biggest difference between ICC in a family medicine practice and a pediatric practice is that the MBP is rarely a patient of the pediatrician's office. Prescribing medications like oral contraceptives or tobacco cessation products may be limited by legal, logistical, or practice scope constraints. As with any provider providing ICC, pediatricians should have robust referral processes in place for positive screens.

Case studies

This toolkit guides you through the rationale behind the IMPLICIT ICC Model and provides steps to help you implement the Model into daily practice. The following case studies can help you apply toolkit content to specific practice situations.

Case study 1: Katia

Katia is a 24-year-old mother of two. She is new to the area and brought her 4-month-old son and 3-year-old daughter to your pediatric office for initial well-child appointments. Katia is screened using the IMPLICIT screen. Katia indicates she is not taking a multivitamin or folic acid supplements. She also indicates she is not currently practicing any family planning but desires to establish a plan. She does not have a primary care doctor established since moving to manage her care.

You counsel Katia on the importance of multivitamin/folic acid supplementation to support breastfeeding, recover from pregnancy demands on the body, and promote healthy future pregnancies. You discuss OTC supplement options that are affordable and effective, including the adult dosing of children's chewable vitamins that she has been giving her 3-year-old daughter. You briefly discuss contraception options (e.g. LARC, oral contraceptive pills, barrier methods) and give her the contact information for local family medicine and OB-GYN care, including Federally Qualified Health Centers.

You make a note on the chart about the vitamin and family planning counseling and the resources given to aid follow-up with Katia at the next visit with her infant.

Questions:

1. What primary care resources do you have in your area to meet the needs of birthing persons for family planning and primary care needs? What options are available for the under- or uninsured?
2. Do you have the means to obtain multivitamin/folic acid samples or vouchers to help facilitate multivitamin/ folic acid initiation?
3. What are ways you, as the pediatrician, can follow up with the pregnant person and make sure they get connected to resources?
4. How and where in the child's chart do you document the screening and interventions?

Case study 2: Ana

Ana is a 26-year-old female who arrived as a refugee from Democratic Republic of the Congo two years ago. She primarily speaks Swahili. She presents to the office with her son for his 6-month well-child check. A Swahili video interpreter is used to conduct the visit.

Ana first connected with the clinic during her prenatal care and was delivered by the family medicine resident team. She had an induction of labor for gestational hypertension that ultimately resulted in an unexpected Cesarean delivery due to failure to descend and a Category 2 fetal heart tracing during the second stage of labor. Ana strongly desired a vaginal delivery and initially declined a Cesarean delivery, but eventually agreed once her baby started to show signs of distress.

During the ICC screening at the well-child check, Ana scores a 14 on her PHQ-9, which was read to her by the nurse who roomed her and interpreted by the video interpreter. She responded "no" to the questions that asked about suicidal ideation or intention. When the provider asks her more about her mood, she shares that she has been feeling very tired, but otherwise she's doing fine. She diverts her eyes from the video screen when the interpreter repeats the provider's questions inquiring about her mood. The ICC screening also reveals that Ana has never smoked, she received a Nexplanon prior to hospital discharge for contraception, and she no longer takes a prenatal vitamin.

During the visit, the physician provides Ana with a voucher for a prenatal vitamin, and she plans to pick up the vitamin at the pharmacy next to the clinic before she goes home. Ana is also agreeable to a follow-up appointment at the clinic to further discuss her mood.

Questions:

1. What cultural considerations should be further explored at the patient's follow-up appointment?
2. What information about the patient's birth story may be important to address at follow-up visits?
3. How does using interpretation services potentially impact the ICC encounter, and what considerations should be taken when conducting a visit with interpretation services?

Case study 3: Star

Dr. Brown, a pediatrician, is covering for another clinician that normally cares for 9-month-old Jasmine. Dr. Brown enters the room for the well-child visit and first introduces herself, stating, "I use the pronouns 'she/her' to describe myself. Would you care to share the pronouns that you prefer to use?" The parent, Star, responds that they identify as they/them and as gender nonbinary. Dr. Brown expresses appreciation for their openness, and their trust in allowing her to care for the child and family.

Dr. Brown proceeds to ask some questions about general health, infant feeding and behavior, while reviewing Jasmine's paper developmental screen and parent interconception care (ICC) paper screen that Star has completed. She notes on the ICC screen that the screen for past or smoking and past or present depression symptoms are both negative. She then proceeds to her physical exam of the infant.

After the physical exam, Dr. Brown asks Star about her responses on the form—that they currently take multivitamins for themselves and are not using any form of contraception. Star expresses appreciation for being asked about their own health—how it makes them feel valued as a parent. They then enter a discussion of options, and Dr. Brown asks what body parts Star possesses and briefly what types of sex they engage in. She learns that Star does have a uterus and vagina, her partner has a penis and they do engage in intercourse. Dr. Brown then mentions the risks of preterm delivery and low birth weight with a short interconception period, and Star is very open to contraception.

Given that visit time is running short and Dr. Brown does not feel very comfortable with detailed

contraceptive discussions, she recommends Star contact the family physician they see who also delivered the baby. Dr. Brown does give Star a brief handout that is available in the office on contraception options.

Questions:

1. How might clinicians use body parts, partners, and practices to determine concerns for pregnancy in gender-diverse patients?
2. What underlying assumptions do clinicians often make regarding pregnancy risks when they care for LGBTQ+, and specifically transgender patients?
3. Why is use of pronouns so important in-patient care?

Case study 4: Kani

Kani is a 32-year-old parent with 2 children who has been coming to this practice for infant care of her 6-month-old daughter who was delivered vaginally following an uncomplicated pregnancy. She also has a 5-year-old son.

During ICC screening, Kani notes that she is not using contraception even though she was provided with a prescription for combined oral contraceptive pills at discharge from the hospital following her delivery. She states she was concerned that they might affect her lactation and milk supply so she stopped taking them when her baby was 6 months of age and has not been using anything since that time.

Using the PATH framework, you ask whether Kani might like to have more children at some point. She reflects that she is open to the possibility of more children, but knows she will be starting a new job and moving from her current home in the next year.

Questions:

1. What are the steps in the PATH framework? How could this approach promote patient centered care?
2. How would you follow up Kani's statement about the timing of a potential future pregnancy?

3. If Kani expressed a desire to re-initiate contraception, how would you approach the available options?

Case study 5: Zoe

Zoe has brought her 4-month-old daughter, Hannah, for a well-child visit and to establish care at your office. They recently moved to the area for her work and this is the first time anyone in the family has seen a local physician. As interconception care is the standard for all well-child visits from birth to 2 years of age at your office, Zoe was screened for depression, whether she was smoking, taking prenatal vitamins, and asked about her plans for more children. She had no history of smoking or depression, and had no current depression symptoms, but has been a little stressed with the move. She had not been taking her prenatal vitamins since she ran out a few weeks ago, and wants to wait at least 2 years before they try to have a second child. She did not have a postpartum visit before the move, and has been using condoms recently.

As Zoe is not a patient at our practice, she is given a handout on interconception care that includes information on the importance of taking a multivitamin with folic acid and birth control options. She's interested in starting an oral contraceptive. You give her a list of local family medicine offices and have your office staff assist her with scheduling an intake visit later in the week. You give her a coupon for free prenatal vitamins at the local pharmacy.

Questions:

1. What resources does your site have available for parents who are not patients of your practice, whether you are able to offer the services or not?
2. Does just giving information about the four areas of interconception care count as an intervention?



