



# Electronic Fetal Monitoring Documentation

## *Connecting Points for Quality Care and Communication*

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### ABSTRACT

Contemporaneous, complete, and objective documentation is the foundation for continuity of patient care and facilitates communication between all levels of healthcare clinicians. The impact of electronic fetal monitoring on obstetric safety has become a high priority, with documentation being essential to evaluating care quality. Over several decades, electronic fetal monitoring documentation has reached a higher level of precision because paper is being replaced with health information technology that incorporates system's features such as checklists, drop-down boxes, and decision analysis. The intent of this article is to provide a synopsis of important concepts regarding electronic fetal monitoring documentation and liability-reduction strategies for perinatal nurses.

**Key Words:** electronic fetal monitoring documentation, fetal heart rate charting, perinatal documentation, health information technology in obstetrics, perinatal liability

Documentation has always been an indispensable part of professional nursing practice. Historically, nursing wisdom was delivered by word of mouth, going through a revolutionary transition from written records during the 1800s to the current electronic medical record (EMR) system.<sup>1</sup> Medical records are considered legal documents, required by law and other regulatory bodies. These records best reflect what transpired during a hospital

admission because documentation is mostly generated concurrently and is thought to be objective. Today, in one form or another, obstetric nurses are documenting clinical care by using paper charting, some method of an EMR, or exclusive electronic documentation. Regardless of nursing specialty, adherence to basic documentation strategies is crucial, as documentation reflects nursing character, competency, and care delivery.<sup>2</sup> Conversely, inadequate documentation potentially negatively impacts patient care, professional accountability, and hospital risk.<sup>3</sup>

Specific to obstetric practice is electronic fetal monitoring (EFM), which incorporates both fetal heart rate (FHR) and uterine activity patterns. In the United States, the objective of EFM is to assess maternal-fetal oxygen delivery with the goal of preventing fetal injury. This mode of monitoring is utilized in almost every contemporary obstetric unit. In fact, *Vital Statistics*, a government publication, halted data collection for intrapartum EFM utilization rates, as percentage rates remained stable at approximately 89% of all births by 2004.<sup>4</sup> During inpatient admissions (antepartum or intrapartum), clinicians use critical thinking and clinical reasoning when EFM data are interpreted and documented. The goal of this EFM documentation article is to provide an overview of fundamental key principles, medicolegal and risk management implications associated with substandard charting, and current strategies to improve documentation proficiency that are compliant with professional organization guidelines.

**Author Affiliation:** Gig Harbor, Washington.

**Disclosure:** The author has disclosed that she has no significant relationships with, or financial interest in, any commercial companies pertaining to this article.

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Submitted for publication: June 11, 2017; accepted for publication: September 28, 2017.

### ESSENTIAL ELEMENTS OF EFFECTIVE DOCUMENTATION

Regardless of clinical focus, whether a woman is admitted to a labor and delivery unit or an antepartum unit, quality medical record documentation that is reflective of critical thinking is a necessary and an integral aspect

of professional nursing care.<sup>5</sup> Historically, in paper-based systems, charting assessments, progress notes, and care plans mostly took place at a patient's bedside. This allowed for maximal patient interaction and input, as well as made paperwork containing patient care information accessible to all clinicians. Nurse-to-patient relationships maintained at the bedside also promoted therapeutic communication and professional responsibility while allowing patients to be collaborative partners in managing personal healthcare.<sup>6</sup> At all levels of healthcare, paper charting is continuing to evolve into a full-time investment in health information technology. The advent of electronic documentation has changed some aspects of paper charting by streamlining data collection and enhancing communication but, in some situations, has led to detracting from individu-

alized patient care.<sup>7</sup> As organizations shift from written formats to electronic systems, clinicians and organizational leadership must be able to articulate and endorse 6 key principles recommended by the American Nurses Association that are essential to effective documentation and communication.<sup>5</sup> These principles are outlined in Table 1 and include specific recommendations that are applicable to obstetric nursing.

