



# High-Risk Maternity

## Care Coordination

## ***Maternity Introduction***

While the United States has made great progress in ensuring healthier pregnancies and babies over the past several decades, we still have much to do. Birth defects, low and very low birth weight infants, preterm deliveries, and infant deaths continue to be higher than the goals outlined in Healthy People 2010, the nation's health agenda. Examining these poor birth outcomes by ethnicity further highlights a pattern of healthcare disparity.

We know that a woman's health during pre-conception, pregnancy, inter-conception, and postpartum play important roles in determining the outcomes for her and her baby.

For this reason, a comprehensive, individualized approach that addresses both medical and social components is required to address these issues. To be successful, Care Coordination must focus on:

- Establishing an interdisciplinary team
- Developing and implementing individualized care plans
- Coaching and behavior modification to promote participant self-care
- Coordinating care across all healthcare settings
- Providing for the social support needs of this population
- Providing condition specific physician practice guidelines
- Providing education and assistance (to both participants and providers) related to the recommended standards of care.

These components support the Care Coordination philosophy that integrates clinical treatment guidelines, disease prevention strategies, participant self-care education, and social support services while demonstrating quantifiable cost savings to the payer.

In June of 2005, the Center for Disease Control (CDC), in partnership with the Department of Health and Human Resources and 35 national professional organizations, hosted the National Summit on Pre-conception. From this summit, in April of 2006, the CDC released ***Recommendations to Improve Preconception Health and Health Care and the American College of Obstetrics and Gynecology national guidelines.***

These recommendations were designed to promote optimal health throughout the life span of women, children, and families by combining clinical care and population-focused public health strategies.

Care Coordination and its team approach to interventions support participant education, promote appropriate medical and social resources, and support reproductive planning and early entrance into prenatal care.

In response to challenges facing the provider community, eQHealth has developed a comprehensive Maternity Toolkit which covers the range of maternity services from Preconception Care to Postpartum Care. Each module may be used individually or the toolkit may be used in its entirety to create a comprehensive Care Coordination Program.

# Preconception Care

## Objectives

High risk pregnancies can result in poor birth outcomes including prematurity, low and very low birth weight babies, and fetal demise. Data also suggests once a woman delivers a pre-term or low birth weight infant she may be at risk for future poor birth outcomes in successive pregnancies. Impacting this high risk population is a complex challenge best approached in the context of a comprehensive program for maternal-fetal health.

The CDC lists **Four Goals to Improve Preconception Health:**

1. Improve the knowledge and attitudes and behaviors of men and women related to preconception health.
2. Assure that all women of childbearing age in the United States receive preconception care services (i.e., evidence-based risk screening, health promotion, and interventions) that will enable them to enter pregnancy in optimal health.
3. Reduce risks indicated by a previous adverse pregnancy outcome through interventions during the inter-conception period, which can prevent or minimize health problems for a mother and her future children.
4. Reduce the disparities in adverse pregnancy.

We recommend a Care Coordination approach that centers on early introduction of a Care Coordinator to support the mother and the family unit. The Pre-conception module of the Maternity Care Coordination Toolkit will have two primary areas of concentration:

1. **Physician Focus:** For the purpose of this program, physician refers to any provider who functions as an OB/GYN, and/or Primary Care Physician/Medical Home. ( OB/GYN, Family Practice, General Practice, Internal Medicine, Pediatricians, etc.). Physician Focus includes:
  - a. Developing preconception care packets for providers which will contain the most recent national guidelines, a preconception care check-off list to place in the participant record and information on billing for preconception care services.
  - b. Promoting the usage of a single, comprehensive pre-conception checklist which can be used by physicians to document adherence to national guidelines.
  - c. Women in need of preconception planning will be able to refer the participant to the Preconception Program for follow up. Referrals may be completed electronically through the provider portal or faxed or called in to eQHealth staff.
  - d. Educate physicians on the importance of preconception screenings at every encounter with a woman of childbearing age and not just after conception.
  - e. Increase provider awareness of the disparities an adverse pregnancy outcomes and the importance of preconception planning.
2. **Participant Focus** which includes:
  - a. Ensuring that all women of child bearing age who have not had a previous pregnancy are screened for preconception planning.
  - b. Collaborating with community resources, health clinics, and primary care clinics related to preconception planning.

- i. Upon request school nurses, local health departments, federally qualified centers, and juvenile detention centers will be provided with screening information for preconception planning.
  - ii. Screenings can be completed at the time of other evaluations such as eye exams and hearing exams.
  - iii. Upon request we will work with schools to screen girls who may be at risk for pre-conception needs and provide education for girls of child bearing age on health evaluations they should be receiving on a regular basis.
- c. Identification of positive screening referrals of girls identified with possible preconception needs either through an electronic portal or call/fax referrals to eQHealth staff.
  - d. Collaboration with the participant to ensure a medical home has been established.

