

## PERSPECTIVES

## Fetal movement education: Time to change the status quo

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Every antepartum record, whether it is on paper or EMR, has a space asking whether the patient feels fetal movement at the visit. Every provider inherently knows that fetal movement is important and worth asking about at each visit. Yet the education for patients about fetal movement and when to alert a provider to changes is not currently standardized in the United States. There is no practice bulletin or guideline from the American College of Obstetricians and Gynecologists and, therefore, there is a wide variation in clinical practice. An Australian study found that 97% of women were asked about fetal movement, but only 62% reported formal education regarding fetal movement. More concerning, only 40% were advised to call immediately if concerned about fetal movement change. A quarter were told to call only if baby moved fewer than 10 times in an hour.<sup>1</sup>



We have a standardized approach to most aspects of prenatal care. We know what to do if the patient has contractions, or protein in their urine, or an increased blood pressure. Our management and education regarding fetal movement must be standardized as well. In this article I will go through

THIS. Evidence in other countries indicates that appropriate, thoughtful education can reduce the stillbirth rate. We need a similar care plan or model for fetal movement education in the United States.

## Myth one: Kick counts

When education is done, kick counts are far and away what providers and nurses advise in the clinic and hospital triage when women present with complaint of decreased fetal movement. The standard approach to this is advising the patient to perform a kick count several times per day to check in on the baby and call if less than 10 kicks per hour. This is not bad advice as it may help create awareness for the mom about what is “normal” for her baby and may help her to “check in” on the baby when she is occupied at work or with older children. However, advising that a kick count should be done to reassure a patient about a concerning change in fetal movement is not supported in the literature. A meta-analysis in the February 2020 issue of the Green Journal found that advised kick count monitoring did not significantly reduce stillbirth risk.<sup>2</sup> Research shows that most moms will get 10 kicks normally within an hour, but there are no data showing what percentage of moms with perceived decreased fetal movement also will get a “passing” result despite their concern. For example, take a patient who normally feels 50 movements in an hour and is not reassured by 10 movements in an hour, but because she is told that 10 movements is okay, she tries not to worry about the concerning change. Many mothers in the stillbirth community report “passing kick counts” in the days leading up to the diagnosis. We need to move away from kick count education to a much simpler plan. We must tell patients if they are worried about a concerning change in fetal movement, they should call their provider.

There is a very common myth that fetuses slow down at the end of pregnancy, especially once labor has started. A study in the Journal of Physiology continuously monitored term fetuses when mom was both awake and asleep. The study also looked at the effect on fetal heart rate and fetal activity based on different maternal positions. The study found the fetuses spent around 90% of the day with active movements and with reactive nonstress tests (NSTs).<sup>3</sup> A 2019 study looking at fetal movement at term and preterm in third-trimester patients illustrated that fetal movement does not decrease in frequency or strength at term. It found that only 6% of patients noted decreased strength and 14% decreased frequency of movements at term. Furthermore, 59% reported an increase in strength, and nearly 39% reported an increase in frequency of fetal movements at term.<sup>4</sup> We must educate patients that a change in frequency or strength of movements is not normal or expected, and they must call if concerned about a change.

### **Myth 3: Try juice, ice water, or food before coming in for evaluation**

A common set of advice when a patient calls with a complaint of decreased fetal movement is to suggest a meal or something sugary, although there is little or no evidence to support this. A randomized controlled trial found maternal perception of increased fetal movement was similar among the two groups. Giving something sugary at NST also was not shown in this study to improve reactivity.<sup>5</sup> Another randomized, double placebo blind study was done to answer the question of whether glucose via IV helped improve fetal movements and decreased the need for admission for induction or further monitoring. In this study, no difference in outcome is found.<sup>6</sup>

come and be evaluated, not recommendation of measures like ice water, orange juice, or sugary meal because it is not supported by the literature. This incorrect message also may further the false impression that a baby who is not moving is most likely sleeping or is simply in need of sugar, not that the baby may be at risk for impending stillbirth. The Perinatal Society of Australia and New Zealand and Royal College of Obstetricians and Gynecologists have fetal movement protocol that both discourage this advice and encourage immediate evaluation of patients with complaint of concerning fetal movement change.<sup>7,8</sup>

#### **Myth 4: An increase in fetal movement is not of concern**

I used to believe that increased fetal movement is never of concern. However, the STARS study illustrated that a concerning increase in fetal movement often is noted just before the diagnosis of stillbirth. A single episode of excessively vigorous activity which often is described as frantic or crazy is associated with an odds ratio for stillbirth of 4.3. In the study, 30% of cases reported this, compared with 7% of controls.<sup>9</sup> In our practice, we manage mothers who call with this concern the same way as a decreased fetal movement complaint, and bring the mother in immediately for evaluation.

#### **Myth 5: Patients all know that a concerning change in fetal movement is a risk factor for stillbirth**

Decreased fetal movement has been associated with an increased OR for stillbirth of 4.51.<sup>10</sup> However, patients often do not know of this association. A study in the United States of providers and stillbirth families showed fear of anxiety kept providers from talking about stillbirth and that it still happens. Because of this patients were completely surprised by the diagnosis.<sup>11</sup> We

Pullen found that 77% of families said they never worried their baby could die outside of the first trimester. Our patients have received this information without increased anxiety and are very appreciative and reassured about the education and protocol (based on the [U.K. Saving Babies Lives Care Bundle Version 2](https://www.england.nhs.uk/wp-content/uploads/2019/07/saving-babies-lives-care-bundle-version-two-v5.pdf) <<https://www.england.nhs.uk/wp-content/uploads/2019/07/saving-babies-lives-care-bundle-version-two-v5.pdf>> ) that we have implemented in our practice.

## **Fact: Fetal movement education guidelines exist and are easy to implement**

The practice I am a partner at has been using a formalized method for educating patients about fetal movement over the past year. As mentioned earlier the U.K. and Australia have formal fetal movement education and management guidelines.<sup>7,8</sup> Both protocols encourage formal education around 20-24 weeks and education for the patient to call immediately with concerns; the patient should be evaluated within 2 hours of the complaint. The formal education we provide is quite simple. The [Star Legacy Foundation](#) (United States) and Still Aware (Australia) have created a simple card to educate patients.



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case/control cohort STARS study by Heazell et al. The STARS study demonstrated that patient report of reduced fetal movement in the 2 weeks prior to loss was associated with an OR of 12.9 for stillbirth, that decreased strength of fetal movement was associated with stillbirth OR of 2.83, and that decreased night time activity was strongly associated with impending stillbirth (74% of cases felt their fetuses died at night).<sup>12</sup> This card also addresses sleep position data, supported by a 2018 meta-analysis in the journal Sleep Medicine. The study identified an OR for stillbirth of 2.45 for supine sleepers with LGA or average sized babies. Furthermore, if the baby was SGA and the mother slept supine, the OR for stillbirth increased to 15.66.<sup>13</sup>

## Conclusions

When I think about the patients I have cared for who have presented with a stillborn baby, I think often that they usually presented for a complaint other than decreased fetal movement such as labor check or routine prenatal visit. When asked when they last felt fetal movement they will often say days before. This does not need to happen. Protocols in Norway for fetal movement education have shown that patients call sooner with decreased fetal movement when they have received a formal education.<sup>14</sup>

Not all stillbirth can be prevented but proper education about fetal movement and not perpetuating dangerous myths about fetal movement, may keep presentations like this from happening. I hope we may soon have a formal protocol for fetal movement education, but until then, I hope some will take these educational tips to heart.

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