Regardless of whether written or electronic methods are used, documentation fundamentals are similar. Point-of-care documentation incorporates tools such as flow sheets, spreadsheets, forms representing vital signs or laboratory result trends, checklists, customizable templates, drop-down menus, and dashboards. Date and time will determine whether or not a patient received appropriate care based on the clinical scenario

**Table 1. Principles of effective obstetric documentation and communication<sup>a</sup>**

Documentation quality	<ul style="list-style-type: none"> <li>● Permanently accessible, retrievable, and available for audits</li> <li>● Thorough, accurate, relevant, and consistent</li> <li>● Clear, concise, timely, and complete</li> <li>● Legible regardless if paper or electronic format</li> <li>● Entered contemporaneously and sequentially</li> <li>● Reflective of nursing process and critical thinking</li> <li>● Apply standardized EFM nomenclature to entries</li> <li>● Avoid nonspecific terms such as "reassuring, good"</li> <li>● Provide evidence of patient handoffs</li> </ul>
Staff education and training	<ul style="list-style-type: none"> <li>● Comprehensive documentation education and training plan for new employees incorporating technical elements of charting with organization or unit documentation policies</li> <li>● Ongoing follow-up education for all employees to reinforce information and documentation trend updates</li> <li>● Conduct team training</li> </ul>
Documentation and communication policies	<ul style="list-style-type: none"> <li>● Familiarization with organization and work location documentation and communication policies that include chain of command, consultation and on-call policies, transfer policies, and conflict resolution</li> <li>● Consider annual review of key policy by bedside clinicians and leadership</li> </ul>
Medical record security system	<ul style="list-style-type: none"> <li>● Integrated into documentation systems that abide by recommended industry standards, governmental mandates, accrediting agencies, and organizational policies</li> <li>● To include:             <ul style="list-style-type: none"> <li>● Data security</li> <li>● Protection of patient identification</li> <li>● Confidentiality of patient information, clinical professionals' information, and organizational information</li> </ul> </li> </ul>
Documentation entries	<p>Medical record entries must be:</p> <ul style="list-style-type: none"> <li>● Accurate, valid, and complete</li> <li>● Authenticated demonstrating entries are truthful, the clinician is readily identified, and information has not been added or inserted</li> <li>● Dated and time-stamped by the clinician</li> <li>● Legible/readable</li> <li>● Completed using standardized terminology and abbreviations</li> </ul>
Standardized terminology	<p>Standardized terminologies and The Joint Commission–approved abbreviations that are used to describe plan, deliver, and evaluate nursing care based on professional organizational guidelines and position statements</p>

Abbreviation: EFM, electronic fetal monitoring.

<sup>a</sup>From American Nurses Association,<sup>5</sup> Association of Women's Health, Obstetric and Neonatal Nurses,<sup>8</sup> The Joint Commission,<sup>11</sup> Lyndon and Ali,<sup>13</sup> Miller et al,<sup>14</sup> Miller,<sup>33</sup> and McCartney and Barnes.<sup>35</sup>

at the right moment. Electronic formats automatically document this information when events are entered. If paper charting is used, date and time must be written at the time of entry.

Relevant clinical charting reflects the continuum of objective patient assessment, diagnosis, planning, implementation, and evaluation. This includes, but is not limited to, documenting normal and abnormal assessment findings, alterations in maternal-fetal condition, significant events such as a fall, current plan of care or changes in plan of care, interventions performed with outcomes, evidence of psychosocial interactions, and patient education. If paper documentation is used and section of forms is not relevant to a clinical situation, a line is drawn through that particular section or “not applicable” can be written or typed. Leaving blanks on paper documents or incomplete electronic charting may suggest that a thorough assessment was not completed. All required documentation is completed prior to the end of a shift.

## FUNDAMENTALS OF EFM DOCUMENTATION

Fetal monitoring documentation often functions as a communication vehicle between clinicians in articulating a narrative account of a woman’s hospitalization. When EFM is charted appropriately, documentation should not only include FHR and uterine activity characteristics but also illustrate critical thinking and rationale used for clinical decision-making and interventions while providing evidence of a woman’s antepartum or intrapartum course.<sup>3</sup> Regardless of the format, paper or electronic, a straightforward approach to documenting EFM and obstetric care is an essential element of safe, quality, evidence-based nursing practice.<sup>5</sup>

