Background

Pregnancy and childbirth are life-changing, monumental experiences that greatly impact the gestational parent and form the basis for a child's future. The United States has the highest maternal death rate among developed nations with more than 50,000 mothers having life-threatening complications annually.[1,2] Mortality also differs greatly based on race with black mothers being three to four times as likely to die in childbirth than white mothers and more likely to suffer complications that lead to maternal death and injury.[1,3] Further, childbirth is the single largest cost for state Medicaid and also most commercial health plans.[4]

Bundled payment models can address some of these preventable complications in maternity care and various models are being currently being used across the country.[5,6] Many of these models cover low-risk pregnancies, limiting their impact on health equity while others exclude the highest and lowest cost episodes and select conditions.[5,7] In many cases, cesarean section rate is used as an indicator of success. However, availability of data on outcomes of the various models are variable.

The workgroup developed a clinical pathway supported by an episode-based payment building on existing perinatal work within Washington State prioritizing health equity, high-quality and evidence-based perinatal and pediatric care. The workgroup relied extensively on practice guidelines from the

American College of Obstetricians and Gynecologists (ACOG) and work done by the Washington State Hospital Association (WSHA).

The bundle is defined as follows:

- Retrospective risk adjustment based on patient-specific factors
- Triggered at delivery to begin 270 days prior to delivery and ending 84 days (3 months) post delivery
    - The workgroup's ideal is to implement a perinatal bundle that will last 365 days (12 months) post-delivery (total 635 days) that also includes pediatric care for 12 months.
- Including prenatal care, labor and delivery, postpartum services for both facility and professional services
- Obstetric care provider or group is the accountable entity
- Exclusion criteria:
    - Incomplete claims within episode time
    - Age: younger than 16, older than 40
    - Cost below first percentile or higher than ninety-ninth percentile
    - Diagnoses within the episode window or 90 prior to episode window: cancer under active management, CNS infection and poliomyelitis, Coma or brain damage, Cystic fibrosis, etc (see Ohio bundle example)[8]
    - Death within episode window

The episode as follows is presented as four components: prenatal care, labor and delivery, and postpartum care.

Washington State Medicaid should be extended to 12 months (365 days) postpartum.

Care Pathway for Obstetric Care Providers

Prenatal Care

- **Intake visit**. The intake visit should happen as soon as possible after a patient contacts the provider or group with a positive pregnancy test. At a minimum, the intake visit should happen in the first trimester.
    - Gather patient information, talk about insurance or needing access to insurance.
    - Nutrition and prenatal vitamins.
    - Importance of continuing exercise.
    - Scheduling dating ultrasound.
    - Information on genetic testing and counseling.
    - Behavioral health screenings, depression, anxiety, suicidality, and tobacco, marijuana, alcohol, and/or other drug use, see more information on tools below.
- Monthly visits up to 28 weeks gestation at minimum. Visits may be done as a group. See **Appendix C: Information on Group Visits**.
- Biweekly visits up to 36 weeks gestation at minimum. Visits may be done as a group.
- **Cardiovascular disease.** For all pregnant patients, conduct a global cardiovascular risk assessment during the first trimester and again in the second trimester. Next steps should follow the California Maternal Quality Care Collaborative Cardiovascular Disease in Pregnancy and Postpartum Toolkit, ACOG's Pregnancy and Heart Disease Practice Bulletin, and ACOG's Gestational Hypertension and Preeclampsia Practice Bulletin.[9] CARL ADD STATEMENT ABOUT ASTHMA
    - Patients with red flags for cardiovascular disease (i.e., shortness of breath at rest, severe orthopnea necessitating four or more pillows, resting heart rate ≥120 beats per minute, resting systolic blood pressure ≥160 mm Hg, and/or resting respiratory rate of ≥30 breaths per minute and an oxygen saturation ≤94%) should be promptly evaluated, managed as appropriate as per current ACOG guidelines and/or other national guidelines. Consider a consultation with maternal and fetal medicine and primary care/cardiology. This may be done via telemedicine, if available.
    - Patients with a personal history of cardiovascular disease should receive a consultation with maternal and fetal medicine and primary care/cardiology. This may be done via telemedicine, if available.
- **Behavioral Health Screening.** Explain to patients the purpose of screening for depression, anxiety, suicidality, alcohol misuse, and drug use including the safety and security of the information. Screen for depression, anxiety, suicidality, and tobacco, marijuana, alcohol, and/or other drug use at intake and at least every trimester using a validated instrument(s), as described below:
    - **Depression** (e.g. Patient Health Questionnaire-2, PHQ-3 and/or PHQ-9) and **anxiety** (e.g., Generalized Anxiety Disorder-2), follow guidelines within the 2017 Bree Collaborative Behavioral Health Integration Report and Recommendations.