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Appendices

These appendices contain examples of different IMPLICIT Network ICC resources. If you're interested in files of these resources, please contact the IMPLICIT Network at: implicitinfo@fmec.net

Resources Include:

- Appendix 1
 - Network background
- Appendix 2
 - ICC questionnaires
- Appendix 3
 - ICC Workflows
- Appendix 4
 - ICC Patient educational materials
- Appendix 5
 - Provider educational materials
- Appendix 6
 - IMPLICIT Network membership
- Appendix 7
 - IMPLICIT Network social media

Appendix 1: IMPLICIT Network Background

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 and educating residents on best practices.



Appendix 1.1: IMPLICIT Network IMPLICIT Pregnancy

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 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 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.



Appendix 1.2: IMPLICIT Network project development

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 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 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).



Appendix 1.3: IMPLICIT Network projects

IMPLICIT ICC and future directions

IMPLICIT ICC uses baby's well-child visits as opportunities to identify and reduce mom's risks for poor outcomes with her next 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 South 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 care within 21 days of delivery in order to improve maternal outcomes.



Appendix 1.4: IMPLICIT Network ICC overview

IMPLICIT Interconception Care (ICC)

The IMPLICIT ICC model addresses barriers to interconception care by screening and promoting risk reduction for moms 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.

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 maternal risk factors:

- **Tobacco use**
- **Depression risk**
- **Lack of contraception use**
- **Lack of multivitamin with folic acid intake**



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 July 2023, 38 Network sites have implemented IMPLICIT ICC as a standard of care, 24 of which are sharing data in the Network's data management system, REDCap.**

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

Moms 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 maternal risk factors. Given high rates of the four risk factors, the Network is currently developing additional strategies to improve maternal 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.



Appendix 1.6: IMPLICIT Network financial funding

Financial support

The IMPLICIT Network has been generously supported by March of Dimes and its Pennsylvania market 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 of 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 2020-2023 funding to support ICC initiatives and expansion of personnel and dissemination to new sites in the commonwealth.

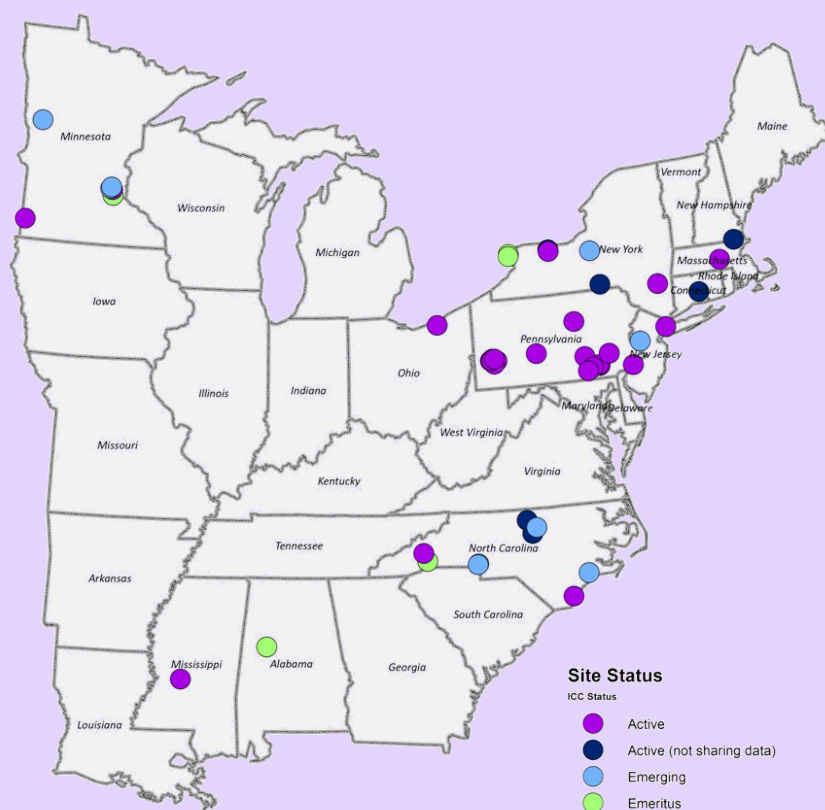


Appendix 1.6: IMPLICIT Network financial funding

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 July 2023, there are 36 programs in 10 states who participate in the IMPLICIT Network.



Appendix 1.8: IMPLICIT Network members

IMPLICIT Network members

Alabama:

University of Alabama FMR

Connecticut:

Middlesex Hospital FMR

Massachusetts:

Greater Lawrence HC

University of Massachusetts FMR

Minnesota:

Dakota Child and Family Clinic HC Pipestone

Family Clinic HC

Southside Community Health Services

Mississippi:

University of Mississippi HC

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

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

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 McKeesport FMR UPMC Renaissance FP

UPMC Shadyside FMR UPMC St. Margaret FMR

UPMC University Family Medicine - Bloomfield

UPMC University Family Medicine - Matilda

Theiss UPMC University Family Medicine -

Squirrel Hill UPMC Williamsport FMR

Wellspan York FMR



Appendix 1.10: IMPLICIT Network mission, vision, values



Mission: The IMPLICIT Network- An FMEC Collaborative is a family medicine maternal child health learning collaborative focused on improving birth outcomes and the health of women, birthing people, infants, and families through faculty, resident, and student development with innovative models of care and quality improvement.



Commitment

Improving the health of women/birthing people one person at a time.



Innovation

Developing methods to improve the health of women, birthing people, children and families.



Education

Training future physicians and healthcare 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.

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

Appendix 2: ICC patient facing questionnaire example

How Are You Doing Mom?			
1. Are you this child's birth mother?	Yes	No	
<i>If NO, you do not have to complete the questionnaire.</i>			
2. What is your smoking history?	Current Smoker	Former Smoker	Never Smoked
3. If Smoking , are you interested in quitting?	Yes	No	
4. Do you have a prior history of depression?	Yes	No	
Please answer each question 5-13 with the number you feel best describes yourself:			
0 – Not at all 1- Several days 2- More than half the days 3- Nearly every day			
Over the past two weeks, how often have you been bothered by any of the following:			
5. Little interest or pleasure in doing things?			
6. Feeling down, depressed, or hopeless?			
7. Trouble falling or staying asleep, or sleeping too much?			
8. Feeling tired or having little energy?			
9. Poor appetite or overeating?			
10. Feeling bad about yourself; that you are a failure or have let people down?			
11. Trouble concentrating on things, like newspaper or TV?			
12. Moving and speaking unusually slowly, or being unusually fidgety and restless?			
13. Thoughts that you would be better off dead or hurting yourself?			
PHQ9 Total Score:			
14. Since this child's birth, have you been pregnant?	Yes	No	
15. What is your current birth control plan	IUD/Implant/Permanent sterilization	Depo/Pills/Patch/Ring	
	Barrier/Withdrawal	Currently pregnant	Trying to conceive
	Abstinence/Not sexually active	No method	
16. Are you happy with your current birth control plan?	Yes	No	
17. Are you currently taking a multivitamin, prenatal vitamin or folic acid?	Yes	No	
If this is not your first well child visit, you only need to answer the next questions if your information has changed			
18. Are you (mom/birthing person) a patient at this office?	Unknown	Yes	No
19. What is your marital status?	Single	Living with Partner	Married
20. What is you highest level of education?	Less than High school degree or equivalent (GED)		
	High School degree of equivalent (GED)		
	More than High school or equivalent (GED)		
21. What health insurance do you have?	Medicaid/Medical assistance	Private Insurance	
	Self-Pay	Unknown	
22. How old were you at this child's birth?	_____		
23. How many living children do you have?	_____		
24. What is your race/ethnicity? (Circle all that apply)	White	Black/African American	Asian
	Am. Indian/AK Native	Native HI/Other PI	
	Hispanic/Latino/Spanish	Middle Eastern/North African	
	Other	Unknown	

Appendix 2.1: ICC patient facing questionnaire example Spanish version

¿Cómo te sientes Mamá?