### EFM nomenclature and interpretation

Professional organizations including the Association of Women’s Health, Obstetric and Neonatal Nurses, American College of Nurse-Midwives, American College of Obstetricians and Gynecologists, and The Joint Commission all recommend that EFM documentation incorporate standardized, descriptive nomenclature described by the National Institute of Child Health and Human Development 2008 Workshop Report on Electronic Fetal Monitoring.<sup>8-12</sup> Using recognized published terms for EFM documentation allows for clear communication among clinicians and avoids confusion when terms are ambiguous. For example, deceleration nadir has been exchanged in some documentation tools as “deceleration magnitude,” which is defined as a deceleration “quantitated by the depth of the nadir in beats per minute.”<sup>12</sup> A review of leading EFM sources confirm that

nadir, not magnitude, is consistently used to describe the lowest FHR point in the deceleration.<sup>13-15</sup> Similarly noted is the concept of a wandering baseline. Published peer-reviewed data are extremely limited when discussing wandering baseline, and this terminology is not included in standardized definitions or professional organization recommendations. From a patient safety perspective, adoption of a common language, for example, nadir and FHR baseline features such as bradycardia and tachycardia, should be used by clinicians in clinical practice to improve interdisciplinary communication as well as maternal-fetal safety.<sup>11</sup>

Despite standardized guidelines for EFM, considerable inter- and intraobserver variations in pattern interpretation continue to burden obstetric care. Tracing misinterpretation can lead to inappropriate decisions being made, resulting in unnecessary interventions or delays in care. Today, some electronic systems apply artificial intelligence and decision aids to assist clinicians with EFM pattern analysis using mathematical formulations and complex decision-making software. Tracing data interpreted by the computer are then auto-populated into a patient’s record, decreasing the amount of time that is required by clinicians to manually document vital information. Limited studies exist on artificial intelligence and pattern analysis, but results show reasonable agreement between bedside interpretation by a clinician and computer pattern analysis.<sup>16-18</sup>

While these tools have conceivable short- and long-term benefits, clinicians still have a responsibility to perform bedside assessments and document concurrence with data generated into a selected data field. For instance, toco transducers record frequency and duration of uterine contractions. Computers with outdated software may auto-populate these data into designated data fields but add uterine contraction intensity and resting tone using a numerical value of mm Hg. This is incorrect and can be deleted so that documentation of uterine findings via palpation can be manually entered to accurately reflect uterine palpation findings. Consequently, by using a common language for pattern interpretation and documentation, verbal and written communication is comprehensible between clinicians and provides clarity if necessary for defense in liability claims.

### Documentation of FHR categories

In 2008, a 3-tier system was recommended for FHR pattern categorization.<sup>12</sup> These 3 categories reflect tracings that are normal, indeterminate, or abnormal as related to fetal acid-base balance. Other EFM experts have proposed a 5-tiered color-coding system based on a Homeland Security Advisory System for terrorist attacks, which has been implemented at various

institutions. Green, blue, and yellow reflect no risk for fetal acidemia, orange suggests a low risk for fetal acidemia, and red is an unacceptably high risk.<sup>19</sup>

Regardless of which system is used, an FHR tracing is evaluated at a specific point of time and recognizes that FHR categories or color can and will change on the basis of individual clinical scenarios, successful implementation of corrective measures, and other management strategies. Currently, there are no published recommendations for documentation of categories or colors in a medical record. Some institutions have mandated that categories or a color-coding system be documented at the same intervals as FHR and uterine activity documentation. This redundancy in documentation theoretically consumes nursing time that could be devoted to hands-on patient care because FHR characteristics and uterine activity are already documented. In addition, in the event a malpractice claim is filed, FHR and uterine activity characteristics, as well as corrective measures and presence of communication between healthcare providers, are typically reviewed, not which category or color was identified in the medical record.

**Frequency of assessment and documentation**

Intermittent auscultation and EFM are 2 separate monitoring modes used in caring for obstetric patients and have professional organization recommendations for assessment and documentation frequency.<sup>8,20</sup> To date, there is a paucity of literature about either of the modes, detailing optimal frequency of intrapartum FHR assessment and documentation. In fact, there are no published peer-reviewed data demonstrating a positive impact on perinatal outcomes when current EFM assessment guidelines are applied at the bedside.

While intermittent auscultation is not the primary focus of this article, clinicians must recognize that there is a distinct difference between both monitoring modes, not only from a technological perspective but also from an assessment and documentation standpoint. Each surveillance method, auscultation and EFM, has professional organization recommendations for frequency of assessment and documentation. See Table 2 for suggested guidelines.

