Clinical Policy Title: Home uterine activity monitoring

Clinical Policy Number: 12.01.01

Effective Date: August 19, 2015
Initial Review Date: July 17, 2013
Most Recent Review Date: July 20, 2016
Next Review Date: July 2017

Related policies:
None.

ABOUT THIS POLICY: AmeriHealth Caritas Northeast has developed clinical policies to assist with making coverage determinations. AmeriHealth Caritas Northeast’s clinical policies are based on guidelines from established industry sources, such as the Centers for Medicare & Medicaid Services (CMS), state regulatory agencies, the American Medical Association (AMA), medical specialty professional societies, and peer-reviewed professional literature. These clinical policies along with other sources, such as plan benefits and state and federal laws and regulatory requirements, including any state- or plan-specific definition of “medically necessary,” and the specific facts of the particular situation are considered by AmeriHealth Caritas Northeast when making coverage determinations. In the event of conflict between this clinical policy and plan benefits and/or state or federal laws and/or regulatory requirements, the plan benefits and/or state and federal laws and/or regulatory requirements shall control. AmeriHealth Caritas Northeast’s clinical policies are for informational purposes only and not intended as medical advice or to direct treatment. Physicians and other health care providers are solely responsible for the treatment decisions for their patients. AmeriHealth Caritas Northeast’s clinical policies are reflective of evidence-based medicine at the time of review. As medical science evolves, AmeriHealth Caritas Northeast will update its clinical policies as necessary. AmeriHealth Caritas Northeast’s clinical policies are not guarantees of payment.

Coverage policy

AmeriHealth Caritas Northeast considers the use of home uterine activity monitoring to be investigational and therefore, not medically necessary.

This CPB is revised to state that home uterine activity monitoring for women who cannot feel their contractions and have certain complications may be considered medically necessary on an individual case exception basis for pregnant women with gestational age greater than 18 weeks. This CPB is revised to state that HUAM may be considered medically necessary on an individual case exception basis for women with physiologic or anatomic factors (eg, paralysis, neuromuscular disorders such as muscular dystrophy) that limit their ability to self-detect contractions.

Limitations:
All other uses of home uterine activity monitoring are not medically necessary.

**Alternative covered services:**

Office visits or home health visits by an appropriately trained health professional; measurement of cervical-vaginal fetal fibronectin; ultrasound determination of cervical length.

**Background**

According to recent Centers for Disease Control and Prevention (CDC) information, one in every eight infants born in the United States is born prematurely (CDC 2014). Premature is defined as a birth prior to 37 weeks gestation. Prematurity is associated with significant acute and chronic morbidity in a child, especially those with neurologic and respiratory conditions.

A number of strategies have been developed to reduce the rate of premature labor and delivery (e.g., home uterine activity monitoring [HUAM]). Some consumer groups (i.e., Sidelines National High Risk Pregnancy Support Network) advocated for the use of HUAM to alert the patient and provider to early labor where tocolytics, cervical cerclage or bed rest might prolong the pregnancy (Luke 2011).

**Searches**

AmeriHealth Caritas Northeast searched PubMed and the databases of:

- UK National Health Services Centre for Reviews and Dissemination.
- Agency for Healthcare Research and Quality’s National Guideline Clearinghouse and other evidence-based practice centers.
- The Centers for Medicare & Medicaid Services (CMS).

We conducted searches in June 13, 2016 Search terms were: "uterine monitoring (MeSH),” “home uterine monitoring (MeSH)” and "preterm labor prevention (MeSH)."

We included:

- **Systematic reviews**, which pool results from multiple studies to achieve larger sample sizes and greater precision of effect estimation than in smaller primary studies. Systematic reviews use predetermined transparent methods to minimize bias, effectively treating the review as a scientific endeavor, and are thus rated highest in evidence-grading hierarchies.
- **Guidelines based on systematic reviews**.
- **Economic analyses**, such as cost-effectiveness, and benefit or utility studies (but not simple cost studies), reporting both costs and outcomes — sometimes referred to as efficiency studies — which also rank near the top of evidence hierarchies.

**Findings**

Home uterine monitoring may result in fewer admissions to a neonatal intensive care unit but more unscheduled antenatal visits and tocolytic treatment. There is no impact on maternal and perinatal outcomes such as perinatal mortality or incidence of preterm birth.

Policy updates:

A recent update of a systematic review inclusive of 6,008 pregnant women found home monitoring may result in fewer neonatal intensive care unit admissions but more unscheduled antenatal visits and tocolytic treatment (Urquhart 2015). The level of evidence is low–to-moderate in this regard. (2015)

Statement added to findings section. Added new references. (2016)

