

## **Fetal Heart Monitoring**

AWHONN supports the assessment of the laboring woman and her fetus during labor through the use of auscultation, palpation and/or electronic fetal monitoring (EFM) techniques. The availability of registered nurses and other health care professionals who are skilled in maternal-fetal assessment, to include fetal heart monitoring (FHM) techniques is important for optimal care of the mother and her fetus. AWHONN recognizes that the fetal auscultation and palpation of uterine activity as well as the judicious application of intrapartum EFM are appropriate and effective methods to assess and promote maternal and fetal well-being. Current research indicates that fetal heart rate auscultation, when provided with a 1:1 nurse-patient ratio, is comparable to EFM for fetal assessment of the laboring woman. It is important that a woman's preference be taken into account whenever possible when deciding on FHM techniques.

Fetal heart monitoring requires advanced assessment and clinical judgment skills, regardless of the setting in which it is used. Therefore, each aspect of FHM should be performed by licensed, experienced health care professionals consistent with their state or provincial scope of practice. AWHONN maintains that fetal heart monitoring (FHM) includes:

- application of fetal monitoring components;
- intermittent auscultation;
- ongoing monitoring and interpretation of FHM data;
- initial assessment of the laboring woman and fetus; and
- ongoing clinical interventions and evaluations of the woman and fetus.

Initiation of monitoring and ongoing clinical evaluation should only be performed by health care professionals who have education and skills validation in FHM and in the care of the laboring woman. AWHONN regards these health care professionals with expertise in fetal monitoring as:

- registered nurses;
- certified nurse midwives (CNMs), certified midwives (CMs) and registered midwives (RMs-Canada);
- other advanced practice nurses such as nurse practitioners and clinical nurse specialists;
- physicians; and
- physician assistants

AWHONN believes fetal heart monitoring should not be delegated to other personnel who do not possess this level of licensure, education, and skill validation.

AWHONN does not support the use of EFM as a substitute for appropriate professional nursing care and support of women in labor. Facilities should ensure registered nurse staffing levels that meet the changing needs and acuity of the laboring woman and her fetus throughout the intrapartum period. Facilities should incorporate relevant recommendations from professional associations and organizations, and state, federal and/or provincial regulations into FHM policies and procedures.

AWHONN recommends a 1:1 nurse-to-patient ratio during the second stage of labor because of the nature and intensity of care required during this period. This staffing ratio should be maintained whether EFM or auscultation and palpation are used to assess the fetal heart rate and uterine activity.

AWHONN recommends ongoing education and periodic competence validation for registered nurses and other health care professionals who engage in fetal heart monitoring (FHM). To prepare clinicians for the use of auscultation and EFM and the evaluation of uterine activity, AWHONN urges facilities to establish or make available educational programs for guided clinical experiences, skills validation and ongoing competence assessment. AWHONN supports education that includes physiologic interpretation of FHM data, implications for labor support, and interprofessional communication strategies.

Communication and collaboration are essential and central to providing quality care and optimizing patient outcomes. AWHONN supports the need for institutional policies, procedures and protocols that promote collegiality among health care professionals. Many perinatal units have developed excellent professional communication strategies that foster collaborative relationships. However, differences of opinion about professional judgment and decision making related to fetal heart monitoring may occur.

Facilities should establish and maintain interprofessional policies and procedures that allow the registered nurse to make decisions regarding fetal monitoring practice and that identify the appropriate mechanisms to use if there is a difference of opinion in the interpretation of the fetal monitoring data or patient plan of care. These policies should clearly describe the facility chain of authority (also referred to as chain of command) and reflect state, territorial and/or provincial regulations; and consider the recommendations of professional organizations and credentialing bodies. The chain of authority should be present and used to safeguard the best interests of the woman and her baby as well as all members of the health care team.

AWHONN supports organizations' development of a culture of safety as described in recommendations of accrediting bodies and other professional organizations. Research suggests that lack of teamwork is associated with less optimal patient outcomes. Policies, procedures and guidelines should address collegial communication, timely and complete documentation, risk management strategies and staffing appropriate for the clinical needs of the laboring woman and her fetus.

Maternal and fetal clinical information should be documented throughout the course of labor. AWHONN supports the development of interprofessional institutional policies, procedures and protocols that outline responsibility for ongoing fetal heart monitoring (FHM) documentation. Documentation should contain streamlined, factual and objective information and should include, but may not be limited to:

- a systematic admission assessment of the woman and fetus;
- ongoing assessments of the woman and fetus;
- interventions provided and evaluation of responses,
- communication with women and their families or primary support persons;
- communication with providers; and
- communication within the chain of authority.

Ideally, all providers should develop consistent FHM policies that specify the standardized FHM language to be used in a given facility. Registered nurses should use standardized descriptive terms to communicate and document fetal heart rate characteristics (e.g. variability, decelerations, and accelerations). It is within the scope of practice of the nurse to implement customary interventions in response to EFM data and clinical assessment.

AWHONN recommends that institutions clearly delineate the nature of documentation, including style, format, and frequency interval. Documentation does not necessarily need to occur at the same intervals as assessment when utilizing continuous EFM. AWHONN supports the use of summary documentation at intervals established by the individual facility and described within policies, procedures and guidelines. This

documentation policy should be based on state and/or provincial guidelines as well as those of professional associations, regulatory and certifying bodies. Each institution should also determine policies and procedures regarding maintenance, storage, archiving and retrieval of all forms of fetal heart monitoring records as well as the parameters of maintaining the FHM tracing as part of the medical record.