A concept of simultaneous assessment and documentation with EFM is not supported in the literature. Unfortunately, nursing leadership, educators, and clinicians at the bedside oftentimes mistakenly use intermittent auscultation assessment and documentation recommendations for EFM. These statements are then written into unit policies. Actual examples of unit policies include the following:

Method of fetal heart rate assessment, either auscultation or electronic fetal monitoring, is dependent on risk factors and clinician preference. If high risk, determine, assess and document fetal heart rate every 15 minutes in first stage of labor and at least every 5 minutes in second stage.

When fetal heart rate is outside normal range on the EFM, it should be assessed and documented every 15 minutes in latent phase, every 5 minutes during the active phase, and every 2-3 minutes while actively pushing.

These examples are not only absurd and unreasonable but also futile, as no one can meet these policy expectations. Unfortunately, the aforementioned policy statements were misinterpreted by policy creators who referenced professional organization position statements and publications to support these

**Table 2. Assessment and documentation recommendations for intrapartum fetal surveillance<sup>a</sup>**

	Latent phase (<4 cm)	Latent phase (4-5 cm)	Active phase (≥6 cm)	Second-stage passive descent	Second-stage pushing
Auscultation					
Low risk: No oxytocin; <i>assess and document</i>	Hourly minimum	Every 15-30 min	Every 15-30 min	Every 15 min	Every 5-15 min
Electronic fetal monitoring					
Low risk: No oxytocin; <i>assess only</i>	Hourly	Every 30 min	Every 30 min	Every 15 min	Every 15 min
Oxytocin infusion or high-risk patient <sup>b</sup> ; <i>assess only</i>	Every 15 min	Every 15 min	Every 15 min	Every 15 min	Every 15 min
	with oxytocin infusion; every 30 min, no oxytocin				

<sup>a</sup>Each woman’s clinical condition should be individualized. Depending on maternal-fetal status or changes in risk status, additional assessment and charting may become necessary. From Association of Women’s Health, Obstetric and Neonatal Nurses.<sup>8</sup>

<sup>b</sup>Summary documentation is appropriate with electronic fetal monitoring and can occur at less frequent intervals than assessment recommendations.

instructions. Therefore, all levels of nursing, from the bedside caregiver to management, must recognize key words in professional documents highlighting recommended auscultation intervals for “assessment and documentation” versus recommended EFM intervals for assessment, not both assessment and documentation. In other words, when intrapartum EFM is utilized, documentation does not need to occur at the same intervals as assessment because data are already being continuously recorded electronically.<sup>8</sup>

Assessment of EFM tracings infers that there is bedside visual review of a paper tracing or labor room computer screen. The habit of noting critical events or initialing nursing presence directly on an actual EFM paper tracing is declining. Although if this is routine practice because electronic methods are not available, written notes must reflect tracing interpretation and actions performed at the bedside. Assessment can be reflected by using the “mark” button on a fetal monitor and initialing the tracing if a printed tracing is used. If EFM patterns are reviewed electronically, evidence of assessment is made in a variety of ways including clicking the actual tracing to record date and time of assessment or using a drop-down box that demonstrates a review was completed. On occasion, tracing analysis from a remote location, such as triage, may become necessary when staffing ratios do not allow for a bedside evaluation. Remote tracing review from an operating room may be required when a critical situation transpires, such as an emergent cesarean birth for fetal indications.

Summary documentation reflects an accurate picture over time of a maternal-fetal dyad, including changes or trends in the FHR tracing or in a patient’s clinical condition. This type of medical record documentation is an acceptable format for documenting FHR characteristics and uterine activity patterns, as well as other patient care data such as patient positioning, urinary output, or response to intravenous pain medication.<sup>13</sup> A common EFM misperception of nurses is that documentation must occur at the same time an FHR assessment is completed, such as assessing and charting every 15 minutes. This concept is not only inaccurate but also unsupported in peer-reviewed literature or by professional organizations. Summary documentation *can occur* at less frequent intervals than assessment parameters.<sup>8,15</sup> Depending on risk status and other maternal-fetal conditions, a summary note could presumably be charted every 30, 45, or 60 minutes. For example, a nurse may assess FHR and uterine activity characteristics every 15 minutes but notices an FHR baseline trend. A summary note could be charted at an interval of perhaps every 30 to 45 minutes that not only addresses pattern analysis but may also include a statement such as:

Gradual FHR baseline increase from 120 to 155 bpm over an hour. Irregular contractions with Montevideo units <130 mm Hg. Normal vital signs. Dr Navarre notified of baseline change/vital signs; will review tracing remotely from clinic.

