FHR tracing speed change from 1 cm/min to 3 cm/min in Alberta

An action plan for all current obstetrical practitioners

A change from a 1 cm/min Electronic Fetal Monitor tracing speed to a 3 cm/min tracing speed will be implemented at all hospitals in Alberta by November 30, 2019.

Rationale

There are three main reasons why the time is right for the province of Alberta to transition now from 1 cm/min FHR tracing speed to 3 cm/min.

The first and most important one is that AHS is committed to launching Connect Care across Alberta over the next 4 years, and it is anticipated that the establishment of intrapartum monitor technology will need to be in place by mid-2019. The new technology that will be integrated into the Connect Care system will not have the appropriate level of functionality, and therefore usability, if it were to be applied at 1 cm/min, since it is designed to be used with 3 cm/min speeds. It would therefore undermine the long-term applicability of this important technology in clinical practice if Alberta hospitals and birthing units were to maintain 1 cm/min monitor speeds. (Contact me directly if you wish a copy of a more in-depth “Briefing Note” on the IT factors).

The second reason is based on the fact that there is evidence that faster paper speed may assist health care providers to better interpret the tracing. Peleg, et al (June 2015)[1] found in “The effect of chart speed on fetal monitor interpretation” that late and variable decelerations were identified significantly less at 1 cm/min than at 3 cm/min, there was significantly reduced perception of variability at 1 cm/min, tracings were incorrectly categorized by reviewing physicians 27.1% of the time at 1 cm/min compared to 12.0% of the time at 3 cm/min, and inter-observer agreement was consistently higher at 3 cm/min than at 1 cm/min.

A third reason for moving to 3 cm/min is that almost all other centres in Canada use 3 cm/min. Given that it is not uncommon for MDs, RNs, and MWs to travel to other provinces after training to take up employment, it only makes sense to transition to a single national paper speed. The updated SOGC intrapartum FHS guideline that is now in draft form will be recommending that a single national paper speed be established.

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The Alberta Maternal Newborn Child & Youth (MNCY) Strategic Clinical Network (SCN) has been considering these matters over the past several months and there is agreement that this transition is necessary in order to ensure best quality patient care in the long term. Other supportive bodies for this change include the Departments of Obstetrics and Gynecology at the Universities of Calgary and Alberta, the Alberta Perinatal Health Program, the Alberta Association of Obstetrics and Gynecology, Canadian Fetal Health Steering Committee, Canadian Perinatal Programs Coalition, MORE^{OB} Teams, and The Society of Obstetricians and Gynecologists of Canada.

Transition

There is understandable uncertainty in the medical, nursing, and midwifery communities about a change in fetal monitor tracing speed and how this may affect tracing interpretation, interdisciplinary communication, and clinical practice. The fear is that caregivers will not be able to understand the tracing at the new speed, that they may interpret it or communicate concerns inaccurately, and that this may lead to suboptimal patient management.

The answer to this concern is to ensure that ALL obstetrical caregivers engage in:

1) formal intrapartum fetal health surveillance educational review via an online manual (see below), followed by
2) interdisciplinary workshop (classroom or online) group practice FHS 3 cm/min interpretation sessions.

This will ensure precision in the classification of FHS (normal, atypical, abnormal) by all caregivers, and hence certainty about what next steps are appropriate in clinical situations. Since the principles of interpretation and classification are **exactly the same** at 3 cm/min as they are at 1 cm/min, there will be no basis for confusion or error once all caregivers have formally completed review training and rehearsed together.

Attaining competence in intrapartum fetal heart pattern interpretation is like learning a complex language and developing the skills to speak and comprehend it in a group setting. Alleging one has competence in Fetal Health (FH) assessment because one has been "doing it for a long time" does not a guarantee (to self or others) that this is true. Deficits in knowledge or communication about specific elements of the "language" has the potential to lead to a preventable perinatal injury or death. As an example, making statements such as "this tracing is not great" or "this tracing is getting worse" fails to properly classify the fetal tracing as "atypical" or "abnormal" by objective criteria, and this, in turn, may not direct appropriate interventions and management in a timely manner. Proper multidisciplinary use of the "language" should instead involve communication such as "this tracing has been 'atypical' for 20 minutes now on the basis

of repetitive uncomplicated variable decelerations", or "this tracing is now 'abnormal' because the FHR has been over 160 for 2 hours, and also the variables are complicated on the basis of slow return to baseline".

There is considerable evidence that preventable perinatal death and injury are partly consequent to intrapartum failures to interpret, respond, and communicate about abnormal FH status in a timely manner in Canada, and internationally [2-7]. There is also evidence that the introduction of a national multidisciplinary fetal health surveillance program (FSEP) in Australia led to a reduction in perinatal hypoxia with no increase in cesarean section rates (Brown et al 2016)[8]. Accordingly, it makes sense to ensure that all caregivers have completed a review of all aspects of fetal health surveillance prior to undertaking the transition from the current tracing speed of 1 cm/min to 3 cm/min.

Plan

Each zone is establishing a target date for implementation of 3 cm/min FH tracing with the final date for the entire province being NOVEMBER 30, 2019. However, each zone has established **specific implementation dates that range anywhere from June 1 to November 30.** (The workshop schedule applicable to your zone will be determined within the next few weeks.)

In anticipation of the transition to 3 cm/min EFM tracing speed across the province, it is therefore recommended that **ALL** obstetrical caregivers involved in the care of pregnant women (i.e., who may be responsible, at any time in the pregnancy or in labour, for evaluating the fetal heart pattern and fetal status):

1) Register for and complete the Canadian Fundamentals of Fetal Health Surveillance – Self Learning Online Manual: https://ubccpd.ca/fhs-online-manual **PRIOR TO ATTENDING YOUR ZONE'S INTERDISCIPLINARY WORKSHOP.**

2) Register for and participate in a zone-offered 2-2.5 hour multidisciplinary workshop (classroom or online) once it has been assigned, which will be just **PRIOR TO your zone's assigned implementation date.**

The Canadian Fundamentals of Fetal Health Surveillance program is currently the national standard for FHS education, and consists of the two components noted above (online manual course, followed by a workshop). The ONLINE MANUAL is jointly managed by the Canadian Fetal Health Surveillance Steering Committee and the Canadian Perinatal Programs Coalition group. It is based entirely on content that was vetted by the SOGC Obstetrical Content Review Committee. It is currently housed at the UBC-CPD website, and it is readily accessible as an online course. Time to

complete the on-line course varies by individual and experience, but generally takes about 4 – 6 hours to complete for experienced practitioners. It can be undertaken over days or weeks, or as a single session. Successful completion of the online exam earns CME credits. There is a minimal cost associated with the online exam, and arrangements are being made to cover the costs of this program for all caregivers.

Once the online course has been completed, all caregivers will then be able to register for the multidisciplinary WORKSHOP (classroom or online) which will include FHS 3 cm/min sessions as described above. These workshops will assist caregivers in applying the didactic learnings of the online manual FHS course with the new (to us) 3 cm/min tracing patterns, such that we can all become comfortable with comprehending and communicating about the relevant elements of the FH patterns as a team.

Obstetrical practitioners who have not already completed the online manual course can access it now, at any time(s) that are convenient for them, through the following website: https://ubccpd.ca/fhs-online-manual .

Thank you, in advance, for your engagement in this important provincial initiative.

Dr. Michael Bow
Co-Chair Alberta Perinatal Health Program Quality Assurance Committee

References

[1.] Peleg et al; 2015. The effect of chart speed on fetal monitor interpretation
[2]. Accreditation Canada, the Healthcare Insurance Reciprocal of Canada, the Canadian Medical Protective Association, and Salus Global Corporation; 2016. Obstetrics Services in Canada: Advancing Quality and Strengthening Safety. Ottawa, ON: Accreditation Canada.
[3]. Royal College of Obstetricians and Gynecologists. Each Baby Counts: key Messages from 2015. London: RCOG; 2016. Available at: https://www.rcog.org.uk/globalassets/documents/guidelines/research–audit/rcog-each-baby-counts-report.pdf. Accessed on 14 August 2017.
[4.] PMMRC; 2016. Tenth Annual Report of the Perinatal and Maternal Mortality Review Committee: Reporting mortality 2014. Wellington: Health Quality & Safety Commission. Available at: https://www.hqsc.govt.nz/assets/PMMRC/Publications/tenth-annual-report-SUMMARY-Jun-2016.pdf. Accessed on 14 August 2017.
[5]. Eskes M, Waelput AJM, Erwich JJHM, et al. Term perinatal mortality Audit in the Netherlands 2010–2012: a population-based cohort study. BMJ Open 2014;4:e005652. doi:10.1136/bmjopen-2014-005652.

[6.] O'Connor D. Saving Babies' Lives: A care bundle for reducing stillbirth; 2016. Available at: https://www.england.nhs.uk/wp-content/uploads/2016/03/saving-babies-lives-car-bundl.pdf. Accessed on 14 August 2017.
[7.] PMMRC; 2014. Eighth Annual Report of the Perinatal and Maternal Mortality Review Committee: Reporting mortality 2012. Wellington: Health Quality & Safety Commission. Available at: http://www.hqsc.govt.nz/assets/PMMRC/Publications/eighth-PMMRC-report-June-2014.pdf. Accessed on 14 August 2017.
[8]. Brown et al; 2015 Journal of Maternal-Fetal and Neonatal Medicine