1. ¿Es usted la madre biológica del niño(a)? Si No
*Si usted **no** es la madre biológica del niño(a), no necesita contestar este cuestionario.*
2. ¿Cuál es su historia con el tabaco? Fumador Fumaba Nunca he fumado
3. Si usted es fumador, ¿Estaría interesada en dejar de fumar? Si No
4. ¿Tiene historial previo de depresión? Si No

Responda las preguntas 5 al 13, escribiendo el número que mejor describa su caso			
0 – Ningún día	1- Varios días	2- Más de la mitad de los días	3- Casi todos los días
En las últimas dos semanas, con qué frecuencia le ha molestado lo siguiente:			
5. ¿Sentirse con poco interés o placer en hacer cosas?			
6. ¿Sentirse sin ánimos, deprimida o sin esperanzas?			
7. ¿Tener problemas para conciliar el sueño, o quedarse dormida, o dormir demasiado?			
8. ¿Sentirse cansada o con poca energía?			
9. ¿Sentirse con falta de apetito o comer en exceso?			
10. ¿Sentirse mal consigo misma; sentirse fracasada o que ha decepcionado a otros?			
11. ¿Tener problemas para concentrarse, como leer el periódico o ver la televisión?			
12. ¿Sentirse que se mueve y habla de una manera inusualmente lenta, o sentirse inusualmente inquieta o nerviosa?			
13. ¿Creer que sería mejor estar muerta o hacerse daño?			
PHQ9 Puntaje Total:			

14. Desde el nacimiento de este niño, ¿Se ha vuelto a embarazar? Si No
15. ¿Qué tipo de método anticonceptivo utiliza?

DIU/ Implante/ Esterilización	Depo/ Pastillas/ Parche/ Anillo	
Barrera/ Retirada	Estoy embarazada	Tratando de concebir
Abstinencia/ No tengo sexo	Ningún método	
16. ¿Está contenta con el método anticonceptivo que utiliza?		Sí No

17. ¿Está tomando algún multivitamínico, vitaminas prenatales o ácido fólico? Si No

*** Si ésta no es la primera visita de salud de su hijo, solo necesita contestar las siguientes preguntas si su información ha cambiado****

18. ¿Es usted una paciente en esta oficina? (madre/persona que da a luz) Lo desconozco Si No
19. ¿Cuál es su estado civil? Soltera Viviendo con mi pareja Casada
20. ¿Cuál es su nivel más alto de educación?? Algunos años de secundaria o certificado de GED
21. ¿Qué seguro médico tiene? Diploma de secundaria o certificado de GED
Más del diploma de secundaria o equivalente (GED)
22. ¿Cuántos años tenía cuando nació éste niño(a)? Medicaid/Asistencia Médica Seguro Privado
Auto-Pago Desconocido
23. ¿Cuántos hijos vivos tiene?
24. ¿Cuál es su raza/grupo étnico? Blanco Negro/Afroamericano Asiático
Nativo Americano/Nativo de AK Nativo de HI/Otra isla del pacifico
Hispano/Latino/Español Medio Oriente/ África del Norte
Otro Desconozco

Appendix 2.2: ICC provider facing EHR questionnaire example

Is mother present at today's visit? Yes No

What is mother's smoking tobacco status? Current Former Never

Was an intervention done? Reinforced cessation or advised mother to quit
 Provided education materials
 Referral (Fax2Quit, follow up appointment or community program)
 Prescription for medication to assist cessation (NRT, varenicline, bupropion)
 No

Does mother have a past or current diagnosis of depression? Yes No

Was PHQ2 positive? Yes No

Was PHQ9 positive (>= 10 or suicide risk identified)? Yes No Not done or refused

Was an intervention in place or provided? Provided education materials, crisis phone number
 Referral (follow up appointment or outside resource)
 In-visit counseling, warm handoff to behavioral health or prescription
 Currently under treatment
 No

Since this child's birth has mother Yes No

Is mother using contraception? Tier 1 - IUD/implant
 Tier 1 - Permanent sterilization
 Tier 2 - Depo, pills, patch, ring, diaphragm
 Tier 3 - Barrier, withdrawal, sponge, spermicide, fertility awareness
 Currently pregnant
 Trying to conceive
 Abstinence or not currently sexually active with men
 No

If not using a Tier 1 method, was an intervention done? Provided education/materials on birth spacing and/or family planning options or reviewed current method compliance
 Referral or follow-up appointment
 Provided birth control during the visit
 No

Is mother currently taking a multivitamin, prenatal vitamin, or folic acid? Yes No

Was a multivitamin, prenatal vitamin, or folic acid recommended? Recommended and provided vitamins
 Recommended Recommended and provided prescription or voucher
 No

Appendix 2.3: ICC questionnaire appearing in EHR note example

My Note

ICC

Sensitive Tag Share w/ Patient Details

Cosign Required

Insert SmartText

Autism:m-chat screening performed and child is considered (LOW MED HIGH 102986)-risk.
 Oral Health:has an established dental home***

Interconception Care

ICC 3 MATERNAL DEPRESSION ADVANCED:
 Is the mother present at today's visit?: **Yes**
 What is mother's smoking status?: **Current**
 Was an intervention done?: **Follow-up appointment or referral to community program, prescription for medication to assist cessation, provided education materials and reinforced cessation or advised mother to quit**
 Does mother have past or current diagnosis of depression?: **Yes**
 Was PHQ2 positive?: **Yes**
 Was PHQ9 positive (> or suicide risk identified)?: **Yes**
 Was an intervention in place or provided?: **Follow-up appointment or referral to outside resource, Provided education materials and crisis phone number and Warm handoff to behavioral health or prescription**
 Since this child's birth has mother been pregnant?: **No**
 Is mother using contraception?: **Tier 1 - IUD/implant**
 Is mother currently taking a multivitamin, prenatal vitamin, or folic acid?: **No**
 Was a multivitamin, prenatal vitamin, or folic acid recommended?: **Recommended and provided prescription or voucher**

Selective Screening

Screening Test	Reason to Screen:
Anemia	{p/c anemia:112490}
Blood pressure	{p/c bp < 3 yrs:112477}
Hearing	{p/c hearing 4mo-2.5yrs:112482}
Lead	{p/c lead:112483}
Vision	{p/c vision:112489}

Sign at Close Encounter

Accept Cancel

Appendix 2.4: ICC questionnaire appearing to patients on tablets

Interconception Care (ICC)

For an upcoming appointment with [REDACTED], MD on 10/13/2022

Interconception Care (ICC)
ICC is the care given to mothers/birthing people between pregnancies.
At our office, our goal is to help support you to have a healthy family!

Please answer the following questions.
Based on your answers, our providers may provide you with some assistance or bring you back for your own visit.

* Indicates a required field.

* Did you give birth to this child?

Yes No

* Indicates a required field.

* Do you smoke tobacco?

Current smoker Former smoker Never smoker

* Are you interested in quitting?

Yes, I am interested No, I am not interested I am not sure

* Do you have a current or past history of depression?

Yes No

* Since your child's birth have you been pregnant?

Yes No

* Are you planning to be pregnant in the next year?

