

the role of experienced operators and centers of expertise in care of patients who require invasive procedures, (2) the risks and benefits of prenatal vs postnatal therapy for fetal anemia at various gestational age ranges, and (3) lack of long-term data on fetuses that undergo fetal blood sampling.

In fact, SMFM recommends that fetal blood sampling be performed by experienced operators at centers with expertise in invasive fetal procedures when feasible (see guideline recommendation #4). With respect to the authors' second point, this guideline did not address specifically the upper range of gestational age for fetal blood sampling or intra-uterine transfusion. The decision is complex and based on the severity of the fetal condition, whether this is the first or a repeat procedure, the risks of prematurity at that given gestational age given the fetal condition, other mitigating

maternal or fetal factors, and operator/center expertise. This clinical question was beyond the scope of this document and will be addressed in an upcoming SMFM Clinical Guideline—*The Fetus at Risk for Anemia: Diagnosis and Management*. In addition, this guideline will address the third point and summarize the available data regarding the short- and long-term outcomes for fetuses who require in utero therapy. ■

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The case for an electronic fetal heart rate monitoring credentialing examination

TO THE EDITORS: The National Certification Corporation (NCC) would like to comment on the article, “The case for an electronic fetal heart rate monitoring certification exam.”¹ We would clarify that there are differences between credentialing and other general assessments. Each type of assessment has its place to foster better care for the obstetric patient. Credentialing is a rigorous procedure that must comply with established criteria to be considered a valid assessment tool.^{2,3}

General assessments, as proposed, can take a number of forms, which are not subjected to the same rigorous development and psychometric standards. The 15,000 professionals who have taken the NCC electronic fetal monitoring (EFM) examination demonstrates that the need for a credentialing examination is already being met, is well established, and is widely used.

The process proposed of creating 2 separate examinations appears to be counterproductive to the goals of promoting multidisciplinary communication and collaboration related to EFM tracing interpretation and management. A major benefit of the NCC EFM examination is the ability of the perinatal team to acknowledge credentialing has been achieved on the same content, and interprofessional providers have a similar understanding of applying the principles of EFM to clinical practice. The concept of 2 separate examinations seems to be a step backward in promoting teamwork in the perinatal setting.

The author cites studies demonstrating that the NCC credential examination has been shown to improve outcomes. Despite this evidence, they go on to claim that the existing NCC examination is “suboptimal,” believing it is focused on purely factual information and interpretation of static segments of a fetal heart rate tracing. The NCC EFM

credentialing examination ensures providers can apply standardized terminology to clinical management scenarios including decision making in response to changing information. Thousands of providers hold this credential, and they have found it to be a fair and effective instrument for evaluation knowledge of EFM.

The NCC applauds all efforts that strive to improve patient care, and although EFM education and credentialing are both worthy endeavors, it is important to recognize that each has a different purpose and application to clinical practice. ■

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REFERENCES

1. Berkowitz RL, D'Alton MD, Goldberg JD, et al. The case for an electronic fetal heart rate monitoring exam. *Am J Obstet Gynecol* 2014;210:204-7.

2. American Educational Research Association. Standards for educational and psychological testing. American Educational Research Association, American Psychological Association and National Council on Measurement in Education. Washington, DC: American Educational Research Association; 1999.

3. National Commission for Certifying Agencies. Standards for the accreditation of certification programs. Washington, DC: American Educational Research Association; 2005.

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REPLY

Thank you for the opportunity to respond to the letter from the president of the National Certification Corporation.

Dr Bessinger's assertion that, because many professionals have taken their examination, the need for an electronic fetal monitoring credentialing examination has been met, begs the question of whether that examination is accomplishing its objective. The examination described in our article was created because the authors believe that utilization of a more sophisticated assessment of the examinee's understanding of the optimal use of fetal heart rate monitoring will result in better care of laboring patients.

The primary difference between the 2 examinations is our use of script concordance testing, which is designed to assess clinical reasoning, or judgment, in addition to questions relating to pure factual knowledge.¹ As educators and clinicians, we believe that the former is a significantly improved tool to assess responses to the dynamic aspects of a patient in labor by presenting multiple clinical scenarios with important aspects of the case changing over time, just as they do in the real world.

We agree that credentialing is a rigorous procedure. Our examination was created by a panel of nationally recognized medical and nursing experts and pretested thoroughly on beta populations. Questions were selected based on their medical relevance, item variances, correlations with all other question scores, and the impact of each question on the examination's overall reliability as measured by Cronbach's alpha analysis.² In addition, reliability criteria for multidimensional examinations were assessed using the overall Omega and Armor's theta analysis.³

We disagree that separate examinations for medical caregivers and nurses is counterproductive to the goals of promoting multidisciplinary communication and collaboration. There is no question that nurses and medical caregivers have to function as a coordinated team and must communicate using the same language, but they have different roles and responsibilities on those teams. Our examinations were designed to assess the knowledge necessary for electronic fetal monitoring interpretation by both groups as well as those areas relating specifically to the use of that knowledge for each of them as labor evolves and tracings change.

In summary, we believe that our examination is a more clinically relevant means to assess the understanding of electronic fetal monitoring by all the members of the obstetrical care team than currently existing credentialing examinations. ■

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REFERENCES

1. Lubarsky S, Dory V, Duggan P, Gagnon R, Charlin B. Script concordance testing: from theory to practice. *AMEE guide no. 75. Med Teacher* 2013;35:184-93.
2. Cronbach LJ. Coefficient alpha and the internal structure of tests. *Psychometrika* 1951;16:297-334.
3. Carmines EG, Zeller RA. Reliability and validity assessment. Beverly Hills, CA: Sage Publications; 1982.

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Manual therapy, exercise, and education for low back pain and pelvic pain during pregnancy

TO THE EDITORS: We read with interest the paper by George et al¹ on a multimodal intervention involving manual therapy, exercise, and education for low back pain and pelvic pain during pregnancy. Although the authors concluded that musculoskeletal and obstetric management (MOM) in mid-pregnancy is more beneficial to patients than standard obstetric care, they acknowledged several important study

limitations including the absence of active or placebo comparators, the inability to independently assess individual components of the multimodal intervention, and likely the enrollment of patients motivated to achieve successful results, thereby having an impact on the generalizability of results.

However, other aspects of study design, analysis, and reporting raise further questions. The eligibility criteria