From a medicolegal perspective, it could be considered reasonable for a nurse caring for a low-risk patient with a category I tracing (in active labor with adequate cervical change and not receiving any medications) to assess a tracing every 30 minutes but use summary documentation every 30 to 60 minutes as long as there have been no considerable changes in status since the last entry. On the contrary, a high-risk preeclamptic patient stated on oxytocin and magnesium sulfate in active-phase labor would have bedside visual assessments completed every 15 minutes according to professional guidelines.

Documentation can occur either contemporaneously or with summary documentation at specific intervals identified in documentation protocols. For antepartum patients, such as a patient with stable preterm labor diagnosis receiving magnesium sulfate for neuroprotection, a summary note could occur every 30 to 60 minutes, allowing for more hands-on patient care and support as long as assessment parameters were met. Every clinical condition must be individualized and depending on the maternal-fetal status, additional charting may become necessary. Certain situations and factors may occur during hospitalization when modifications to assessment and documentation intervals may need to be considered. This includes, but is not limited to, oxytocin dosage changes, FHR presence prior to scheduled cesarean births, FHR surveillance in the event of an emergency or unplanned cesarean birth, medication administration, or neuraxial anesthesia placement.<sup>13,14</sup>

### Location of assessment and documentation

In 2011, the Institute of Medicine indicated EMR and health information technology would transform the fundamental approach clinicians documented patient care compared with written documents. The report emphasized that with implementation of health information technology, there would be an increased likelihood that clinicians would have more bedside opportunities to communicate with and support patients.<sup>21</sup> While health information technology remains understudied in both outpatient and inpatient perinatal settings, especially related to nursing, there are supportive data that electronic documentation can enhance transmission of vital patient information between clinicians, improve documentation, allow clinicians to have more effective hands-on care at the bedside, and improve patient safety outcomes.<sup>22–25</sup>

What is unique about currently available EFM technology is that FHR tracing analysis and decision support software can combine surveillance and real-time alerts, allowing for continuous monitoring of maternal-fetal condition, especially when condition has deviated from normal. Recent studies in nonobstetric settings that target technology and clinicians have demonstrated positive outcomes in patient care as well as promising quality data to further improve how care is provided.<sup>22,26</sup>

Regrettably, clinicians in some situations are challenged with whether to provide care to a patient or care to a chart. Complaints about electronic documentation include duplicate entries on separate screens; scrolling through multiple formats to access necessary data; locating the correct screen to document data; slow, time-consuming cumbersome systems; reliability; not enough workstation terminals; and increased mandatory documentation dictated by multiple entities such as regulatory agencies and insurance.<sup>1,7,27</sup> Several studies findings suggest that when clinicians use electronic documentation, attention is diverted away from patients and more toward computers so that assessment and nurse-patient communication are not dynamic. For example, computer analysis of an EFM tracing can be automatically entered without clinicians performing a bedside evaluation of a woman's entire clinical picture. This further complicates assessment and documentation because patient discussion or input is limited, therefore, leading to patient needs being still present, not improved, or with limited resolution.<sup>7,28,29</sup>

Much of intrapartum care is delivered in an environment centered primarily on technology with EFM, vital sign equipment, intravenous pumps, infant warmers, and computer documentation stations surrounding a patient's bedside. This atmosphere and a nurse's ability to be receptive to each patient's individual needs can interfere with effective patient care. Also, patient satisfaction about intrapartum care provided can be influenced negatively if technology or other distractors overwhelm a clinician's desire to be at the bedside.<sup>6,27</sup> Nursing leaders have been vocal about encountering some difficulties keeping staff interested in bedside charting and interacting with women, especially during the intrapartum period.<sup>30</sup> Nurses may believe that documentation is a time-consuming nuisance that is often left until the end of a shift to complete, which results in rushed entries that lack depth and detail. This places an increased risk of critical data being lost, potentially leading to adverse outcomes.<sup>5</sup> As nurses become more reliant on electronic charting and less focused on hands-on patient care, anecdotal comments such as "it's stupid to stay at the bedside," "what am I supposed to do while I'm in the room all that time," or "her

family is there to help her" become real challenges for leaders and mentors. Regrettably, clinicians who prefer to have maximal bedside interaction with patients are sometimes chastised for "taking too much time" with patients or are incompetent. In all of these situations, nurses may be advised that attitudes such as these are counterproductive as well as unprofessional and that bedside documentation optimizes a woman's perception of what is considered quality family-centered care.