Yes No I don't know

* Are you currently taking a prenatal vitamin or multivitamin?

Yes No

* Would you like to take home a free bottle of prenatal vitamins or multivitamins today?

Yes No

* I am interested in using
Select all that apply.

<input type="checkbox"/>	Implant
<input type="checkbox"/>	IUD
<input type="checkbox"/>	Sterilization (tubes tied)
<input type="checkbox"/>	Depo Provera
<input type="checkbox"/>	Pills
<input type="checkbox"/>	Patch
<input type="checkbox"/>	Ring
<input type="checkbox"/>	Withdrawal method
<input type="checkbox"/>	Fertility awareness
<input type="checkbox"/>	Condoms
<input checked="" type="checkbox"/>	None

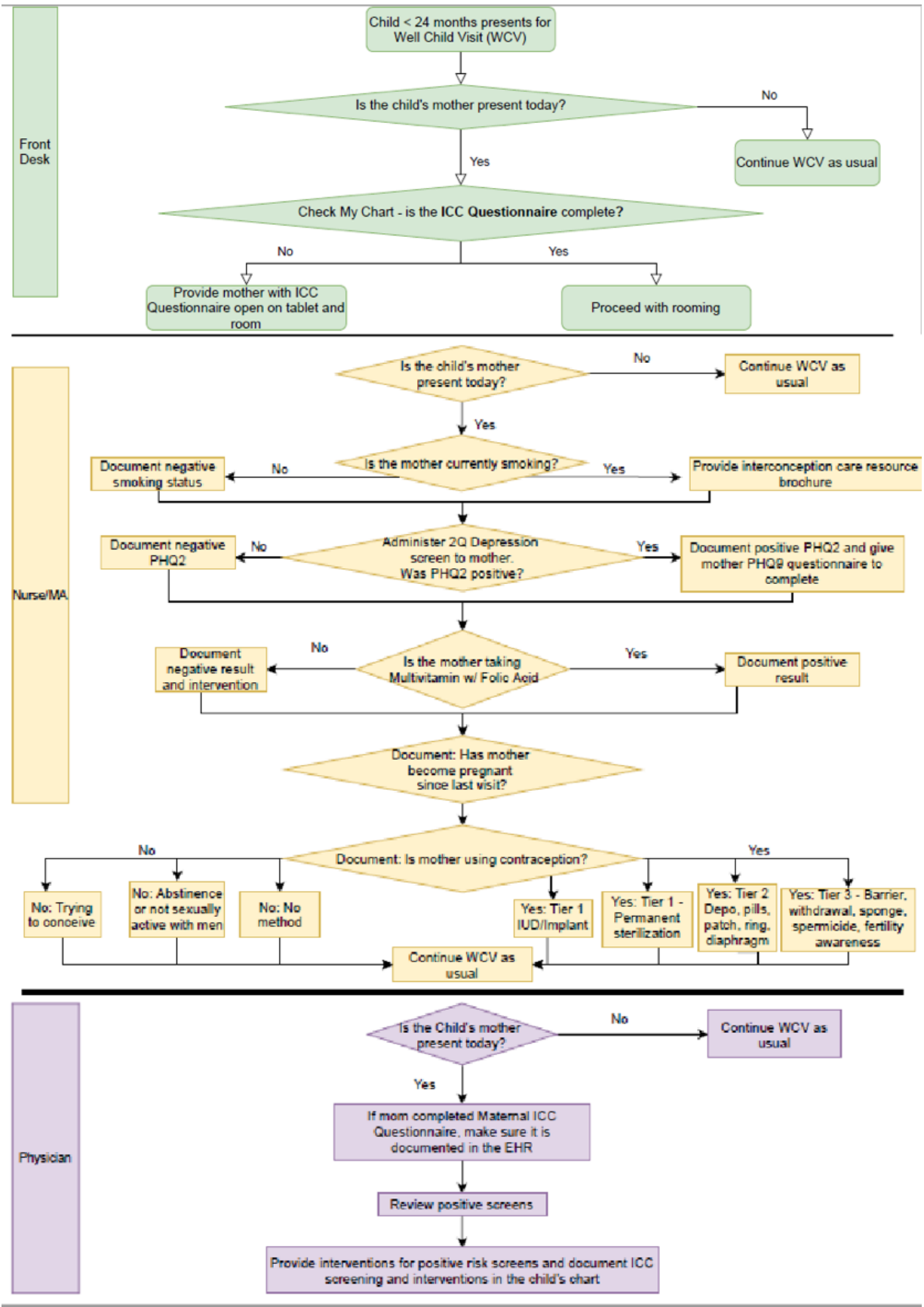
* Are you currently taking a prenatal vitamin or multivitamin?

Yes No

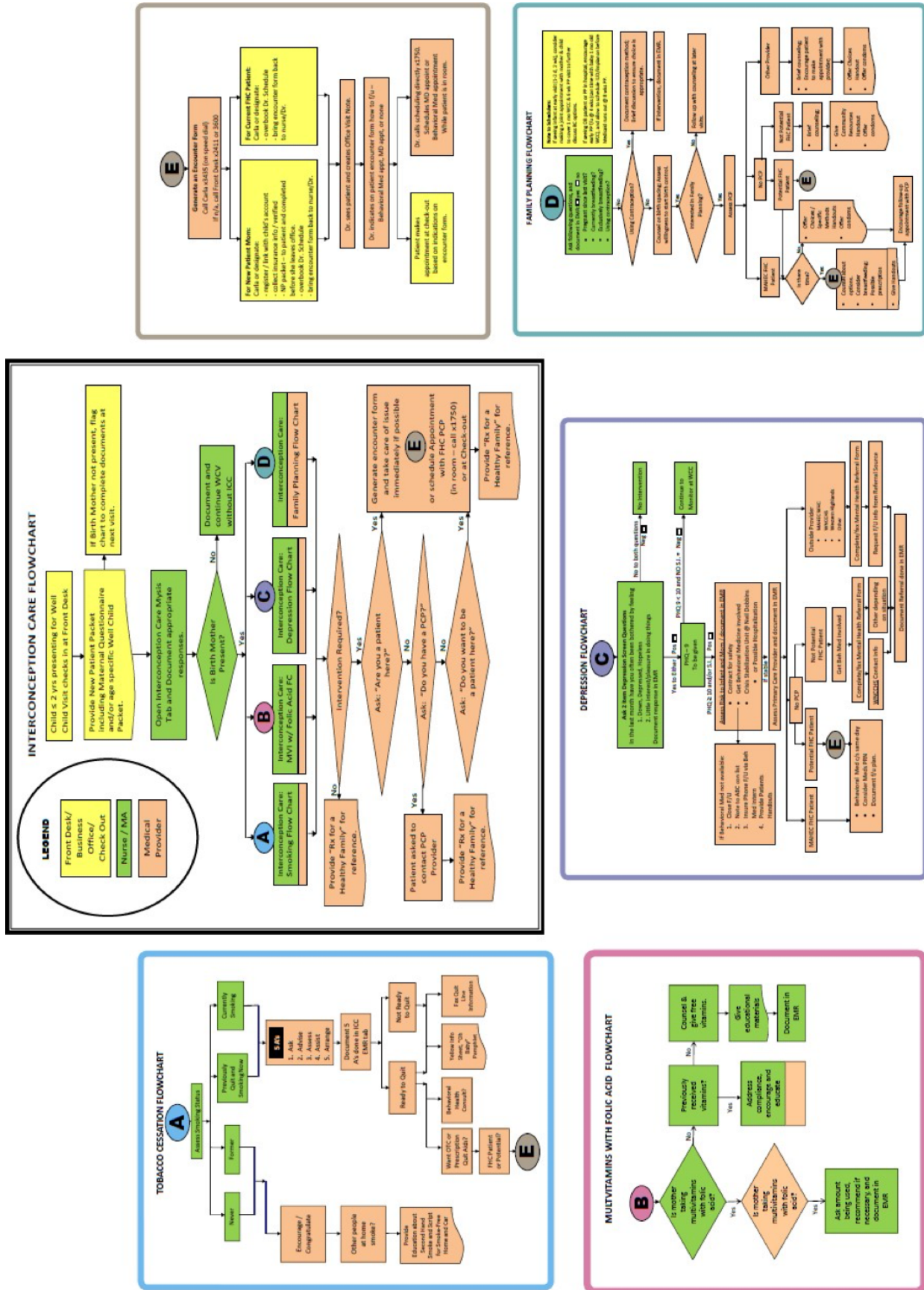
* Would you like to take home a free bottle of prenatal vitamins or multivitamins today?