  - **Suicidality** (e.g. ninth question of the PHQ-9, first and second questions of the Columbia Suicide Severity Rating Scale (C-SSRS), the Ask Suicide-Screening Questions (ASQ) as well as current plans and any past attempts). If suicide risk is detected, follow guidelines within the 2018 Bree Collaborative Suicide Care Report and Recommendations, or more recent if available.
  - **Tobacco, marijuana, alcohol** (e.g., AUDIT-C), and **drug use** (e.g., single-item screener, ASSIST, DAST-10, single item cannabis and other drug use questions). If alcohol misuse or illicit drug use is detected, follow guidelines within 2015 Bree Collaborative Addiction and Dependence Treatment Report and Recommendations, or more recent if available following the Screening, Brief Intervention, and Referral to Treatment (SBIRT) protocol.

- **Infectious Disease Screening.** Screen all patients according to ACOG guidelines available here including for infectious disease and immunity to infectious disease, where appropriate (e.g., rubella, varicella). Information for patients is available here.
  - Follow ACOG practice advisory for Management of Pregnant and Reproductive-Aged Women during a Measles Outbreak or other infectious disease, where appropriate.
- **Gestational Diabetes Screening.**
- **Vaccination.**
  - Tetanus, diphtheria, and pertussis, third trimester
  - Influenza if not already done so in the current season
- **Third trimester education**
  - Breastfeeding
  - Birth spacing and contraception. Materials include: www.marchofdimes.org/pregnancy/how-long-should-you-wait-before-getting-pregnant-again.aspx
  - **Shared Decision Making.** Use shared decision making as appropriate for relevant clinical conditions including:
    - Vaginal birth after cesarean section
      - Birth Choices: What is best for you... Vaginal or Caesarean Birth? Yale University School of Nursing
      - Pregnancy: Should I Try Vaginal Birth After a Past C-Section (VBAC)? Healthwise
      - Vaginal birth after C-section (VBAC) guide Mayo Clinic
    - Pain relief
      - Pain Relief for Labour: For women having their first baby. University of Sydney
      - Pregnancy: Should I Have an Epidural During Childbirth? Healthwise
    - Other delivery options
      - Failure to progress in labor: Delivery options. EBSCO Health
      - Making choices: options for a pregnant woman with a breech baby. University of Sydney
- **Social Determinants of Health.** Consider the impact of social determinants of health on patient health. If appropriate, screen patients for unmet needs using a culturally and patient-appropriate tool (e.g., OneCare Vermont: Self-Sufficiency Outcomes Matrix, Oregon Family Wellbeing Assessment, other tools). Link patients to community resources, if needed.
- ***Patient Support.*** *Support patients as needed*

- *Doula*
- *Home visiting*

Labor Management and Delivery

The workgroup's goal is for a physiologic birth[10] when safe to do so including:[11,12,13]

- Spontaneous onset and progression of labor;
- Biological and psychological conditions that promote effective labor;
- Vaginal birth of the infant and placenta;
- Resulting in physiological blood loss;
- Optimal newborn transition through skin-to-skin contact and
- Keeping the mother and infant together during the postpartum period; and early initiation of breastfeeding.