While group interactions on an obstetric unit are important for social and nonsocial reasons, priority is placed on frequent bedside patient interaction and optimizing patient safety. Oftentimes, computer workstations are located at a central nursing desk, which is a busy and sometimes hectic location on any patient care unit. By charting at the bedside, nurses are less likely to be faced with interruptions from other individuals or performing non-nursing-related tasks. One study involving 9 hospitals reviewed 13 025 interruptions, usually at a nursing desk, that was experienced by nurses when direct patient care was not being performed. Many of these interruptions occurred during documentation outside patient's rooms. Results of this study demonstrated that 90% of interruption-related errors resulted in delay in treatment, loss of concentration, or loss of focus.<sup>31</sup> A similar study of nursing practice found of 5325 interruptions, with 88.9% could have negative consequences whereas 11.0% could result in positive outcomes.<sup>32</sup> While these studies were not conducted on obstetric units, distractions such as these can potentially have a negative impact on individualized care and patient safety.<sup>31,32</sup> Simply stated, the only option to avoid these interruptions and potential risks is to document entries at a patient's bedside where clinicians are less apt to be disturbed. Noise from medical equipment, televisions, mobile phones, as well as patients and visitors in a labor room can also be perceived as distracting, but these factors are more controllable versus documenting solely at the desk.

When nurses congregate at a desk for long periods of time, regardless of whether charting is taking place or to engage in social chatter unrelated to patient care, nurses are perceived as not being busy. A valid argument that arises from this observation is trying to justify 1:1 nurse-to-patient ratios when nurses spend more time at a nursing station instead of providing bedside labor support and documentation. While there are no written data to support or negate this discussion, human perception can create conditions that are interpreted by individuals in the workplace as being reality. Speculations such as this are harmful between nursing personnel and leadership.

## Late entry

Delays in documentation can potentially affect a clinician's memory, leading to uncertainty about vital details or sequence and timing of actions and interventions. The reality on every obstetric unit is that at times data cannot be charted contemporaneously. Late entry notations become necessary because clinicians are required to dedicate full attention to changes in maternal-fetal condition and not on documentation. Often this is related to a sudden change in a woman's clinical condition or an urgent situation such as a precipitous vaginal birth. Completing hours of back charting for every 15-minute assessments does not fall into this category and does not constitute the need for late entry charting to simply catch up. Late entries follow a format established by each healthcare facility and are completed as soon as possible after an event. There are no professional recommendations for what time frame constitutes a late entry note, but any delay in charting that is greater than 1 to 2 hours seems practical.<sup>33</sup> Unit documentation policies should dictate the maximum time period an entry on patient care can be made before becoming late.

Unfortunately, once a clinical situation has been resolved, other patient care needs or unit tasks may impact a nurse's ability to complete a note in a reasonable amount of time. In these cases, clinicians have a professional responsibility to ensure late entries are written prior to the end of a scheduled shift. Completing a late entry on another shift or several days later is not acceptable and may be interpreted as being self-serving or defensive, making the clinician appear unreliable and less credible.<sup>33</sup>

Regardless of whether paper or electronic documentation is utilized, notes are labeled as late entry at the start of a progress note. Late entry notes include data and time that charting took place if electronic charting was not available, why a note was delayed, events in the sequence of order as it occurred with times recorded whenever possible, and a complete EFM assessment if applicable to the clinical situation. An example of a free-text late entry might appear as:

Late entry due to urgency of patient care situation. At 22:10 patient had increasing pelvic pressure and bloody show. Fetal heart rate baseline 145 bpm, moderate variability, intermittent variable decelerations. Firm contractions every 2-4 minutes lasting 70-90 seconds. Vaginal examination by CNM Zemmer: 6/100%/-1. Approximately 10 minutes later, involuntary pushing noted, followed by a 5-minute prolonged deceleration to 90 beats per minute. Patient turned to right side. Repeat examination by this nurse 10/100%/+4. CNM Zemmer called to room for delivery. Head out at 22:32, followed by shoulder dystocia. Time of birth 22:38.

Pediatrics paged at 22:35 with Dr Murphy arriving at 22:42. Refer to shoulder dystocia documentation checklist for further details of 6-minute shoulder dystocia and delivery summary. Apgar scores 2, 4, and 6.