Yes No

Appendix 3: ICC workflow example

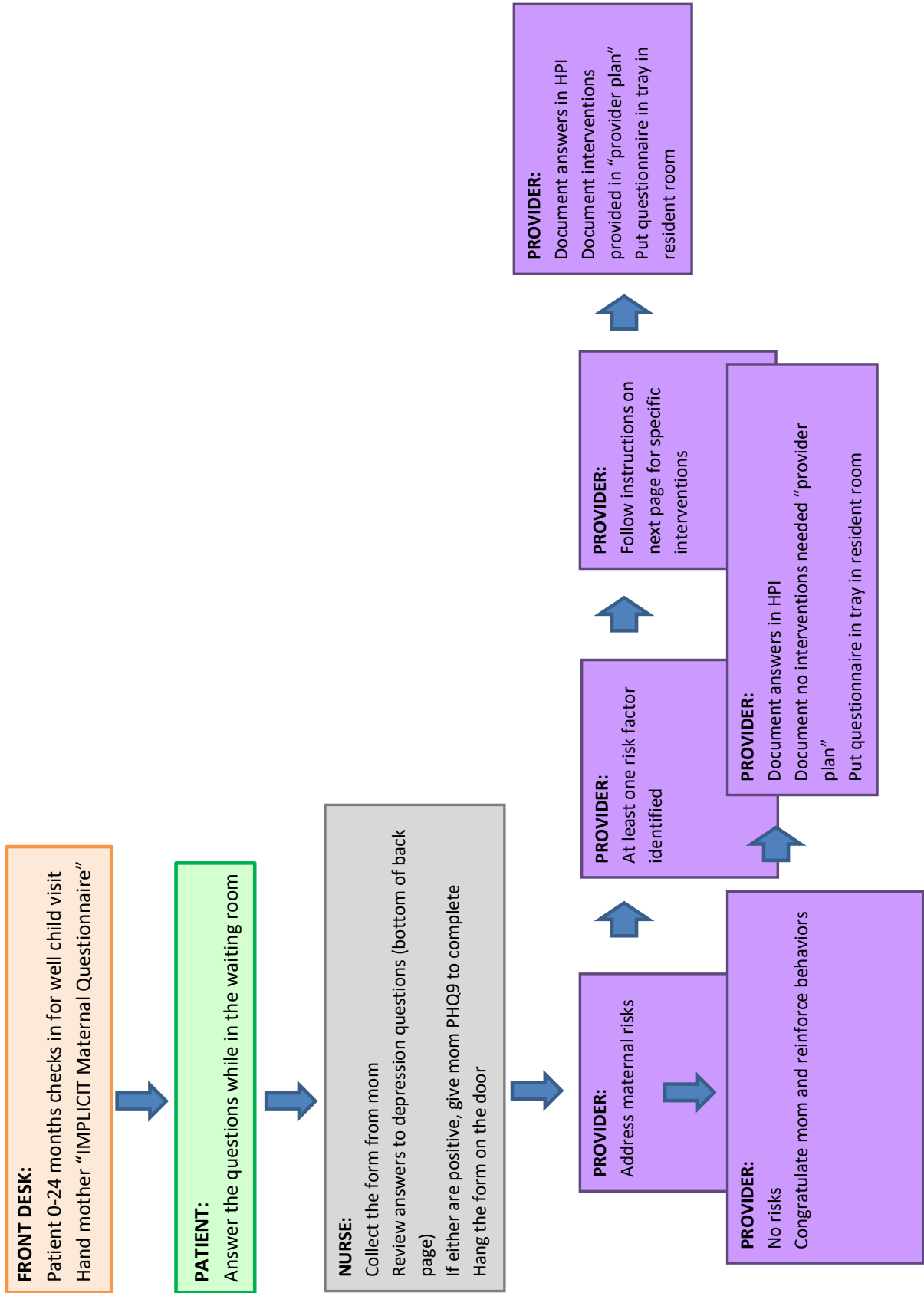


Appendix 3.1: ICC workflow example

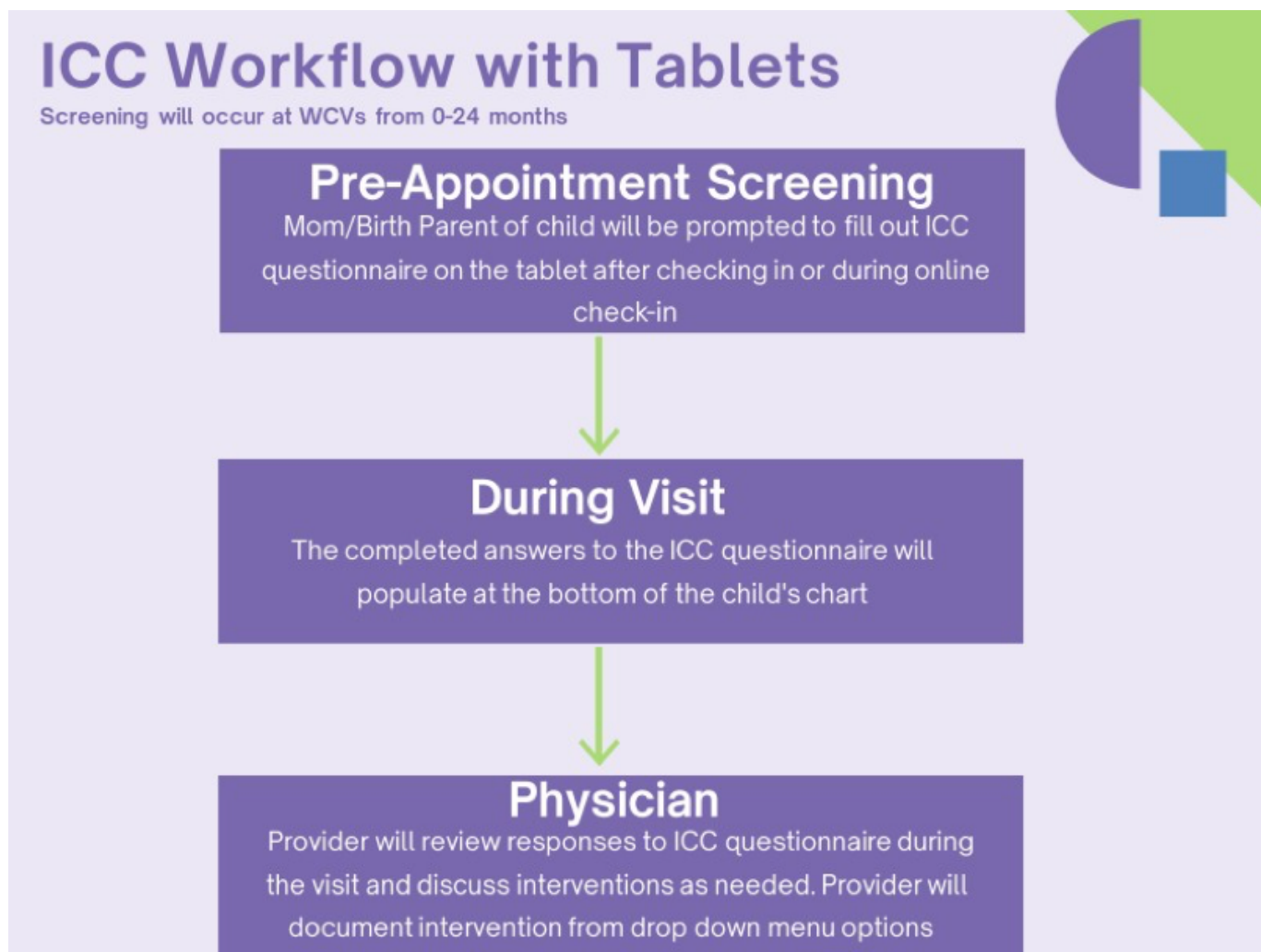


Appendix 3.2: ICC workflow example

IMPLICIT Interconception Care Workflow



Appendix 3.3: ICC workflow example, utilizing tablets



Appendix 4: Patient educational material example

Prenatal Vitamins

Your provider can provide you with a voucher for free prenatal vitamins at Esterbrook Pharmacy. The Esterbrook Pharmacy is conveniently located on the campus of The Reading Hospital and Medical Center.

We recommend prenatal vitamins before, during, and in-between pregnancies! Prenatal vitamins have folic acid, which can help prevent birth defects of the brain and spinal cord. Only 24% of women get enough folic acid. Prenatal vitamins also have iron, which helps with low blood counts common in pregnancy.

Esterbrook Pharmacy
301 S 7th Avenue, Suite #145
West Reading, PA, 19611
(610) 376-6542

Service for a busy growing family
Women, Infants, Children (WIC) of Reading
1110-C Rockland St., Reading, PA
(610) 373-5545



At today's visit, your provider prescribed:

- Smoking Cessation
- Birth Control
- Breastfeeding Support
- A Safety Plan
- Mental Health Treatment
- Prenatal Vitamins
- Other:

If you have a concern about your pregnancy or baby after hours, call the office line to leave a message and an on-call provider will call you back within 1 hour.

My Provider is:

My Baby's provider is:

Contact Us

Reading Hospital Family Health Care Center
301 S. 7th Ave. Suite 200
Reading, PA 19611
Phone
484-628-8198
Website
towerhealth.org



Resources for new and expecting moms



Healthy Mom Healthy Family

Today at your appointment, your provider talked to you about how to help you and your baby stay healthy and happy.

Safe Berks
255 Chestnut Street, Reading, PA 19602
(844)789-SAFE

Mercy Community Crisis Pregnancy Center
105 S 5th Street, Reading, PA 19602
(610)376-0828

Mary's Shelter
615 Kenhorst Blvd, Reading, PA 19611
(610)603-8010

***National Domestic Violence Services**
1-800-799-7233 thehotline.org

Mental Health

Pregnancy, childbirth, and having a newborn at home are life changing and come with a lot of stress. Being aware of your body, mood, and thoughts is important during this time. You need to take care of yourself before you can take care of others.

It is normal to be more emotional, but depression is an illness. If you are depressed, you may not have the energy or desire to care for yourself or your baby.

Talk with your provider or nurse if you:

- Feel sad or anxious all the time
- Don't feel like yourself
- Cannot do the things you need to do to take care of yourself or your baby

The Greater Reading Mental Health Alliance
1234 Penn Ave, Wyomissing, PA
(610) 775-3000

PA Counseling Services
125 S. 5th Street, Reading, PA
(610) 685-2188

Out of the Blue: Pregnancy and Postpartum Support
Amanda Hunter, LCSW
Greater Reading Mental Health Alliance
1234 Penn Avenue, Wyomissing, PA
(484)706-9465

National Suicide Prevention Hotline
1-800-273-8255

Quitting

Having a baby is a new beginning, and a great opportunity to improve your own health. Using tobacco or other substances while pregnant raises the chance of your baby being born too early (prematurely) or underweight