## ***Program Inclusion and Exclusion Criteria***

### **Inclusion Criteria**

- Medical Coverage Eligibility
- Female participants from menarche to menopause

### **Exclusion Criteria**

- Females who have not reached menarche
- Females who have had a hysterectomy or permanent sterilization
- Females with history of one or more previous births

## ***Program Interventions***

### **Participant Introductory Call/Visit**

All participants will receive an introductory phone call/visit. The Care Coordinators will attempt to reach the participant within **15 days** of identification to perform a preconception assessment. In addition, the program welcome kit will provide the participant with information about wellness care specific to women of childbearing age, how she can opt-out of the program if she does not wish to participate, and information related to encouraging partners/significant others to join in the preconception education.

If the Care Coordinator is unable to reach the participant by telephone or in person after five attempts (including at least one after normal business hours call), a written notification will be sent to the referring provider requesting assistance with contacting the participant. If the participant does not respond to any attempts at outreach within 30 days, the “New Participant” case will be closed related to inability to contact.

### **Participant Follow Up Calls/Visits and Disease Specific Assessment**

All enrolled participants will receive at least one additional call/visit in addition to the initial assessment call/visit when indicated. Follow up will consist of a review of the plan of care and any referral or coordination of care needs indicated. Based on this contact, the participant may receive further Care Coordinator interactions at scheduled intervals.

Participants will be discharged from the program once all plan of care goals have been resolved or the participant becomes pregnant.

## Care Transition

If a Care Coordination participant is admitted to the hospital, the Care Coordinator will be notified by designated hospital personnel at the time the participant enters the hospital. The Care Coordinator will then reach out to the participant while they are still in the acute setting and discuss the follow up plan of care.

## Participant Education

Educational information will be sent to participants when deemed appropriate by the Care Coordinator. All educational information is culturally sensitive, considerate of the participant's educational, literacy and language needs.

Educational interventions related to preconception care may include:

1. Ensuring every woman has been educated on having a reproductive life plan.
  - a. Reproductive life plans allow a woman to consider when she will be ready to start a family and assist her with non directive options to meet her goal.
  - b. As unintended pregnancies are often directly related to poor birth outcomes we will ensure that woman enrolled in the program are educated on the need for a pregnancy plan.
2. Controlling chronic health conditions such as asthma, diabetes, hypertension and heart disease
  - a. Educate participants that prior to becoming pregnant, management of chronic conditions are crucial to the health outcomes of the woman and her baby.
  - b. Educate participants on specialist care that may be indicated related to chronic condition management.
3. Weight management.
  - a. Obesity has become an epidemic in our country and it is important that this be addressed.
  - b. Obesity can lead to chronic conditions such as hypertension and diabetes and place a woman at risk for poor birth outcomes including prematurity and birth defects.
  - c. Infants born to women having a higher pre-pregnancy weight are more likely to be macrosomic and require neonatal intensive care services.
4. Nutritional needs
  - a. Healthy, balanced diet
  - b. Use of multivitamin
5. Use of Folic Acid to prevent birth defects
6. Education related to cessation of substance and/or alcohol use
7. Education on controlling mental health disorders
8. Immunizations needs
9. Appropriate woman's health maintenance interventions (annual pap smears, monthly self breast exams, etc.)
10. Smoking cessation programs and the importance of smoking cessation related to the woman's long -term health and the effects of smoking on babies.
11. Prevention of sexually transmitted infections
12. Avoidance of exposure to known terratogens
13. Education related to genetic disorders such as sickle cell anemia, Huntington's Chorea, Tay Sachs, etc. when indicated.

## **Multidisciplinary Team**

Our multidisciplinary team of healthcare professionals will collaborate with any identified entities such as state supported disease management and medical home vendors, when indicated, to ensure the participants' needs are met. This is accomplished by addressing clinical, functional, financial, psychosocial, environmental, and support system needs. Team members include, but are not limited to, internal physician advisors, community physician advisors, treating physicians, registered nurses, pharmacists, and behavior health specialists. Any or all of these team members may participate in case conferences to coordinate care for individuals who require intense management.

Interventions related to interdisciplinary team coordination may include:

1. Referrals/Coordination assistance related to substance/tobacco abuse
2. Referrals/Coordination of mental health services for behavioral health needs when identified
3. Referrals/Coordination/Addressing social services including financial concerns, partner abuse, housing, etc.
4. Coordination of appropriate appointments
5. Working collaboratively with local physicians to integrate preconception Care Coordination into their existing services without additional time/work requirements
6. Working collaboratively with local health facilities to integrate preconception Care Coordination into their existing services without additional time/work requirements

## **Individualized Plan of Care**

Every participant enrolled in the program will work collaboratively with the Care Coordinator to develop an individualized plan of care consistent with national guidelines and the physician treatment plan.

James Prochaska noted that in order for behavior change to be successful a person must want to make the change and must be involved in how the change will occur. Care Coordinators will devise a list of participant problems based on the preconception assessment tool. These problems will be reviewed with the participant and/or the participant and support system, with Care Coordinator guidance, to determine the best way to resolve the problems and which problem they would like to work on first.