## Audit trails

An audit trail is a retrievable tamperproof evaluation of a record that confirms who has retrieved an EMR, when a system was accessed, where a system was opened, and what operations were performed.<sup>35</sup> In medical record documentation, audit trails display clinician's name who entered data, location of entry (bedside or remote location), date and time of all entries, and care that was provided to each patient. For instance, one patient's audit trail can demonstrate bedside fetal monitoring documentation, vital sign results, clinician's name who remotely viewed the record from the clinic, and time of FHR alarm cancellation when the patient ambulated to the bathroom. In situations where clinicians back chart for several hours of data or correct a record, entry time is recorded wherever a clinician desires the entry to be placed, and an actual time documentation took place is also recorded. An example of this is a clinician waiting 4 hours after delivery to document every 15-minute assessments while sitting in a remote location. An audit trail will verify that entries were remotely entered hours later. Back charting is not recommended from a medical-legal perspective, as these entries will be scrutinized closely as being reflective of a patient not being monitored closely, poor time management skills, or that care was negligent. Audit trails provide nonrepudiation in that a clinician cannot deny access and activity in the medical record.<sup>35</sup>

## DOCUMENTATION POLICIES

Unit and hospital policies, including those incorporating documentation, function as a resource for staff members and establish expected standards of practice for personnel. Frequently, units have countless policies that can create inconsistent or conflicting standards. On occasion, policies are outdated or have not been reviewed recently. Lack of documentation or inadequate documentation policies can have significant legal consequences for staff and the healthcare facility. Deviating from a policy can create risks to patient safety and liability exposure that may be unwarranted.<sup>36</sup> Therefore, a formalized EFM documentation policy that is readily available to all staff members is recommended.<sup>5,8</sup> Policies are current, broad in scope, concise, and reflect adherence to professional organization guidelines, state-level mandates, as well as evidence-based practice to help reduce practice variability between clinicians.

Factors such as the level of maternal care offered, patient census and acuity, nurse-to-patient ratios, risk management, and professional and regulatory agency requirements may also be considered. Hospital systems that include multiple locations may find central policies useful in standardizing documentation practices across systems, especially if on-call personnel work at more than 1 facility.

Policies that are applicable to EFM have an obligation to include the nature of documentation, whether written or computerized, as well as style, format, and frequency intervals.<sup>8</sup> Specific language on procedures to be taken for documentation options can be included when electronic systems are malfunctioning or taken off-line for maintenance. Documentation policies must be reflective of actual bedside care. For example, a policy may state that a paper tracing is marked every 15 minutes with the initials of the caregiver when, in fact, paper tracings are no longer printed out. Documentation recommendations that are impractical to follow, use outdated information, or follow obsolete practices are often ignored by clinicians and have no place in high-reliability obstetric units. A common misconception often written into EFM policies is that frequency of documentation during second-stage labor is every 5 minutes. Nurses are then challenged to meet this policy requirement while providing patient care. This frequently ends up in a situation of back charting several hours later. These actions may hinder testimony as the unit policy is reflective of an impractical process, creating a rule that cannot be followed if the nurse is actually providing care and support to a laboring woman.

## DOCUMENTATION ALLEGATIONS IN LITIGATION

Clinicians have a heightened awareness of the relationship between medicolegal vulnerability related to

documentation and obstetric malpractice. Leading documentation concerns include failure to chart recognition of FHR patterns that require bedside assessment and intervention, failure to document use of corrective measures in response to an indeterminate and abnormal FHR tracing, and failure to document ongoing maternal-fetal condition during the delivery process.<sup>34</sup> Medical records provide substantial evidence for not only attorneys and expert witnesses but also a judge and jury if a claim leads to testimony. Lack of timely entries, absence of comprehensive assessments, and accurate documentation that lack a follow-through management plan will be discovered.<sup>2,3</sup> Suggestions to limit liability mistakes in EFM and documentation are shown in Table 3.

Immediate impressions are often formed when a clinical note is reviewed from a medical-legal perspective. A comparison is made in these 2 notes documented at the bedside on the FHR tracing represented in Figure 1.

Nurse at bedside; fetal heart rate appears sketchy; toco not picking up contractions; patient requests pain medication; midwife Duncan called for orders.