Summary of clinical evidence

<table>
<thead>
<tr>
<th>Citation</th>
<th>Content</th>
</tr>
</thead>
</table>
| Urquhart, Cochrane (2015) | **Key points:**  
* Systematic review of 15 randomized controlled trials (RCTs) inclusive of 6008 pregnant women.  
* Women using home uterine monitoring were less likely to experience preterm birth.  
* There was no significant difference in the rate of perinatal mortality.  
* Women using home uterine monitoring made more unscheduled antenatal visits and had more tocolytic therapy.  
* Home uterine monitoring may result in fewer admissions to a neonatal intensive care unit, but the level of evidence is generally low to moderate. |
| Newman (2006)     | **Key points:**  
* Prospective masked observational study of uterine contraction frequency in twins.  
* Fifty-nine twin pregnancies and 306 singletons enrolled.  
* Mean uterine contraction frequency was significantly higher for twin gestations than singletons.  
* In twin pregnancies, maximum a.m. and p.m. contraction frequency did not predict spontaneous preterm birth in less than 35 weeks gestation. |
| Iams et al. (2002) | **Key points:**  
* Study showing frequency of uterine contractions and risk of premature delivery.  
* Study of 34,908 hours of uterine activity monitoring in 306 pregnant women.  
* More contractions in women who delivered prior to 35 weeks gestation, than those delivering later.  
* No threshold frequency that could effectively identify women who delivered preterm |
infants.

- Conclusion: Although the likelihood of preterm delivery increases with an increased frequency of uterine contractions, measurement of this frequency is not clinically useful for predicting preterm delivery.

**Brooten (2001)**

**Key points:**

- Randomized trial of nurse specialist home care for women with high-risk pregnancies.
- One hundred and seventy-three women with high-risk pregnancies, randomized to usual care or to home nurse visits, with education and support.
- Intervention group had lower fetal/infant mortality vs. the control group (2 versus 9), 11 fewer preterm infants, more twin pregnancies carried to term (77.7% vs. 33.3%), fewer prenatal hospitalizations (41 versus 49), fewer infant hospitalizations (18 versus 24), and a savings of more than 750 total hospital days.
- Conclusion: Home nurses provided better outcomes in high-risk pregnancies than usual care.

**Glossary**

**Cervical cerclage** — Also known as a cervical stitch, is a treatment for cervical incompetence or insufficiency, when the cervix starts to shorten and open too early during a pregnancy causing either a late miscarriage or preterm birth.

**Prematurity** — Refers to infants born at less than 37 weeks gestation.

**Tocolytics** — Drugs used during the course of a pregnancy to reduce uterine contractions associated with premature labor.

**References**

**Professional society guidelines/other:**


**Peer-Reviewed References:**


Clinical Trials:


CMS National Coverage Determinations (NCDs):

No NCDs identified as of the writing of this policy.

Local Coverage Determinations (LCDs):

No LCDs identified as of the writing of this policy.

Commonly submitted codes

Below are the most commonly submitted codes for the service(s)/item(s) subject to this policy. This is not an exhaustive list of codes. Providers are expected to consult the appropriate coding manuals and bill accordingly.

<table>
<thead>
<tr>
<th>CPT Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>82731</td>
<td>Fetal fibronectin, cervicovaginal secretions, semi-quantitative</td>
</tr>
<tr>
<td>99500</td>
<td>Home visit for prenatal monitoring and assessment to include fetal heart rate, non-stress test, uterine monitoring, and gestational diabetes monitoring</td>
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<table>
<thead>
<tr>
<th>ICD-9 Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>622.5</td>
<td>Incompetence of cervix</td>
</tr>
<tr>
<td>641.2</td>
<td>Premature separation of placenta</td>
</tr>
<tr>
<td>644</td>
<td>Early or threatened labor</td>
</tr>
<tr>
<td>644.0</td>
<td>Threatened premature labor</td>
</tr>
<tr>
<td>644.1</td>
<td>Other threatened labor</td>
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<tr>
<td>644.2</td>
<td>Early onset of delivery</td>
</tr>
<tr>
<td>658.1</td>
<td>Premature rupture of membranes</td>
</tr>
<tr>
<td>V23.5</td>
<td>Pregnancy with other poor reproductive history</td>
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<thead>
<tr>
<th>ICD-10 Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>O60.00</td>
<td>Preterm labor without delivery, unspecified trimester</td>
</tr>
<tr>
<td>O60.02</td>
<td>Preterm labor without delivery, second trimester</td>
</tr>
<tr>
<td>O60.03</td>
<td>Preterm labor without delivery, third trimester</td>
</tr>
<tr>
<td>O47.00</td>
<td>False labor before 37 completed weeks of gestation, unspecified tri</td>
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<tr>
<td>O47.9</td>
<td>False labor before 37 completed weeks of gestation, second tri</td>
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<tr>
<td>O47.00</td>
<td>False labor unspecified</td>
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</tr>
<tr>
<td>O47.02</td>
<td>False labor before 37 completed weeks of gestation, second tri</td>
</tr>
<tr>
<td>O47.03</td>
<td>False labor before 37 completed weeks of gestation, third tri</td>
</tr>
<tr>
<td>O47.1</td>
<td>False labor at or after 37 completed weeks of gestation</td>
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<tr>
<th>HCPCS Level II</th>
<th>Description</th>
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<tr>
<td>S9001</td>
<td>Home uterine monitor with or without associated nursing services</td>
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<tr>
<td>S9208 - S9214</td>
<td>Home management of preterm labor, preterm rupture of membranes (PROM), gestational hypertension, postpartum hypertension, preeclampsia, or gestational diabetes, including administrative services, professional pharmacy services, care coordination, and all necessary supplies or equipment (drugs and nursing visits coded separately), per diem (do not use this code with any home infusion per diem code)</td>
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