Guideline for Use of Fetal Vibroacoustic Stimulation (VAS)

**Background and rationale:**
Acoustic stimulation of the nonacidotic fetus may elicit fetal heart rate accelerations that appear to be valid in the prediction of fetal well-being. Such stimulation offers the advantage of safely reducing the overall testing time, and reducing false negative testing, without compromising detection of the acidotic fetus.

**Patient selection:**
VAS should not be performed in the presence of:
- gestational age < 32 weeks
- oligohydramnios
- fetal heart rate pattern (NIH Category 3) or biophysical profile (score ≤ 4, or ≤ 6 if oligohydramnios present) raising concern for fetal well-being (sinusoidal pattern, absent baseline variability, recurrent late or variable decelerations, bradycardia)
- reactive fetal heart rate or biophysical score ≥ 8

**Procedure:**
1. VAS is an adjunct to tests of fetal well being. Therefore, it requires an order from a provider credentialed to order and interpret tests of fetal well being.
2. An artificial larynx (ideally a commercially made model especially designed for the purpose) is positioned on the maternal abdomen and a stimulus of 1-2 seconds is applied.
3. This may be repeated up to 3 times for progressively longer durations up to 3 seconds’ duration to elicit fetal heart rate accelerations.

**Actions:**
1. In response to VAS, a fetal heart rate acceleration of 15bpm x 15 sec is a positive or reassuring result that appears to be a valid predictor of fetal well being.
2. Absence of a 15bpm x 15 sec acceleration following VAS does not necessarily signify lack of fetal well being, but does warrant further evaluation.
3. The fetal response to the VAS should be:
   a) noted in the patient’s medical record
   b) directly related to the ordering provider

**Note:**
VAS may provoke unusual fetal heart rate patterns including tachycardia (≥ 160bpm) or decelerations. Such patterns do not necessarily represent fetal compromise and must be interpreted with caution.
References:


