Clinical Review Criteria
UltraCom Scan for Hypertension in Pregnancy

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Criteria
For Medicare Members
No documents found. CPT codes have no restrictions.

For Non-Medicare Members
There is insufficient evidence in the published medical literature to show that this service/therapy is as safe as standard services/therapies and/or provides better long-term outcomes than current standard services/therapies.

The following information was used in the development of this document and is provided as background only. It is not to be used as coverage criteria. Please only refer to the criteria listed above for coverage determinations.

Background
Preeclampsia is a major cause of maternal and perinatal morbidity and mortality. Among pregnant women, cardiac output may be associated with increased risk of preeclampsia. Ultracom is a continuous-wave Doppler computer that measures cardiac output. Using UltraCom, at-risk women can be identified and treatment to reduce maternal and neonatal adverse outcomes can be initiated.

Medical Technology Assessment Committee (MTAC)

UltraCom Scan
2/14/2001: MTAC REVIEW
Evidence Conclusion: This review addresses three questions:
1. Does UltraCom accurately measure cardiac output?
2. Is high cardiac output associated with preeclampsia?
3. Does treatment of women with high cardiac output reduce the risk of preeclampsia?

Question 1: There were two small studies evaluating the validity of the UltraCom test. Both studies found a high correlation between the results of UltraCom testing and thermodilution. However, the sizes of the samples (n=11 and n=12) are insufficient to show that the UltraCom test can accurately measure cardiac output compared to the best available alternative test. (Easterling 1987, 1990 Am J Perinatol)

Question 2: There was one prospective cohort study that suggests an association between cardiac output and preeclampsia. However, this study did not control for confounding, particularly weight. The association between cardiac output and preeclampsia could be due to the weight differences between the two groups of pregnant women rather than cardiac output differences. (Easterling 1990)

Question 3: There was one small randomized controlled trial that found that women with high cardiac output who were treated with atenolol had a lower rate of preeclampsia than women with high cardiac output who were given placebo. Nulliparous women treated with atenolol also had babies that weighed significantly less than women treated with placebo. (Easterling, 1999). This single study provides insufficient evidence to draw conclusions about the effect of screening with UltraCom and subsequent treatment with atenolol on maternal and neonatal health outcomes. There is no evidence on the effectiveness of any other type of treatment.

All of the available studies on the use of UltraCom with pregnant women were done by a single group of researchers. Generally, replication by various groups of researchers in different settings provides stronger effectiveness data. Moreover, these researchers are based at University Hospital, University of Washington, which...
is marketing the UltraCom test for pregnant diabetic women; we cannot exclude the possibility of a conflict of interest that might bias the research methodology.


The use of UltraCom Scan in the screening and treatment of hypertension in pregnancy does not meet the *Kaiser Permanente Medical Technology Assessment Criteria*.

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MDCRPC Medical Director Clinical Review Policy Committee

MPC Medical Policy Committee

**Codes**

No specific codes for this service