

# Pregnancy Medical Home Program Care Pathway: Progesterone Treatment and Cervical Length Screening

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## A. Background

Prematurity remains the leading cause of neonatal morbidity and mortality. Two major risk factors for preterm birth are a history of previous spontaneous preterm birth and a short cervix on ultrasound screening.

In low-risk patients with an incidental finding of a short cervix noted at the time of anatomy ultrasound (16 to 20 weeks gestation), daily treatment with vaginal progesterone has been shown to reduce the risk of spontaneous preterm birth.

In patients with a previous history of spontaneous preterm birth, treatment with weekly intramuscular 17alpha hydroxyprogesterone (17P) significantly reduces the risk of recurrence. In those with a singleton gestation who have a history of a spontaneous preterm birth and a current shortened cervix on ultrasound, placement of a cerclage reduces the risk of preterm birth.

The following outlines a management plan for the utilization of second trimester ultrasound to screen for a short cervix and progesterone therapy to reduce the incidence of preterm birth.

## B. Management of previous spontaneous preterm birth

- I. Consider consultation with Maternal Fetal Medicine or other High Risk Obstetrics specialist.
  - a. All patients with a history of spontaneous preterm birth prior to 32 weeks or those who experienced a second trimester pregnancy loss should have MFM/high-risk OB consultation.
- II. Women with a history of a spontaneous preterm singleton birth and/or preterm rupture of membranes (>20 weeks of gestation)

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with a current singleton pregnancy should receive weekly intramuscular progesterone (17P).

- a. Progesterone in any form has not been associated with prevention of preterm birth in women with multiple gestation.
- b. Intramuscular progesterone should be initiated at 16-20 weeks of gestation and may be initiated up to 24 weeks for patients who present late to prenatal care. Treatment should continue through the 36th week of gestation.
- c. Patients who miss weekly doses should continue with intramuscular progesterone treatment.

III. Obtain cervical length measurement by transvaginal ultrasound.

- a. Cervical length measurements should be done in an ultrasound unit with technical proficiency in transvaginal evaluation of the cervix
- b. Obtain an initial transvaginal cervical length measurement at 15-16 weeks of gestation and repeat measurement every two weeks through 23-24 weeks
  - i. In patients with a more advanced gestational age at their index preterm birth, consider an initial assessment at 16-18 weeks with one confirmatory measurement at 20-24 weeks, if the initial assessment is > 35 mm.
  - ii. For those with a singleton gestation up to 23-24 weeks and a cervical length <25mm, consider:
    - (a) Referral to MFM/HROB specialist
    - (b) Cerclage placement
  - iii. For those with a cervical length 25-29mm or with internal os abnormalities, perform weekly cervical length measurement until 23-24 weeks of gestation

IV. For women with a history of spontaneous preterm birth before 34 weeks only in a multiple gestation and with a current singleton gestation, seek MFM/high-risk OB consultation to determine if progesterone treatment is warranted.

**C. For women with no history of spontaneous preterm birth or pregnancy loss:**

V. Obtain cervical length measurement by abdominal ultrasound at the time of the anatomy scan (16-20 weeks gestation).

VI. For those with a transabdominal cervical length <30mm, perform confirmatory measurement by transvaginal ultrasound.

- a. Cervical length measurements should be done in an ultrasound unit with technical proficiency in transvaginal evaluation of the cervix.
- b. If cervix is <30mm by TVUS, consider referral to MFM/HROB specialist.
- c. Repeat cervical length measurement every 1-2 weeks until 23-24 weeks of gestation for those with a transvaginal cervical length <30 mm.
- d. Recommend vaginal progesterone to those with a transvaginal cervical length <25mm. Vaginal progesterone dosing is either 200 mg micronized capsules or 90 mg gel per vagina once nightly until 36 weeks of gestation.

## References

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*Note: Pregnancy Medical Home Care Pathways are intended to assist providers of obstetrical care in the clinical management of problems that can occur during pregnancy. They are intended to support the safest maternal and fetal outcomes for patients receiving care at North Carolina Pregnancy Medical Home practices. This pathway was developed after reviewing the Society for Maternal-Fetal Medicine and the American College of Obstetricians and Gynecologists resources such as practice bulletins, committee opinions, and Guidelines for Perinatal Care as well as current obstetrical literature. PMH Care Pathways offer a framework for the provision of obstetrical care, rather than an inflexible set of mandates. Clinicians should use their professional knowledge and judgment when applying pathway recommendations to their management of individual patients.*