Additional recommendations include:

- Endorse standards within the Washington State Hospital Association Labor Management Bundle
- Shared decision making, as appropriate
- Comprehensive, client-centered contraceptive counseling that includes education about a broad range of contraceptive methods and facilitates shared decision-making when and if selecting a method. (was Immediate postpartum LARC is accessible if desired by a patient)
- Follow the 2012 Bree Collaborative labor standards for limiting scheduled deliveries before the 39th week, limiting elective inductions between 39 and up to 41 weeks except for language regarding favorability of the cervix, and for appropriate indications for cesarean sections.
    - While the ARRIVE trial supported elective 39 week inductions under controlled study criteria, no data exists to recommend this practice for the general population in a community setting.[14,15]

Postpartum Care

The bundle extends to 84 days (12 weeks) postpartum. The workgroup recommends at least two postpartum visits with additional visits as needed. Postpartum care should be individualized following recommendations within the American College of Obstetrics and Gynecologists committee opinion on Redefining the Postpartum Visit. Higher-risk patients may need to be seen more often. Visits should at a minimum include:

- Three weeks postpartum visit including:
    - Physical recovery from birth
    - Assessment of mood and emotional well-being including screening with a validated tool for depression (e.g., PHQ-9, Edinburgh Postnatal Depression Scale), anxiety (e.g., GAD), suicidality, and tobacco, alcohol, marijuana, and other drug use.
    - Sexuality including contraception (if needed) and discussing birth spacing
        - Same-day placement of long-acting reversible contraceptive, if desired
        - Use of shared decision making on contraception (e.g., Birth control options: Things to consider)
    - Other topics as needed or wanted by the patient
- Additional comprehensive visit prior to 12 weeks postpartum including:[16]
    - Assessment of mood and emotional well-being including screening with a validated tool for depression (e.g., PHQ-9), anxiety (e.g., GAD), tobacco use, substance use disorder.
    - Infant care and feeding
    - Sleep and fatigue
    - Physical recovery from birth
    - Chronic disease management, if needed
    - Health maintenance
    - Identification of primary care provider to assume care after 12 weeks postpartum
    - Discussion of importance of vaccines
    - Other topics as needed or wanted by the patient
- *Support women in the postpartum period.*
    - *Home visits*

Recommendations for Stakeholder Groups

Emergency Department and Urgent Care

- **Cardiovascular Disease.** Assess all women of childbearing age for recent pregnancy and last menstrual period. Women may be at higher risk for cardiovascular disease up to five months postpartum and may present with shortness of breath, chest pain, unresolved cough or swelling. Follow algorithm for taking patient history, physical examination, and workup as outlined in the California Maternal Quality Care Collaborative Cardiovascular Disease in Pregnancy and Postpartum Toolkit.[17]

Department of Health

- Provide comprehensive resources around social determinant of health resources including tools to measure need around social determinants of health. Tools include but are not limited to:
    - OneCare Vermont: Self-Sufficiency Outcomes Matrix,
    - Oregon Family Wellbeing Assessment,
    - Other tools

Quality Metrics

Maternity

- Not appropriate for value-based: Contraceptive Care – Postpartum Women Ages 15-44; it's an OPA measure: https://www.hhs.gov/opa/sites/default/files/2018-Measure-Specifications-CCP-for-OPA-Website.pdf
- HIV Screening
- Strep B screening
- Gestational diabetes screening
- Asymptomatic bacteriuria screening
- Chlamydia screening
- Tdap vaccination
- Source: HPC-LAN from Core Quality Measures Collaborative http://hcp-lan.org/workproducts/maternity-whitepaper-final.pdf and http://www.qualityforum.org/cqmc/
    - Frequency of ongoing prenatal care
    - Cervical cancer screening
    - Chlamydia screening and follow up
    - Incidence of episiotomy
    - Elective delivery for vaginal or cesarean at > =37 and < 39 weeks of gestation completed (PC-01)
    - Cesarean (nulliparous women with a term, singleton baby in a vertex position delivery by cesarean section, PC-02)
    - Antenatal steroids under certain conditions (PC-03)
    - Exclusive breast milk (PC-05)
- Source: HPC-LAN from CMS Medicaid and CHIP Child and Adult Core Measures for Maternity Care
    - PC-01: Elective delivery NQF 0469 – Endorsed
      This measure assesses patients with elective vaginal deliveries or elective cesarean births at >= 37 and < 39 weeks of gestation completed. This measure is a part of a set of five nationally implemented measures that address perinatal care (PC-02: Cesarean Section, PC-03: Antenatal Steroids, PC-04: Health Care-Associated Bloodstream Infections in Newborns, PC-05: Exclusive Breast Milk Feeding). PC-01: Elective Delivery is one of two measures in this set that have been reengineered as eCQMs and are included in the EHR Incentive Program and Hospital Inpatient Quality Reporting Program.
    - PC-02: Cesarean Section NQF 0471 – Endorsed
      Percentage of nulliparous women with a term, singleton baby in a vertex position delivered by cesarean birth (C-section).
    - PC-03: Antenatal steroids NQF 0476 – Endorsed
      Percentage of Medicaid and CHIP enrolled women at risk of preterm delivery at 24 and <34 weeks gestation that received antenatal steroids prior to delivering preterm newborns.
    - Timeliness of Prenatal Care NQF 1517 – Not endorsed
    - Live births less than 2500 grams NQF 1382 – Endorsed

Percentage of live births that weighed less than 2,500 grams in the state during the reporting period.
Frequency of ongoing prenatal care NQF 1391 – Not endorsed

- Behavioral health risk assessment for pregnant women
  American Medical Association - PCPI
  Percentage of patients, regardless of age, who gave birth during a 12-month period seen at least once for prenatal care who received a behavioral health screening risk assessment that includes the following screenings at the first prenatal visit: screening for depression, alcohol use, tobacco use, drug use, and intimate partner violence.
- Postpartum contraceptive use among women ages 15-44
  Developmental measure (OPA/CDC)- NQF-29025
  The first rate is an intermediate outcome measure, and it is desirable to have a high percentage of women who are provided the most effective or moderately effective contraceptive methods during the postpartum period. The second rate is an access measure, and the focus is on making sure that women have access to LARC methods during the postpartum period.

- Source: Washington State Common Measure Set, 2019 (PMCC Approved, December 2018) https://www.hca.wa.gov/assets/program/washington-state-common-measures-2019.pdf
  - Cesarean Birth (NTSV C-Section)
    The Joint Commission. This measure assesses the number of nulliparous women with a term, singleton baby in a vertex position delivered by cesarean birth. This measure is part of a set of five nationally implemented measures that address perinatal care. This is PC-02.
  - Prenatal Care
    Washington State Department of Health. The percentage of women who receive first trimester prenatal care.
  - Unintended Pregnancies
    Washington State Department of Social and Health Services. Percentage of pregnancies that was unintended at the time of conception.
  - Mental Health Service Penetration (Broad Version)
    Washington State Department of Social and Health Services. The percentage of members with a mental health service need who received mental health services in the measurement year. Separate reporting for two age groups: 6-17 years and 18 years and older.
  - Substance Use Disorder Service Penetration
    Washington State Department of Social and Health Services. The percentage of members with a substance use disorder treatment need who received a substance use disorder treatment in the measurement year. Reported for Medicaid only. Separate reporting for two age groups: 12-17 years and 18 years and older Reported for Medicaid only.
  - Antidepressant Medication Management (AMM)
    National Committee for Quality Assurance. The percentage of members 18 years and older who were treated with antidepressant medication, had a diagnosis of major depression and who remained on an antidepressant medication treatment. Two rates reported: Effective Acute Phase Treatment and Effective Continuation Phase Treatment

- Controlling High Blood Pressure (CBP)
  National Committee for Quality Assurance. The percentage of patients 18 to 85 years of age who had a diagnosis of hypertension (HTN) and whose blood pressure (BP) was adequately controlled.