The Care Coordinator will supply the participant with any/all tools they may need to make informed decisions related to their problems and plan of care such as:

- Physician treatment plan
- Disease specific information
- Self-care education
- Referrals to community resources
- Medical equipment

## **Participant Access**

In addition to the above items, participants may also have access to:

- Nurse Calls/Visits providing health education, behavior modification and/or health coaching.
- Identifying and resolving gaps in care (wellness visits, physician follow up schedule, recommended follow up testing, medication adherence, etc.)
- Education materials tailored to the participant's primary language and reading level
- Ongoing collaboration with the primary care physician or medical home
- Evaluation of medications and medication adherence
- Quarterly general health reminders (such as annual pap smears)
- Ongoing reassessment and adjustment of the plan of care

## ***Physician Interventions***

Local physician involvement is critical to Care Coordination. In order for women to succeed in preconception planning, they must be able to work with a primary care physician. For this reason, eQHealth employs the use of company **Medical Directors**.

The primary focus of the Medical Director will be to reach out to their peers and create meaningful partnerships for effective provider collaboration. The Medical Director will foster and promote the unique needs of a particular population. In addition, the Medical Director will provide clinical support to the Care Coordination staff and review all assessment and plan of care documents to ensure compliance with national practice guidelines as they are updated.

Physician interventions include:

1. Developing preconception care packets for providers which will contain the most recent national guidelines related to preconception care, the rationale for preconception care, a preconception care check-off list to place in the participant record and information on billing for preconception care services.
2. Establishing a provider portal that will:
  - a. Include the latest recommended national guidelines
  - b. Electronic program referral tools
  - c. Participant educational resources that can be distributed by the provider
3. Development of a single, comprehensive preconception checklist which can be used by physicians to document adherence to national guidelines
4. Referral tools. Physicians who identify women for preconception planning will be able to refer the participant to the Preconception Program for follow up by faxing or calling eQHealth.
5. Physician Education. Educate physicians that preconception screenings should be performed on every encounter.

## ***Program Evaluation***

Preconception assessment, education and counseling are designed as preventive strategies to empower women and their families to reduce risk factors that may lead to adverse pregnancy outcomes.

Program Outcomes will be measured at least semi-annually. Participant outcome measures will be compared to pre-enrollment baseline data. In addition, participants will be measured against those eligible participants who elected to opt-out of the program.

### **Clinical**

- Verification that any uncontrolled co-morbid health conditions are now within acceptable control
- Increased utilization of preventive health services
- Percent decrease in the rate of teen pregnancies
- Successful access of community resources
- Reduction of unhealthy health behaviors (Smoking Cessation, Alcohol Abuse, Drug Abuse, etc.)

### **Financial Measures (enrollees compared over time to eligible program participants who chose not to participate)**

- Admits/thousand (program enrolled participants)
- Days/thousand (program enrolled participants)
- ALOS (program enrolled participants)
- % of total admissions for High Risk deliveries

**Provider**

- Evidence of use of provider portal
- Evidence of use of preconception screening tool on all encounters with women who meet inclusion criteria
- Provider comparison related to recommended preconception testing and immunization in comparison to his peers

**Program quality measures**

- Participant satisfaction
- Annual provider satisfaction

# Postpartum Care

## *An emphasis on inter-conception care*

### ***Post Partum Care Background***

The postpartum period covers a critical transition for a woman, her family and her newborn. This transition has physiological, emotional and social impact on each family member. For women experiencing childbirth for the first time it can be the most significant and life-changing event marked by strong emotions, physical changes, new and altered relationships and the adjustment to new roles.

Currently there is not a “formal” definition of the postpartum period. It is, however, widely accepted that the postpartum period encompasses the time immediately after delivery through the six week postpartum check-up. While many life-threatening postpartum events occur in the immediate 24 hours after delivery, women remain at risk for infection, hypertension, hemorrhage, blood clot formation, wound dehiscence, mastitis, abuse, stress and postpartum depression.

As a component of the inter-conceptional period, the post partum assessment can be divided into six (6) sections:

1. Risk Assessment (risk of family violence, infection and immunization, nutrition, depression and stress)
2. Health Promotion (Breast feeding, back to sleep infant positioning, exercise, nutrition, exposure to environmental hazards or toxins, family planning, and folic acid/vitamin supplementation)
3. Clinical Interventions (Assessment of clinical status related to women of childbearing age as well as any identified co-morbid health conditions)
4. Psychological Interventions (Depression screening, low income assistance, social service support, parenting support)
5. Inter-conception care for mothers of high risk infants
6. Coordination of services

### ***Inter-Conception Care***

According to the CDC, inter-conception is the period between pregnancies and management, emphasizing those factors which must be acted on before conception or early in pregnancy to have maximum impact.” Inter-conception care will be provided to women who are between pregnancies and have already had a high risk pregnancy or poor birth outcome. It involves the woman, her partner, family, and social support system.

### ***Objectives***

During the postpartum period, women have several concerns which are often unaddressed. The objectives of the Postpartum Module are to ensure that health concerns present during the pregnancy as well as both medical or social which occurred after delivery are addressed and resolved. The Postpartum Module is targeted to mothers and babies during this initial post-delivery period and will focus on two (2) specific areas:

1. Care of the mother through:
  - a. Postpartum assessment
  - b. Inter-conception care for high risk mothers or mothers who delivered high risk babies
  - c. Screening for postpartum depression
  - d. Access to a medical home
  - e. Education on infant care
  - f. Education on the diagnosis of and prevention of SIDS
  - g. Referral/Coordination of all identified social/community/mental health needs
2. Care of the infant through:
  - a. Post-delivery assessment of the infant

- b. Environmental assessment of the home
- c. Access to a medical home
- d. Assessment of parent-infant bonding

Postpartum interventions will be based on the assessment of the mother and the infant and will be provided in an integrated fashion. Skilled care, assessment, and early intervention have the potential to reduce the incidence of death and disability. These interventions coupled with facilitating the mother's return or entry into a medical home and referrals to appropriate community/mental health services can create an overall reduction in health care costs.

