

Form 442 Question 7: Experimentation Description
0111-EX-PL-2014

LifeWave Biomedical is planning to design and test a new UWB radar transceiver to ensure consistency with the FCC's UWB rules under Part 15.517.

Experiment overview

- 1) In conjunction with local California hospitals, demonstrate efficacy of UWB radar designs for purpose of intrapartum monitoring of fetal heart rate and uterine contractions, including:
 - a. Assessing overall signal to noise ratio requirements across a range of patient body mass indices (BMIs).
 - b. Demonstrating improvement in signal capture reliability and accuracy over the current care standards of Doppler Ultrasound and Toco sensors.
 - c. Demonstrating non-inferiority with Doppler/Toco and identify BMI classes of superiority.
- 2) Test patients in comparison with gold standard (fetal scalp electrode and uterine pressure catheter) assessing non-inferiority and/or improvement over Doppler. (Example: superiority in signal capture but non-inferiority in accuracy)
- 3) Produce data sets of non-inferior/superior LifeWave vs. Doppler/Toco across a range of BMIs with a subset also having Fetal Scalp ECG and Intrauterine Pressure Catheter data.



FetalConnect™ Fetal Heart Rate and Uterine Contraction Monitoring System.