Quit to lower your risk of:

- Cancer
- Heart attack
- Lung disease
- Stroke and more

Quit to lower your baby's risk of:

- SIDS (sudden infant death syndrome)
- Asthma
- Ear infections
- Flu

Smoking Cessation
Counsel on Chemical Abuse
50 N. 5th St. 5th Floor, Reading PA
(610) 376-8669
<https://cocaberks.org/program/free-tobacco-cessation-classes/>

PA Quit Line
800-QUIT-NOW (800-784-8669)

Substance Use
Opioid Use Disorder Center of Excellence
Reading Hospital
(484)628-4984

Family Planning

Creating time for your mind and body to heal is important both for you and (if you choose) your next baby. Becoming pregnant too quickly after a delivery increases the chance that your baby will be born too early (prematurely). Aim for at least 18 months before trying for another pregnancy. Birth control is the best way to protect from getting pregnant.

Women, Infants, Children (WIC) of Reading
1110-C Rockland St., Reading, PA
(610) 373-5545

Lifeline of Berks County
612 Reading Ave, West Reading, PA 19611
610.374.8545

Planned Parenthood
1920 Kutztown Rd., Reading, PA
(610) 376-8061

Safe Relationships

A healthy family means not living in fear of someone hurting you or your child. If you are in a relationship, ask yourself if you feel liked as well as loved.

Pregnancy and having a new baby is an unsafe time for you and your child if you live with someone who is violent or abusive.

Tell your provider if your provider if your partner:

- punches, slaps, or threatens you
- throws, breaks, or punches things
- verbally puts you down

Your provider and nurse can help make a safety plan.



Breastfeeding

Breastfeeding is a great (and cheap!) way to nourish your baby, but whatever way you choose, we support you! Your provider or nurse can give you advice, supplies, or a note for your employer to provide breaks for pumping.

Lactation Support through Reading Hospital
(484) 628-9299



Appendix 4.1: Patient educational brochure example

Interconception care (ICC)
EXPLAINED

ICC is the healthcare given to women *between* pregnancies!

Being in your best health before pregnancy matters!

Some behaviors may have a negative impact on yourself and your future baby.

Here at the Shadyside Family Health Center, we want to make sure that **ALL** women are able to have healthy and safe pregnancies.

ICC allows our team to connect you with resources for a healthy family!

Everyone deserves to have healthy and happy families!

Location:
UPMC Shadyside Family Health Center
5215 Centre Avenue
Pittsburgh, PA 15232

Contact us:

Operating Hours:
Monday - Friday:
8:00am - 5:00pm

Phone: (412) 623-2287
Fax: (412) 623-6629

UPMC LIFE CHANGING MEDICINE

What is interconception CARE?

UPMC Shadyside Family Health Center



Our goal is to provide moms with support to have healthy families.



Healthy mom, Healthy family

 As a busy new mom, we want to make sure that you get the care and support that you need.

Healthy Families BEGIN HERE

 How do the doctors make sure my family stays healthy?

- 1 During your child's checkups from 0 to 2 years old your provider will ask you, the baby's mom, some questions.
- 2 Based on your answers, your doctor may give you some quick solutions or have you come back on your own for a visit.
- 3 This will help you get the support you need!