### ***Inter-conception Care Objectives***

The objective of the inter-conception module is to use the period between pregnancies to provide intensive interventions to women who have had previous pregnancies that resulted in poor birth outcomes (infant death, fetal loss, birth defects, low or very low birth weight, or preterm birth).

Care Coordination has the ability to identify high impact interventions that have the potential to mitigate maternal risk factors. These risk factors include: medical co-morbidities, mental health, substance abuse, smoking, , and social problems such as partner abuse, social isolation and homelessness.

Topics to be addressed with the woman include, but are not limited to:

- Access to care
- Baby Spacing
- Future Conception
- Nutrition/Exercise/Obesity
- Maternal infections
- Mental health concerns
- Smoking cessation
- Alcohol and/or substance abuse
- Chronic health conditions (diabetes, hypertension, heart disease, asthma, etc)

For women with previous healthy pregnancies, this period is used for wellness promotion and assessment of the parent child relationship and social environment. However, for women who have experienced a recent poor birth outcome the inter-conception period is critical for risk reduction prior to the next pregnancy.

### ***Sites of Care***

This program will be implemented in hospitals that provide obstetrical and neonatal intensive care services to participants. Hospital selection will be based on the volume of paid neonatal claims and client input.

In addition to initial visits in the hospital for high risk mothers and babies, Care Coordinators may make home visits when indicated to assess the mother or infant, home environment, or other needs identified by the Care Coordinator.

### ***Program Inclusion and Exclusion Criteria***

The postpartum program will include women who have had given birth at one of the defined sites of care and who meet the following criteria:

#### **Inclusion Criteria**

- Mother must have eligible health care coverage at the time of delivery
- Delivery at proposed site of care

## Exclusion Criteria

- Women who elect not to participate in the program
- DCFS wards
- Maternal age less than 18 years
- Severe mental impairment

## Inter-conception Care Module

In addition to the above criteria, to be eligible for the inter-conception care module the mother must have had an infant admitted to the NICU.

## *Program Stratification*

Program participants will be identified through physician referrals, facility referrals, and/or participant self referral.

Women will initially be stratified into the following levels based on the outcome of their pregnancy as follows:

- Women with healthy birth outcomes will be initially stratified for low intensive management
- Women who may have developed health problems during pregnancy, had a chronic condition prior to pregnancy, or had a complicated delivery but had healthy outcomes will initially be stratified into medium intensity management
- Women identified as having had poor birth outcomes or high risk pregnancies, will be initially stratified into the High Severity level of the program for intensive management including inter-conception care.

Care Coordinators will reach out to participants in the appropriate timeframes, based on initial severity level, and perform an in-person assessment of the participant. Care Coordinators may re-stratify participants at that time of indicated by the clinical assessment.

Stratification is re-evaluated each time new clinical information is received and each time there is a Care Coordinator-participant encounter.

The severity level assigned to a participant determines the type and intensity of interventions received as part of Care Coordination. Program levels include:

### **Low Level**

This level of the program is designed for mothers who have had a healthy uncomplicated pregnancy resulting in a healthy newborn.

***Mothers in the low level of the program will receive one (1) home assessment within two (2) weeks of discharge from the hospital***

### **Medium Level**

This level of the program is designed for:

1. Women who developed health problems during gestation who delivered healthy babies
2. Healthy women who had complicated deliveries and delivered a healthy newborn
3. Women with a history of chronic health conditions who had an uncomplicated pregnancy and healthy delivery

*Mothers in the medium level of the program will receive two (2) interactions with a Care Coordinator in addition to the initial hospital assessment: one within two (2) weeks of discharge from the hospital and one six (6) weeks after discharge.*

## **High Level**

This level of the program is designed for women regardless of health history whose pregnancy resulted in a poor birth outcome

*Mothers in the high level of the program will receive three (3) interactions with a Care Coordinator in addition to the initial hospital assessment: one within two (2) weeks of discharge from the hospital, one within six (6) weeks of discharge from the hospital and one six (6) months after discharge.*

## **Program Interventions**

### **Participant Introductory Visit**

All eligible participants in high or medium severity levels will receive an initial in person visit from a Care Coordinator. During this visit the Care Coordinator will assess the home environment, basic care for the child, mother's health, infant's health, psychosocial issues, and any community resource referrals. If the mother and child are considered to be low level severity, a follow up contact will be made within two weeks of discharge from the inpatient facility.

### **Care Transitions Introductory Visit**

All participants will receive a postnatal introductory visit from a Care Coordinator while still in the hospital. During this introductory visit, an initial inter-conception assessment and a program welcome kit will be provided. The program welcome kit includes information regarding wellness care specific to women of childbearing age, the process for opting out of the program if she does not wish to participate, and information encouraging her family to join in the inter-conception education.