Nurse at bedside; unable to interpret fetal heart rate data due to noncontiguous tracing related to maternal body habitus; firm contractions palpable every 2-3 minutes; monitors readjusted patient requests pain medication; pain scale 7 of 10; midwife Duncan called for pain medication orders and fetal spiral electrode/intrauterine pressure catheter placement.

Objective information about the condition is lacking in the first note. In addition, the term “sketchy” is ill-defined as related to EFM and is not described in standardized nomenclature. This can have a significantly negative impact on the overall impression made by a legal team or jurors. The second note is a better representation of an objective and thorough summary that demonstrates critical thinking. Other phrases to consider instead of noncontiguous may include poor

**Table 3. Limiting liability mistakes in electronic fetal monitoring**

<p>Establish a patient relationship from admission to discharge that allows for open communication that is timely, straightforward, and transparent</p> <p>Keep current with evidence-based practice related to maternal-fetal physiology, fetal heart rate interpretation, and interventions</p> <p>Know and utilize applicable published standards and guidelines for electronic fetal monitoring</p> <p>Follow unit policies, to include electronic fetal monitoring, documentation, and oxytocin</p> <p>Maintain adequate interpretable fetal heart rate and uterine activity tracing</p> <p>Recognize indeterminate and abnormal fetal heart characteristics</p> <p>Attend joint nursing and physician fetal monitoring education to include formal in-person lectures and interdisciplinary case reviews</p> <p>Ensure qualified perinatal nurses who have successfully completed unit orientation have primary responsibility of antepartum and intrapartum patients</p> <p>Membership in professional organizations</p> <p>Maintain professional licensure and certification, including electronic fetal monitoring</p>
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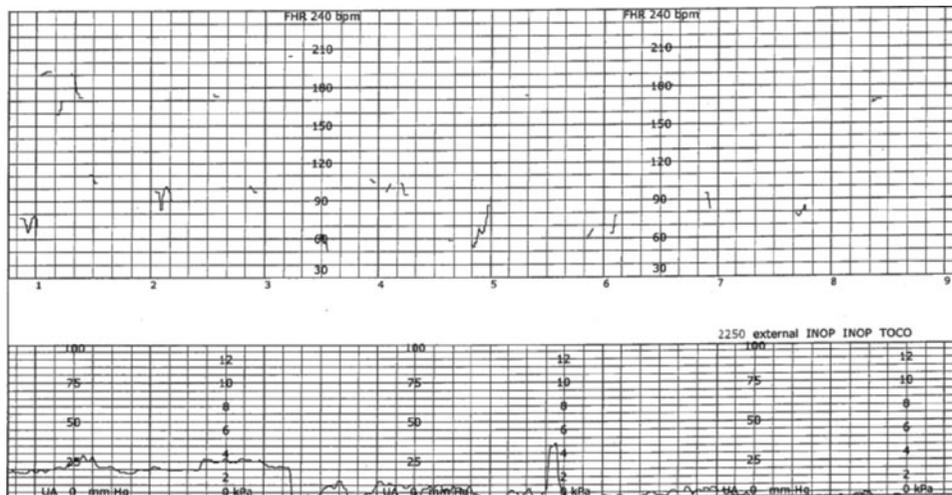


Figure 1. Tracing example.

signal quality, signal interference, or interrupted signal due to maternal body habitus, fetal movement, or maternal positioning. When care is taken to document a complete and thorough note, clinicians are able to demonstrate that the standard of care was being met and they have established credibility from a medical liability perspective.<sup>36</sup>

## CONCLUSION

Electronic fetal monitoring documentation is an everyday part of obstetric healthcare and is one of the most crucial aspects of validating the provision of quality care. Nurses are one of the initial staff members a woman will encounter at admission to labor and delivery, with this relationship continuing as nurses provide the majority of direct patient care throughout hospitalization. Today's clinicians carry immense personal obligations and professional responsibilities to meet workplace demands while balancing bedside duties with documenting objective data in a reasonable amount of time.<sup>37</sup> Occasionally, patient acuity, workflow, and staffing can be challenging, leading to documentation and communication failures that may impact patient and nurse satisfaction as well as perinatal outcomes. As health information technology specific to EFM incorporates processes such as pattern analysis and decision support, this area of healthcare will continue to garner more attention in optimizing the basics of obstetric documentation while improving efficiency, perinatal outcomes, and patient safety.

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