What will the doctors ask me about? 

1. Smoking in the home
2. Baby blues & postpartum depression
3. Family Planning
4. Prenatal and multivitamin use
5. Information about you, like your age, how many children you have and your race/ethnicity

Why will the doctors ask me about these things?

These four things may put you at risk for:

- **Preterm birth:** having the baby too early
- **Low birth weight:** having a baby that does not weigh enough



INTERCONCEPTION CARE FACTS 

- 1 1 in 5 babies born to moms who smoke have a low birth weight. Babies born too small are not as healthy.
- 2 1 in 7 women experience depression. Depression can affect how you care for yourself and your baby.
- 3 Aim for 18 months or more between pregnancies. This will allow your **body and mind to heal.**
- 4 Only 24% of women get enough folic acid. Taking a multivitamin with folic acid can help prevent birth defects in future pregnancies.

Appendix 4.2: Patient education brochure example in Spanish



Llámenos o visítenos en:

Ellenville Family Health Center
(845) 647-4500

Kingston Family Health Center
(845) 338-6400

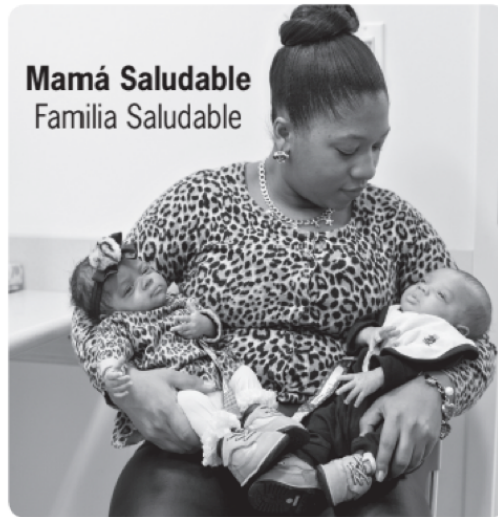
New Paltz Family Health Center
(845) 255-2930

Port Ewen Family Health Center
(845) 331-2355

Pediatric Care Center of Kingston
(845) 339-9055

OB/GYN Specialty Care Center of Kingston
(845) 338-8444

Center for Counseling at Kingston Family Health Center
(845) 338-2562



**Mamá Saludable
Familia Saludable**

Consejos de Salud para una Mamá Ocupada



Puede ser difícil encontrar el tiempo para cuidarse a usted misma después de tener un bebé. Aquí le presentamos cuatro temas importantes en que pensar para ayudarle a **mantenerse saludable ahora y en futuros embarazos**.

1. Nutrición (Ácido Fólico)

Sólo 1 de 4 mujeres obtienen la cantidad correcta de ácido fólico cada día. Si usted está planeando en tener otro bebé, tomar ácido fólico - un tipo especial de Vitamina B - es muy importante. Puede ayudar a prevenir defectos de nacimiento y ayudar al bebé a desarrollar un cerebro, cráneo y espina dorsal saludables. También puede prevenir un parto prematuro.

¿Qué puedo hacer?

Su doctor le puede escribir una receta para las vitaminas que contienen ácido fólico. También están disponibles sin receta en el mostrador. Hable con su doctor si tiene cualquier preocupación acerca de tomar ácido fólico.



2. Métodos Anticonceptivos

Planear tiempo entre los embarazos es importante tanto para las mamás como para cada uno de sus bebés. Si usted se embaraza en menos de 18 meses después de haber tenido a su bebé, hay un riesgo más alto de que el nuevo bebé vaya a nacer más pronto de lo esperado y con bajo peso. Nosotros le recomendamos que espere dos o más años antes de tener otro bebé.

¿Qué puedo hacer?

La mejor forma de protegerse para no quedar embarazada demasiado pronto es usar un método anticonceptivo. Hay muchos tipos diferentes de métodos anticonceptivos. Usted puede hablar con su profesional médico para determinar el mejor método para usted.

3. Depresión

Aproximadamente 1 de cada 8 mujeres se siente deprimida después de tener un bebé. La depresión es una enfermedad que involucra el cuerpo, el estado de ánimo y los pensamientos. Una mujer que está deprimida puede que no tenga la fuerza o el deseo de cuidarse a ella misma o a su bebé.

¿Qué puedo hacer?

Hable con su enfermero/a o profesional médico si se siente triste, ansiosa o simplemente no como normalmente es usted. Ellos pueden ayudarle a encontrar el mejor tratamiento para que usted pueda sentirse mejor.

4. Fumar

Dejar de fumar mejora la salud de toda la familia. Dejar de fumar puede disminuir su riesgo de cáncer, ataque cardíaco, embolia y enfermedad pulmonar. Si usted está planeando en tener otro bebé es más probable que usted tenga un bebé con bajo peso y que nazca demasiado temprano si fuma mientras está embarazada. Además, los niños que están alrededor de los cigarrillos son más propensos a que contraigan bronquitis, la influenza/gripe, infecciones de oído, asma o a morir del síndrome de muerte súbita infantil (SIDS-síglas en Inglés).

¿Qué puedo hacer?

Hable con su enfermero/a o profesional médico si tiene pensamientos acerca de disminuir o dejar de fumar. Nosotros le podemos ayudar a dejar de fumar dándole información y poniéndola en contacto con servicios de consejería o recetándole medicina que le ayude a dejar de fumar.



Appendix 4.3: Patient education materials for smoking and multivitamin risks

Smoking

Although **50%** of women quit smoking while pregnant, **70%-80%** of women start again after birth

Quitting smoking  risk of:

- **cancer**
- **heart attack**
- **stroke**
- **lung disease**



 Women who smoke while pregnant are at an  risk of having a baby **born too early and underweight**



Mom's smoking can lead to long term childhood health issues like:

- **child smoking**
- **attention-deficit hyperactivity disorder (ADHD)**
- **childhood obesity**



Children exposed to **SECONDHAND SMOKE** are more likely to get:


- **ear infections**
- **lung infections**
- **asthma**
- **the flu**





& - die from **Sudden Infant Death Syndrome (SIDS)**




Multivitamin


 Folic Acid is a type of B vitamin that helps our bodies **make new cells**, and may **prevent heart disease and cancer**

It also helps **prevent birth defects**


Eating a healthy diet, that includes **fruits and vegetables** helps you get the folic acid you need 


But the **best** way to make sure you are getting enough folic acid is to **take a multivitamin with folic acid DAILY**



Neural tube defects (NTDs) are birth defects of the **brain & spine** 

They can start **days to weeks** after conception, **when many women do not know they are pregnant**


Folic Acid alone reduces the rate of NTDs by 70% 

 **BUT** Multivitamins with folic acid reduce the risk of NTDs by **90%**

To help prevent NTDs, women should take a multivitamin with folic acid **DAILY** for at least **1** month prior to **conception**

Appendix 4.4: Patient education materials for depression and family planning risks


Depression




Baby blues is a time **3-5 days after giving birth** when mom can feel more annoyed, sad, or confused. She may cry more easily. It can last anywhere from **a few days to 2 weeks and is completely normal**

Talk to your doctor if your baby blues lasts longer than 2 weeks


Depression is an **illness** that affects:



body



mood




thoughts

Postpartum Depression is a type of sadness that women can get after giving birth and is **nothing to be ashamed of**

1 in 7 women feel depressed after having a baby

Women who are depressed may not have the **strength or desire to care for themselves or for their baby**



Early **detection and treatment** of mom's depression **↓** risk of **behavioral & mental health problems in children**

Family Planning

Planning time between pregnancies is important to both **mom and each of her children**

Ideal spacing between pregnancies **18 months** or more

Getting pregnant less than **12 months** after you had your baby will **↑** the risk that the baby will be **born too early**

Talk to your doctor about the best form of birth control for you!