The initial assessment will focus on physical, social, and psychological issues. Some of the items in the initial assessment include:

1. Focusing on previous pregnancy outcomes, medical history, reproductive history, family history including genetic disorders, social support system, physiological assessment for depression or other mental illness, and lifestyle assessment related to smoking, alcohol/drug use and possible physical abuse.
2. Reviewing all discharge instructions for understanding and adherence
3. Reviewing safety concerns regarding discharge of neonatal infants
4. Reviewing the participant's contraceptive plan and discussion of pregnancy spacing
5. Establishing a time for a follow up assessment
6. Instruction in maternal post-delivery care
7. Information regarding WIC services

### **Participant Follow Up Calls/Visits and Disease Specific Assessment**

All enrolled participants will receive at least two additional calls/visits after the initial assessment. Participants will be discharged from the program once all plan of care goals have been addressed.

Follow up calls will be provided at two (2) weeks postpartum, six (6) weeks postpartum, and six (6) months postpartum. Some of the topics to be discussed include:

1. Mother
  - a. Information/Counseling on scheduling postpartum clinic visit, establishing/re-establishing care with medical home, care of the child and breast feeding, maternal physiological changes during the postpartum period

- b. Ensuring postpartum appointments/medical home appointments were attended by the participant and/or the child as well
  - c. Risk assessment for family violence, infections, immunizations, stress, and depression
  - d. Assessment and counseling related to permanent smoking cessation, alcohol and drug use
  - e. Family planning
  - f. WIC
2. Child
- a. Assessment of growth and development
  - b. Appropriate feeding
  - c. Safe, adequate environment
  - d. SIDS and “Back to Sleep” campaign
  - e. Bonding
  - f. Stimulation
  - g. Next steps related to health care coverage, birth certificates
  - h. Selection of pediatrician/Medical Home and adherence with follow up appointment

### **Inter-conception Care Follow Up**

Inter-conception follow up will consist of all of the items above with some exceptions related to more intensive management and needs of high risk birth outcomes.

The initial participant follow up call will occur within three to five (3-5) days post discharge for high-risk participants. In addition to the 2 required calls, Care Coordination may continue if the participant has ongoing unresolved needs.

Some of the specific interventions of the follow up process in addition to those already mentioned include:

1. Ensuring the woman has identified a medical home and has reestablished care with that provider
2. Ensuring the participant has selected a pediatrician/Medical Home for her child and made the follow up appointment.
3. Adherence with filling prescriptions
4. Assessing for problems with the medications
5. Ensuring the 6wk post partum visit has been scheduled
6. Assessing maternal adherence to the discharge plan
7. Assessing adherence to the newborn’s discharge plan
8. Confirming medical home establishment
9. Confirming adherence to 6wk follow up
10. Administering a depression screening to assess for post partum depression

### **Participant Education**

Education information will be provided to participants when deemed appropriate by the Care Coordinator. All educational information is culturally sensitive, considerate of the participant’s educational, and literacy and language needs, and tailored to meet the woman’s individual needs.

Some of the educational interventions included are:

1. Ensuring every woman has been educated on having an inter-conception plan.
  - a. Inter-conception plan allows a woman to incorporate an appropriate timeframe for spacing pregnancies
  - b. Information regarding unintended pregnancies and poor birth outcomes
  - c. Contraception education
2. Childcare

3. Infant development
4. Weight management.
  - a. Obesity has become an epidemic in our country and it is important that this be addressed with women.
  - b. Education regarding the relation between obesity , chronic health conditions and poor birth outcomes
5. Nutritional needs
  - a. Promotion of a healthy, balanced diet
  - b. Use of multivitamin and folic acid
6. Educating related to the continued cessation of substance and/or alcohol abuse
7. Educating on controlling mental health disorders
8. Immunizations needs
9. Appropriate woman's health maintenance interventions (annual pap smears, monthly self breast exams, etc.)
10. Smoking cessation programs and the importance of smoking cessation related to the woman's long term health and the effects of smoking on babies
11. Prevention of sexually transmitted infections
12. Dental Care. Need for dental care and evaluation on a regular basis
13. ***For inter-conception, high risk participants:*** Achieving and maintaining optimal control of chronic health conditions such as asthma, diabetes and heart disease.
  - a. Educate that prior to becoming pregnant management of chronic conditions is crucial to the health outcomes of the woman and her baby.
  - b. Educate on specialist care that may be indicated related to chronic condition management.