Pediatrics

- Source: HPC-LAN from CMS Medicaid and CHIP Child and Adult Core Measures for Maternity Care
  - Pediatric Central Linked Associated Bloodstream infections: neonatal ICU and pediatric ICU (CLABSI)
- Source: Washington State Common Measure Set, 2019 (PMCC Approved, December 2018) https://www.hca.wa.gov/assets/program/washington-state-common-measures-2019.pdf
  - Audiological Evaluation No Later Than 3 Months of Age
    Centers for Disease Control. The percentage of newborns who did not pass hearing screening and have an audiological evaluation no later than 3 months of age.
  - Childhood Immunization Status (CIS) Combination 10
    National Committee for Quality Assurance. The percentage of children 2 years of age who had four diphtheria, tetanus and acellular pertussis (DTap); three polio (IPV); one measles, mumps and rubella (MMR); three haemophilus influenza type B (HiB); three hepatitis B (HepB); one chicken pox (VZV); four pneumococcal conjugate (PCV); one hepatitis (Hep A); two or three rotavirus (RV); and two influenza (flu) vaccines by their second birthday
  - Well Child Visits in the First Fifteen Months of Life (W15)
    National Committee for Quality Assurance. The percentage of members who turned 15 months old during the measurement year and who had six or more well-child visits with a PCP during their first 15 months of life.

Appendix X: Exclusions

- Incomplete claims within episode time
- Age: younger than 16, older than 40
- Cost below first percentile or higher than ninety-ninth percentile
- Diagnoses within the episode window or 90 prior to episode window:
    - Cancer under active management
    - CNS infection and poliomyelitis
    - Coma or brain damage
    - Cystic fibrosis
    - Ectopic pregnancy
    - End stage renal disease
    - Human Immunodeficiency Virus
    - Intrauterine death or intrauterine hypoxia and birth asphyxia
    - Paralysis or multiple sclerosis
    - Parkinson's disease
    - Prolapse of female genital organs
    - Solid organ transplants (excluding corneal)
    - Multiple gestation
    - Multiple other comorbidities
- Death within episode window

- Healthy People 2020
    - A low-risk female is defined as one with a full-term (at least 37 weeks since the first day of the last normal menstrual period [LMP]) singleton (not a multiple) pregnancy, with a vertex fetus (head facing in a downward position in the birth canal). A description of the primary measurement used to determine the fetus's gestational age, the interval between the first day of LMP and the birth, has been published by NCHS.

Codes

Global Obstetrical Package – CPT codes:

- 59400
- 59510
- 59610
- 59618

Global obstetrical care includes antepartum care, delivery and postpartum care and is reported using the date of delivery as the date of service after all services are rendered by a provider from a solo practice or multiple providers within the same group practice.

Initial and subsequent histories
Physical examinations
Recording of weight, blood pressures, fetal heart tones
Routine chemical urinalysis
Monthly visits up to 28 weeks gestation
Biweekly visits up to 36 weeks gestation
Weekly visits until delivery
Hospital & observation care
Evaluations & management (E&M) services within 24 hours of delivery
Admission to hospital
Admit history & physical
Management of uncomplicated Labor
Placement of internal fetal and/or uterine monitors; fetal monitoring
Catheterization or catheter insertion
Perineum preparation
Injection of local anesthesia
Induction of labor/artificial rupture of membranes
Preoperative counseling for cesarean delivery, preparation of abdomen and abdominal incision
Delivery of fetus (vaginal or cesarean)
Delivery of placenta
Insertion of cervical dilator
Simple removal of cerclage (not under anesthesia)
Episiotomy and/or repair of first and second degree lacerations
Removal of sutures/staples
E&M services following delivery

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