



POSITION STATEMENT

Standardized Nomenclature for Electronic Fetal Monitoring

The American College of Nurse-Midwives (ACNM) maintains the following:

- Evaluation of the fetal heart rate provides essential information for fetal risk assessment during labor and birth.
- Standard nomenclature should be developed and used for the communication of all critical clinical assessment values.
- Effective and seamless communication among health care providers is a key patient safety goal, and the adoption of standardized nomenclature for the communication of critical clinical data supports this objective.

Background

There are multiple methods for fetal heart rate surveillance in labor, including intermittent fetal heart rate auscultation. In the case of electronic fetal heart rate monitoring (EFM), definitions were established in 1997 and reaffirmed in 2008 by a multidisciplinary panel convened under the auspices of the National Institute of Child Health and Human Development (NICHD). The nomenclature became known and is commonly referred to as the NICHD nomenclature. The NICHD nomenclature provides clinicians with a clear set of objective definitions for EFM terminology (see Appendix). In 2008, the NICHD expert panel added a three-tier system for interpretation of fetal heart rate patterns. Standardization of EFM nomenclature has been recognized by experts and professional organizations as crucial to communication and collaboration between all members of the healthcare profession.

In an effort to promote meaningful collaborative practice within the team framework of perinatal care and to build a culture of safety for mothers and infants, ACNM supports and encourages use of the NICHD nomenclature as the standard when using EFM. Furthermore, ACNM supports and encourages multidisciplinary, evidence-based education and competency assessment in fetal heart rate evaluation for all perinatal healthcare team members.

ADDITIONAL RESOURCES

Fox M, Kilpatrick S, King T, Parer JT. Fetal heart rate monitoring: Interpretation and collaborative management. *J Midwifery Womens Health*. 2000;45:498-507.

Joint Commission on Accreditation of Healthcare Organizations. *Preventing Infant Death and Injury during Delivery. Sentinel Event Alert No. 30*. Oakbrook Terrace, IL: Joint Commission on Accreditation of Healthcare Organizations; 2004:1-3.

Macones GA, Hankins GD, Spong CY, et al. The 2008 National Institute of Child Health and Human Development Research Workshop report on electronic fetal heart rate monitoring. *Obstet Gynecol.* 2008;112:661-666.

Miller LA. Safety promotion and error reduction in perinatal care: lessons from industry. *J Perinat Neonat Nurs.* 2003;17:128-138.

Miller LA. System errors in intrapartum electronic fetal monitoring: A case review. *J Midwifery Womens Health.* 2005;50:507-517.

National Institute of Child Health and Human Development Research Planning Workshop. Electronic fetal heartrate monitoring: Research guidelines for interpretation. *Am J Obstet Gynecol.* 1997;17:1385-1390.

Simpson KR, Knox GE. Common areas of litigation related to care during labor and birth: Recommendations to promote patient safety and decrease risk exposure. *J Perinat Neonat Nurs.* 2003;17:110-125.

Source: Division of Standards and Practice
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Appendix. NICHD Terminology for Fetal Heart Rate Characteristics

Term	Definition
Baseline Rate	Mean FHR rounded to increments of 5 bpm during a 10 minute segment excluding periodic or episodic changes, periods of marked variability and, segments of baseline that differ by > 25 bpm. Duration must be \geq 2 minutes.
Bradycardia	Baseline rate of < 110 bpm for \geq 10 minutes
Tachycardia	Baseline rate of > 160 bpm for \geq 10 minutes
Variability	Fluctuations in the baseline FHR of 2 cycles/min or greater. Visually quantitated as the amplitude of the peak-to-trough in beats per minute
- Absent variability	Amplitude from peak to trough undetectable.
- Minimal variability	Amplitude from peak to trough > undetectable and \leq 5 bpm.
- Moderate variability	Amplitude from peak to trough 6-25 bpm.
- Marked variability	Amplitude from peak to trough > 25 bpm.
Acceleration	Visually apparent abrupt increase (onset to peak is < 30 sec.) of FHR above baseline. Peak is \geq 15 bpm. Duration is \geq 15 bpm and < 2 min. In gestations < 32 weeks, Peak of 10 bpm and duration of 10 sec. is acceleration.
Prolonged acceleration	Acceleration > 2 min and < 10 min duration.
Early deceleration	Visually apparent gradual decrease (onset to nadir is \geq 30 sec.) of FHR below baseline. Return to baseline associated with a uterine contraction. Nadir of deceleration occurs at the same time as the peak of the contraction Generally, the onset, nadir, and recovery of the deceleration occur at the same time as the onset, peak and recovery of the contraction.
Late deceleration	Visually apparent gradual decrease (onset to nadir is \geq 30 sec.) of FHR below baseline. Return to baseline associated with a uterine contraction. Nadir of deceleration occurs after the peak of the contraction. Generally, the onset, nadir and recovery of the deceleration occur after same time as the onset, peak, and recovery of the contraction
Variable deceleration	Visually apparent abrupt decrease (onset to nadir is < 30 sec.) in FHR below baseline. Decrease is \geq 15 bpm. Duration is \geq 15 sec. and < 2 min.
Prolonged deceleration	Visually apparent abrupt decrease (onset to nadir is < 30 sec.) in FHR below baseline. Decrease is \geq 15 bpm. Duration is \geq 2 min. but < 10 min.

bpm = beats per minute

Adapted from: Macones GA, Hankins GDV, Spong CY, Hauth J, Moore T. The 2008 National Institute of Child Health and Human Development workshop report

on electronic fetal monitoring: update on definitions, interpretation, and research guidelines. *Obstet Gynecol.* 2008;112:661–666.