## **Multidisciplinary Team**

A multidisciplinary team of healthcare professionals will collaborate with the appropriate vendors and community resources to ensure the participants' needs are met. This is accomplished by addressing clinical, functional, financial, psychosocial, environmental, and support system. Team members include, but are not limited to, internal physician advisors, community physician advisors, treating physicians/specialists, registered nurses, and behavior health specialists. Any or all of these team members may participate in internal case conferences to coordinate care for individuals who require intense management. Interventions related to interdisciplinary team coordination may include:

1. Referrals/Coordination assistance related to tobacco, substance and/or alcohol abuse
2. Referrals/Coordination of mental health treatment for behavioral health needs
3. Referrals/Coordination/Addressing social issues such as financial concerns, possible abuse, housing, etc.
4. Ensuring any women needing social services is referred to the appropriate resource
5. Coordination of appointments related to medical, behavioral or psychosocial care
6. Working collaboratively with local physicians to integrate inter-conception Care Coordination into their existing services without additional time/work requirements
7. Working collaboratively with local health entities to integrate inter-conception Care Coordination into their existing services without additional time/work requirements

## **Individualized Plan of Care**

Every participant enrolled in the program is required to work collaboratively with the Care Coordinator to develop an individualized plan of care consistent with national guidelines and the physician treatment plan.

James Prochaska noted that in order for behavior change to be successful a person must want to make the change and must be involved in how the change will occur. Care Coordinators will devise a list of participant problems based on the inter-conception assessment tool. These problems will be reviewed with the participant and/or the participant and support system, with Care Coordinator guidance, to determine the best way to resolve the problems and which problem they would like to work on first.

The Care Coordinator will supply the participant with tools they may need to make informed decisions related to their problems and plan of care such as:

- Disease specific information
- Self-care education
- Referrals to community resources
- Medical equipment

### **Support System Integration**

Care Coordinators will facilitate a mentoring/support system component to the program. “Graduates” from the postpartum and inter-conception Care Coordination program will be asked to be mentors to future mothers particularly those at risk for a poor birth outcome. Volunteers will be trained on the initial assessment process. In addition, these mentors can provide guidance to these mothers based on personal experiences.

eQHealth will work with local agencies to acquire space for regularly scheduled support group meeting for the postpartum and high risk inter-conception parents. In addition to peer support, inter-conception participants will be provided with specific educational information related to decreasing the risk for future poor birth outcomes.

### **Participant Access**

In addition to the above items, participants may also have access to:

- Nurse Calls/Visits providing health education, behavior modification and/or health coaching.
- Assistance identifying and resolving gaps in care (wellness visits, physician follow up schedule, recommended follow up testing, medication adherence, etc.)
- Ongoing collaboration with the primary care physician
- Evaluation of medications and medication adherence
- Women’s Health reminders (such as mammograms, pap smears)
- Ongoing reassessment and adjustment of the plan of care

### ***Physician Interventions***

Local physician involvement is critical to Care Coordination. In order for women to succeed in inter-conception planning, they must be able to work with a primary care physician. For this reason, eQHealth employs the use of company **Medical Directors**.

The primary focus of the Medical Director will be to reach out to peers and create meaningful partnerships for effective provider collaboration. The Medical Director will lead a community-focused advisory board in the Care Coordination area to ensure the unique needs of that particular population are being addressed appropriately. In addition, the Medical Director supports the Care Coordination staff and reviews all assessment and plan of care documents to ensure compliance with national practice guidelines as guidelines are changed/updated.

Some of the physician interventions to be provided include:

1. Developing postpartum and inter-conception care packets for providers which will contain the most recent national guidelines related to postpartum and inter-conception care, the

- rationale for postpartum and inter-conception care, and a postpartum and inter-conception care check-off list to place in the participant record
2. Establishing a provider portal that will:
    - a. Providing the latest recommended national guidelines
    - b. Electronic program referral tools
    - c. Physician educational opportunities
    - d. Physician educational resources that can be distributed to participants
  3. Development of a comprehensive postpartum and inter-conception checklist which can be used by physicians to document adherence to national guidelines by working collaboratively with other health care agencies
  4. Hard copy referral tools for Care Coordinator follow up
  5. Physician Education. Educate physicians regarding the importance of postpartum and inter-conception screenings and education

### ***Program Evaluation***

Postpartum and Inter-conception assessment, education and counseling are designed as preventive strategies to empower women and their families to reduce risk factors that may lead to additional adverse pregnancy outcomes.

Program Outcomes will be measured at least semi-annually. Participant outcome measures will be compared to pre-enrollment baseline data. In addition, participants will be measured against those eligible participants who elected to opt-out of the program.

### **Clinical**

- Verification that any uncontrolled co-morbid health conditions are now within acceptable control
- Increased utilization of preventive health services
- Successful access of community resources
- Reduction of unhealthy health behaviors (Smoking Cessation, Alcohol Abuse, Drug Abuse, etc.)
- % change in the number of births with gestational age <32 weeks
- % change in the number of births with birthweight <1900 grams

### **Financial Measures (enrollees compared over time to eligible program participants who chose not to participate)**

- Admits/thousand (program enrolled participants) to NICU
- % of total admissions for High Risk deliveries
- % decline in NICU admission rates
- Total costs associated with % decline in NICU admission rates

### **Provider**

- Evidence of use of provider portal
- Evidence of use of postpartum and inter-conception assessment tool on all encounters with women who meet inclusion criteria
- Provider comparison related NICU admissions and lengths of stay

### **Program Quality Measures**

- Participant satisfaction
- Annual provider satisfaction

**Maternity ICD-9-CM Codes**

Fifth Digits:

1 = Delivered, with or without mention of antepartum condition

2 = Delivered, with mention of postpartum complication

CODE RANGE	APPLICABLE 5 <sup>TH</sup> DIGITS *	NARRATIVE DESCRIPTION
<b>640 – 649 – Complications Mainly Related To Pregnancy</b>		
640.0X 640.8X – 640.9X	1	Hemorrhage in early pregnancy
641.0X – 641.3X 641.8X – 641.9X	1	Antepartum hemorrhage, abruption placenta, and placenta previa
642.0X – 642.7X 642.9X	1, 2	Hypertension complicating pregnancy, childbirth, and the puerperium
643.0X – 643.2X 643.8X – 643.9X	1	Excessive vomiting in pregnancy
644.2X	1	Early onset of delivery
645.1X – 645.2X	1	Late pregnancy
646.0X	1	Papyraceous fetus
646.1X	1, 2	Edema or excessive weight gain in pregnancy, without mention of hypertension
646.2X	1, 2	Unspecified renal disease in pregnancy, without mention of hypertension
646.3X	1	Habitual aborter
646.4X	1, 2	Peripheral neuritis in pregnancy
646.5X	1, 2	Asymptomatic bacteriuria in pregnancy
646.6X	1, 2	Infections of genitourinary tract in pregnancy
646.7X	1	Liver disorders in pregnancy
646.8X	1, 2	Other specified complications of pregnancy
646.9X	1	Unspecified complication of pregnancy
647.0X – 647.8X 647.9X	1, 2	Infectious and parasitic conditions in the mother classifiable elsewhere, but complicating pregnancy, childbirth, or the puerperium
648.0X – 648.9X	1, 2	Other current conditions in the mother classifiable elsewhere, but complicating pregnancy, childbirth, or the puerperium
649.0X	1,2	Tobacco use disorder complicating pregnancy, childbirth, or the puerperium
649.1X	1,2	Obesity complicating pregnancy, childbirth, or the puerperium
649.2X	1,2	Bariatric surgery status complicating pregnancy, childbirth, or the puerperium
649.3X	1,2	Coagulation defects complicating pregnancy, childbirth, or the puerperium
649.4X	1,2	Epilepsy complicating pregnancy, childbirth, or the puerperium
649.5X	1	Spotting complicating pregnancy
649.6X	1,2	Uterine size date discrepancy complicating pregnancy
649.7	1	Cervical shortening
<b>650 – 659 Normal Delivery, And Other Indications For Care In Pregnancy, Labor, And Delivery</b>		
650	--	Normal delivery <b>NOTE: This code is for use as a single diagnosis code and is not to be used with any other code on this list.</b>
651.0X – 651.6X 651.8 – 651.9X	1	Multiple gestation
652.0X – 652.9X	1	Malposition and malpresentation of fetus
653.0X – 653.9X	1	Disproportion

CODE RANGE	APPLICABLE 5 <sup>TH</sup> DIGITS *	NARRATIVE DESCRIPTION
654.0X – 654.1X	1, 2	Congenital abnormalities of uterus Tumors of body of uterus
654.2X	1	Previous cesarean delivery
654.3X – 654.9X	1, 2	<ul style="list-style-type: none"> <li>• Retroverted and incarcerated gravid uterus</li> <li>• Other abnormalities in shape or position of gravid uterus and of neighboring structures</li> <li>• Cervical incompetence</li> <li>• Other congenital or acquired abnormality of cervix</li> <li>• Congenital or acquired abnormality of vagina</li> <li>• Congenital or acquired abnormality of vulva</li> <li>• Other and unspecified abnormality of organs and soft tissue of pelvis</li> </ul>
655.0X – 655.9X	1	Known or suspected fetal abnormality affecting management of mother
656.0X – 656.9X	1	Other known or suspected fetal and placental problems affecting management of mother
657.0X	1	Polyhydramnios
658.0X – 658.4X	1	<ul style="list-style-type: none"> <li>• Oligohydramnios</li> <li>• Premature rupture of membranes</li> <li>• Delayed delivery after spontaneous or unspecified rupture of membranes</li> <li>• Delayed delivery after artificial rupture of membranes</li> <li>• Infection of amniotic cavity</li> </ul>
658.8X – 658.9X	1	<ul style="list-style-type: none"> <li>• Other</li> <li>• Unspecified</li> </ul>
659.0X – 659.9X	1	Other indications for care or intervention related to labor and delivery, not elsewhere classified
<b>660 – 669 Complications Occurring Mainly In The Course Of Labor And Delivery</b>		
660.0X – 660.9X	1	Obstructed labor
661.0X – 661.4X	1	Abnormality of forces of labor
661.9X	1	Unspecified abnormality of labor
662.0X – 662.3X	1	Long labor
663.0X – 663.6X	1	Umbilical cord complications
663.8X – 663.9X	1	<ul style="list-style-type: none"> <li>• Other umbilical cord complications</li> <li>• Unspecified umbilical cord complications</li> </ul>
664.0X – 664.5X	1	Trauma to perineum and vulva during delivery
664.6X	1	Anal sphincter tear complicating delivery, not associated with third-degree perineal laceration
664.8X – 664.9X	1	<ul style="list-style-type: none"> <li>• Other specified trauma to perineum and vulva</li> <li>• Unspecified trauma to perineum and vulva</li> </ul>
665.0X – 665.1X	1	<ul style="list-style-type: none"> <li>• Rupture of uterus before onset of labor</li> <li>• Rupture of uterus during labor</li> </ul>
665.2X	2	Inversion of uterus
665.3X – 665.6X	1	<ul style="list-style-type: none"> <li>• Laceration of cervix</li> <li>• High vaginal laceration</li> <li>• Other injury to pelvic organs</li> <li>• Damage to pelvic joints and ligaments</li> </ul>
665.7X	1, 2	Pelvic hematoma
665.8X – 665.9X	1, 2	<ul style="list-style-type: none"> <li>• Other specified obstetrical trauma</li> <li>• Unspecified obstetrical trauma</li> </ul>
666.0X – 666.3X	2	Postpartum hemorrhage
667.0X – 667.1X	2	Retained placenta or membranes, without hemorrhage
668.0X – 668.2X	1, 2	Complications of the administration of anesthetic or other sedation in labor and delivery
668.8X – 668.9X	1, 2	<ul style="list-style-type: none"> <li>• Other complications of anesthesia or other sedation in labor and delivery</li> <li>• Unspecified complication of anesthesia and</li> </ul>