AWHONN supports research focused on enhancing the body of knowledge and best practices regarding fetal assessment. Specifically, AWHONN supports research concerning the:

- efficacy of FHM that includes standardized definitions and FHM terminology;
- efficacy of interventions used in response to fetal monitoring findings;
- effect of uterine activity on fetal oxygenation;
- efficacy of EFM related to neonatal outcomes;
- impact of EFM on a woman's labor experience and maternal outcomes;
- impact of staffing on optimal patient outcomes related to fetal assessment and intervention;
- identification of optimal information technology applications; and
- comparisons of patient outcomes and quality indicators when using auscultation and palpation versus EFM.

AWHONN supports policies that promote:

- Promulgation and broad professional acceptance of unified terminology for description and documentation of FHM;
- Consensus regarding interpretation and management of EFM; development of standardized FHM terminology across disciplines;
- Clarity and consensus development among professional organizations and regulatory bodies regarding the scope of practice of licensed health care providers related to the use of FHM.

## **Background**

The background section of this position statement has been expanded to provide resource information for clinicians. AWHONN utilizes a variety of publications to promulgate policy and clinical recommendations. AWHONN has done extensive work in the area of fetal heart monitoring. Clinical recommendations are updated on an ongoing basis to keep pace with the current research and practice recommendations that are discussed and promoted by national professional and regulatory organizations. The role of this AWHONN position statement is to articulate the position of the organization on key policy issues within the field of fetal heart monitoring. Clinical recommendations are found in a number of key publications published by AWHONN and other organizations. Selected key publications are noted at the end of this document in Resources.

Two specific clinical recommendations are presented as background for this position statement – frequency of auscultation and fetal assessment in labor. AWHONN encourages practitioners to utilize the full range of fetal heart monitoring resources published.

## **Frequency of Assessments in Labor**

### **Frequency of Fetal Heart Rate by Auscultation**

Professional associations including the Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN), the American Academy of Pediatrics (AAP) and American College of Obstetricians and Gynecologists (ACOG) (AAP & ACOG, 2007), the Society of Obstetricians and Gynaecologists of Canada (SOGC, 2007), and the Royal College of Obstetricians and Gynaecologists (RCOG, 2001) have suggested

protocols for the frequency of assessment of the fetal heart rate by auscultation to determine fetal status during labor. The suggested frequencies are typically based on protocols reported in seminal research clinical trials that compared perinatal outcomes associated with fetal heart rate auscultation and electronic fetal monitoring (Haverkamp, et al., 1979; Haverkamp, Thompson, McFee, & Cetrulo 1976; Kelso, et al., 1978; Luthy, et al. 1987; McDonald, Grant, Sheridan-Pereira, Boylan, & Chalmers, 1985; Neldam, et al., 1986; Renou, Chang, Anderson, & Wood, 1976; Vintzileos et al., 1993). The range of frequency of assessment using auscultation in these studies varied from every 15 – 30 minutes during the active phase of the first stage of labor to every 5-15 minutes during the second stage of labor. In most studies, a 1:1 nurse to patient ratio was used for auscultation protocols. These classic studies included low risk and/or high risk patient populations.

Because variation exists in the original research protocols, clinicians should make decisions about the method and frequency of fetal assessment based on evaluation of factors including patient preferences, the phase and stage of labor, maternal response to labor, assessment of maternal-fetal condition and risk factors, unit staffing resources and facility rules and procedures.

Considering these factors, the suggested frequencies for fetal heart rate auscultation are within the range of every 15 - 30 minutes during the active phase of the first stage of labor and every 5-15 minutes during the active pushing phase of the second stage of labor. No clinical trials have examined fetal surveillance methods during the latent phase of labor. Therefore, health-care providers should use their clinical judgment when deciding the method and frequency of fetal surveillance.

### **Frequency of Fetal Assessment with Electronic Fetal Monitoring**

#### **In the absence of risk factors:**

Determine and evaluate the FHR every 30 minutes during the active phase of the first stage of labor and every 15 minutes during the (active pushing phase) of the second stage of labor (AAP & ACOG, 2007). In Canada, the FHR is evaluated every 5 minutes in the active phase of the second stage of labor (SOGC, 2007).

#### **When risk factors are present, continuous EFM is recommended:**

During the active phase of the first stage of labor, the FHR should be determined and evaluated every 15 minutes (AAP & ACOG, 2007). During the active pushing phase of the second stage of labor, the FHR should be determined and evaluated at least every 5 minutes (AWHONN, 2008).

During oxytocin induction or augmentation, the FHR should be determined and evaluated every 15 minutes during the active phase of the first stage of labor and every 5 minutes during the (active pushing phase) of the second stage of labor (AAP & ACOG, 2007; AWHONN 2008).

When EFM is used to record FHR data permanently, periodic documentation can be used to summarize evaluation of fetal status at the frequencies recommended by AAP and ACOG (2007) as outlined by institutional protocols. Thus, while evaluation of the FHR may be occurring every 15 minutes, a summary note including findings of fetal status may be documented in the medical record less frequently. During oxytocin induction or augmentation, the FHR should be evaluated and documented before each dose increase. During the active pushing phase of the second stage of labor, summary documentation of fetal status approximately every 30 minutes indicating there was continuous nursing bedside attendance and evaluation seems reasonable (Simpson, 2008b).

*Approved by the AWHONN Board of Directors, 1988; revised 1992; reaffirmed 1994; revised and re-titled 2000; revised and re-titled November 2008.*

## Resources

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