Having more space in-between children gives mom enough time to **recover physically & emotionally** from the previous pregnancy



Birth control is the best way to protect yourself from getting pregnant

Types of birth control:
IUD, Implant, Shot, Pill, Patch, Ring



IUDs & Implants are one of the **most effective** ways to help **↓** the chance of unintended pregnancy and increase the odds of better birth spacing

Appendix 4.5: Patient centered contraception options educational material

KNOW YOUR BIRTH CONTROL OPTIONS

LONG ACTING
 3+ years of protection once placed depending on product. Sterilization intended as permanent birth control

- Implant**
99% Effective
- IUD (hormonal and non-hormonal)**
>99% Effective
- Shot**
97% Effective
- Vaginal Ring**
98-99% Effective
- Patch**
99% Effective
- Pill**
96-97% Effective

REGULAR ROUTINE
 Requires regular and consistent use

- Emergency Contraception**
58%-94%
- Spermicide**
71-96% Effective
- Male or Female Condom**
88-90% Effective

SINGLE USE
 Must be used every time you have sex

Natural Family Planning
90-97% Effective

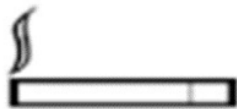
IMPLICIT Network

Appendix 5: Provider intervention reminder poster

You're Probably Doing an ICC Intervention

Remember to give yourself credit when screening for ICC!
If you perform any of these or more, remember to select "Yes" to the question
"Was an intervention performed?"

Smoking



Advise to quit

Depression



Screen for safety, give patient education, & refer for appointment

Family Planning



Discuss best interpregnancy interval or contraception options

Multivitamin w/ Folic Acid Use



Recommend taking folic acid daily



Appendix 6: IMPLICIT Network membership information

IMPLICIT Network-

An FMEC Collaborative

Membership Guide



The IMPLICIT Network has been dedicated to enhancing preconception, prenatal, postpartum and interconception care since 2003.

The Network currently collaborates on two projects:
1) IMPLICIT Pregnancy
2) IMPLICIT Interconception Care (ICC)

\$500 Emerging Membership

Perks and access to:

- IMPLICIT Pregnancy implementation materials
- IMPLICIT ICC implementation materials
- Network communications, including newsletter
- Network data management system, REDCap
- Network document storage, Google Drive
- Invitations to webinars
- Invitations to Fall and Spring meetings
- Participation in Network Committees:
 - Data Review
 - Scholarly Activity
 - Journal Club/Literature Review
- Quarterly site and Network data reports
- Collaboration for Continuous Quality Improvement (CQI) and best practice strategies
- Collaboration on publications and conference submissions

\$100 Affiliate Membership (Individual Membership)

Perks and access to:

- Network communications, including newsletter
- Network document storage, Google Drive
- Invitations to webinars

\$500 Active Membership

Perks and access to:

- IMPLICIT Pregnancy implementation materials
- IMPLICIT ICC implementation materials
- Network communications, including newsletter
- Network data management system, REDCap
- Network document storage, Google Drive
- Invitations to webinars
- Invitations to Fall and Spring meetings
- Participation in Network Committees:
 - Data Review
 - Scholarly Activity
 - Journal Club/Literature Review
- Quarterly site and Network data reports
- Collaboration for Continuous Quality Improvement (CQI) and best practice strategies
- Collaboration on publications and conference submissions
- Eligibility to serve on the Network's Leadership Council

For more information, visit <http://www.fmec.net/implicitnetwork.htm>
Or contact implicitinfo@fmec.net



Appendix 6.1: IMPLICIT Network participation agreement

IMPLICIT Network- An FMEC Collaborative Participation Agreement

The purpose of this document is to provide informed consent regarding participation in the IMPLICIT Network- An FMEC Collaborative and the use of the information contained within the family of IMPLICIT project databases in REDCap.

Regarding data, the general principle is that each participating site owns its own data and the IMPLICIT Network owns the collective data. Protected health information will not be transmitted to the IMPLICIT REDCap databases. On the IMPLICIT REDCap web site, site names will be associated with their data to facilitate communication and CQI monitoring, but the information on the IMPLICIT REDCap site is confidential and should not be shared or reproduced outside the collaborative without permission. *IMPLICIT REDCap is maintained on servers at Lancaster General Health in Lancaster, PA and is administered by the Lancaster General Research Institute (<https://redcap.lqhealth.org/redcap/>). REDCap is a fully HIPAA compliant and protected web-based database. (See: <http://www.project-redcap.org/> or Paul A. Harris, Robert Taylor, Robert Thielke, Jonathon Payne, Nathaniel Gonzalez, Jose G. Conde, Research electronic data capture (REDCap) - A metadata-driven methodology and workflow process for providing translational research informatics support, J Biomed Inform. 2009 Apr;42(2):377-81)*

As a participating site, you agree to the following:

1. Join the IMPLICIT Network- An FMEC Collaborative, and pay associated annual dues to the FMEC.
2. Participate in monthly audio calls/webinars and attend bi-annual in person IMPLICIT meetings to share experiences with IMPLICIT colleagues, staff, and personnel.
3. Communicate regularly with Network Coordinator regarding IMPLICIT project(s) implantation, updates, and initiatives.
4. Identify and select relevant IMPLICIT projects where you wish to participate and notify the Network Coordinator so that your site can be set up in the REDCap database and appropriate access and training can be provided.
5. Obtain IRB/QI approval or exemption from the IRB office at your site.
6. Regularly collect and input clinical data into the IMPLICIT REDCap database through manual or electronic means.
 - a. Sites can access and use their own data for whatever purposes they see fit (e.g., internal QI activities).
 - b. Sites will only be able to access their own data in the IMPLICIT REDCap system and users at the sites will be restricted within that site's data access group.
 - c. Access to IMPLICIT REDCap data will be established on a per-user basis at the site level with unique user ID/passwords. Logs of access and use are maintained in the REDCap system and can be accessed for auditing and monitoring purposes.
 - d. IMPLICIT collaborative data shall not contain protected health information.
 - e. In no case shall a site record or transmit any data that includes data from another project site.
 - f. IMPLICIT collaborative data will include site names to facilitate network-wide analyses and benchmarking.
 - g. Only authorized IMPLICIT project coordinators and biostatisticians/database administrators will have access to the entire network data set.

The major purpose of the IMPLICIT Network is to learn how to change clinical practice in primary care sites. To achieve this purpose, information about the results of the collaborative may be used in academic papers, presentations or posters as approved by the IMPLICIT Leadership Council. The Network will not identify metrics for any individual sites, unless there is a clear purpose and explicit written permission in advance.

On behalf of my site, I agree to these conditions regarding participation and data use in the IMPLICIT Network:

Signature

Date

Print Name

Network Site

IMPLICIT Participation Agreement_V.3_11.23.2015

Appendix 7: IMPLICIT Network social media information



Follow The
IMPLICIT Network



IMPLICITNETWORK



<https://www.facebook.com/groups/903138003597146>

For more information reach out at:



<http://www.fmec.net/implicit>



IMPLICIT Interconception Care Toolkit

[FMEC.NET/IMPLICIT](https://fmec.net/implicit)

[MARCHOFDIMES.ORG/IMPLICITTOOLKIT](https://marchofdimes.org/implicittoolkit)