CODE RANGE	APPLICABLE 5 <sup>TH</sup> DIGITS *	NARRATIVE DESCRIPTION
		other sedation
669.0X – 669.2X	1, 2	<ul style="list-style-type: none"> <li>Maternal distress</li> <li>Shock during or following labor and delivery</li> <li>Maternal hypotension syndrome</li> </ul>
669.3X	2	Acute renal failure following labor and delivery
669.4X	1, 2	Other complications of obstetrical surgery and procedures
669.5X – 669.7X	1	<p><b>Caution: The following codes should only be used if the medical reason for the procedure is not known or documented in the medical record, i.e., there is no mention of the indication for the procedure.</b></p> <ul style="list-style-type: none"> <li>Forceps or vacuum extractor delivery without mention of indication</li> <li>Breech extraction, without mention of indication</li> <li>Cesarean delivery, without mention of indication</li> </ul>
669.8X – 669.9X	1, 2	<ul style="list-style-type: none"> <li>Other complications of labor and delivery</li> <li>Unspecified complication of labor and delivery</li> </ul>
<b>670 – 676 Complications of the Puerperium</b>		
670.0X- 670.3X 670.8X	2	Major puerperal infection <ul style="list-style-type: none"> <li>Endometritis</li> <li>Sepsis</li> <li>Septic thrombophlebitis</li> <li>Other: pelvic cellulitis, peritonitis, salpingitis</li> </ul>
671.0X – 671.2X	1, 2	Venous complications in pregnancy and the puerperium <ul style="list-style-type: none"> <li>Varicose veins</li> <li>Varicose veins of vulva and perineum</li> <li>Superficial thrombophlebitis</li> </ul>
671.3X	1	Deep phlebothrombosis, antepartum
671.4X	2	Deep phlebothrombosis, postpartum
671.5X	1, 2	Other phlebitis and thrombosis
671.8X – 671.9X	1, 2	<ul style="list-style-type: none"> <li>Other venous complication</li> <li>Unspecified venous complication</li> </ul>
672.0X	2	Pyrexia of unknown origin during the puerperium
673.0X – 673.3X	1, 2	<ul style="list-style-type: none"> <li>Obstetrical air embolism</li> <li>Amniotic fluid embolism</li> <li>Obstetrical blood-clot embolism</li> <li>Obstetrical pyemic and septic embolism</li> </ul>
673.8X	1, 2	Other pulmonary embolism
674.0X	1, 2	Cerebrovascular disorders in the puerperium
674.1X – 674.4X	2	<ul style="list-style-type: none"> <li>Disruption of cesarean wound</li> <li>Disruption of perineal wound</li> <li>Other complications of obstetrical surgical wounds</li> <li>Placental polyp</li> </ul>
674.5X	1, 2	Peripartum cardiomyopathy
674.8X – 674.9X	2	<ul style="list-style-type: none"> <li>Other complication of the puerperium, not elsewhere classified</li> <li>Unspecified complication of the puerperium, not elsewhere classified</li> </ul>
675.0X – 675.2X	1, 2	Infections of the breast and nipple associated with childbirth
675.8X – 675.9X	1, 2	<ul style="list-style-type: none"> <li>Other specified infections of the breast and nipple</li> <li>Unspecified infection of the breast and nipple</li> </ul>
676.0X – 676.6X	1, 2	Other disorders of the breast associated with childbirth and disorders of lactation
676.8X – 676.9X	1, 2	<ul style="list-style-type: none"> <li>Other disorders of lactation</li> <li>Unspecified disorder of lactation</li> </ul>

CODE RANGE	APPLICABLE 5 <sup>TH</sup> DIGITS *	NARRATIVE DESCRIPTION
<b>678-679 Other Maternal and Fetal Complications</b>		
678.0X	1	Fetal hematologic conditions
678.1X	1	Fetal conjoined twins
679.0X	1, 2	Maternal complications from in utero procedure
679.1X	1, 2	Fetal complications from in utero procedure