

Fetal Health Surveillance Instructor Update January 2020

Canadian Fetal Health Surveillance Education Program

One of the aims of the Canadian Fetal Health Surveillance Steering Committee (CFHSSC) has been to establish standardized education for providers of Fetal Health Surveillance (FHS) across Canada. In working towards this goal, the committee has established numerous working groups over past years to complete activities such as the development of a standardized online exam to support self-learning through the online FHS manual, development of an instructor portal, an update of the 8-hour Fundamentals workshop, and the development of a refresher workshop for ongoing FHS education.

The Canadian FHS Education Program consists of three components. Learners are required to:

- 1) Review the online FHS manual (UBC CPD site),
- 2) Pass the online exam (UBC CPD site), and
- 3) Attend one of the following in person workshops:
 - a. 8-hour Fundamentals of FHS Workshop, or
 - b. 4-hour FHS Refresher Workshop

A minimum of one workshop facilitator must be registered with the Canadian FHS Instructor Portal and be familiar with current practice guidelines. Workshop composition should aim to be interprofessional whenever possible.

Upon completion of the FHS education program, learners will be able to:

- Describe methods of intrapartum FHS with emphasis on intermittent auscultation (IA) and electronic fetal monitoring (EFM).
- Explain maternal-fetal physiology and pathophysiology.
- Interpret IA and EFM findings within the clinical context.
- Classify IA and EFM findings and describe appropriate clinical response.
- Identify strategies to mitigate risk through improved interdisciplinary communication, collaboration and management.

The FHS education program is designed for registered nurses, physicians and midwives who assess and interpret fetal health as a part of their professional role.

*Questions arise about participation of practical nurses in the Canadian FHS education program as valued members of interdisciplinary teams. Practical nursing education and scope of practice varies in Canada. Education needs for practical nurses should be assessed at a facility/provincial level with consideration to the legislated scope of practice and organizational policies to support their role.



In This Issue

- Canadian FHS Education Program Overview
- Fundamentals of FHS Manual and Exam Update
- FHS Refresher Workshop
- Canadian FHS Instructor Portal
- SOGC Clinical Practice Guideline: Intrapartum FHS
- Question and Answer – Baseline Variability
- Resources of Interest

Internet Links

- **Online FHS Manual -**
<https://ubccpd.ca/fhs-online-manual>
- **FHS Instructor Portal -**
<https://elearning.ubccpd.ca/enrol/index.php?id=201>

Fundamentals FHS Online Manual and Exam - Update

The Fundamentals of FHS Online Manual provides a self-directed online learning opportunity that is a comprehensive source of information. It provides opportunities for the application of the SOGC FHS clinical practice guidelines. The online exam evaluates learner comprehension of the content. Since January 2019 the manual and exam are the required preparation for attending the in-person Fundamentals of FHS, the FHS Refresher and Instructor workshops.

The Canadian FHS Education Program consists of three components: self-study, exam completion AND attendance at an in person workshop.

The online FHS exam is intended to ensure learner completion of the online workbook and provides an assessment of learners' knowledge prior to attending the in-person workshops. This strengthens standardization and consistency in FHS education and evaluation. The working group developed the exam blueprint¹ to identify item and subject importance and assign appropriate weighting to reflect the FHS content. The exam uses multiple choice questions to evaluate the knowledge and understanding of content that match to the learning objectives of the course. Exam items were assessed for content validity and reliability by content experts, FHS providers and healthcare students from across Canada. The working group appreciates UBC's guidance in this process.

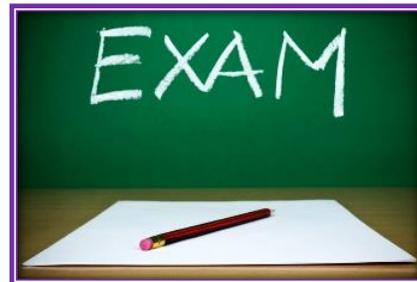
Effective September 1, 2018, a \$30 fee was implemented to take the exam, with revenues allocated to maintenance of the online manual, exam, and FHS instructor portal.

A CFHSSC working group has undertaken a complete review and update of the Online FHS Manual in collaboration with authors of the 2020 edition of the SOGC Intrapartum FHS clinical practice guideline.

FHS Refresher Workshop

An interprofessional subcommittee of the CFHSSC was created in 2016 to review the entry level Fundamentals course and to develop a standardized Canadian FHS Refresher option. The FHS Refresher training involves 3 components: 1) Review of the UBC CPD Online Fundamentals course; 2) passing the online FHS exam, and; 3) participation in a 4-hour in person workshop. The interprofessional workshops focus on communication and teamwork while engaging learners in case reviews.

The Canadian FHS Refresher workshop was piloted in three locations in 2018 at the following venues: 1) Champlain Maternal Newborn Regional Program (CMNRP) in Ontario; 2) Canadian Association of Perinatal and Women's Health Nurses (CAPWHN) 2018 National Conference in Ottawa; and 3) in Saskatchewan with an interprofessional group of midwives, registered nurses, and obstetricians.



Number of enrolled Online Manual users, since course launch - June 20, 2017: **12,545**

Number of exam completions, since exam launch - Aug 15, 2018: **7,034**

Exam Completions by Province:

AB	2972	NU	17
BC	924	ON	2157
MB	154	PE	17
NB	91	QC	38
NL	181	SK	206
NS	228	YT	0
NT	27	Int.	28

Exam Completions by Profession:

Nurse	5050
Midwife	733
Resident/Student	506
General Practitioner	461
Specialist	254
Nurse Practitioner	12
Other Health Prof.	2
Other	37

¹ Coderre, s., Woloschuk, W., & McLaughlin, K. (2009). Twelve tips for blueprinting. *Medical Teacher*, 31 (4), 322-324.

Participant and course leader evaluations of these three (3) pilot workshops informed the current refresher program. The feedback was very positive and reflected:

- Four (4) hours was the appropriate workshop length to meet the workshop objectives;
- Successful collaboration of healthcare provider teams;
- Increased knowledge, particularly from the case discussions and teamwork information;
- High value of a multidisciplinary perspective in the case discussions;
- Applicability to practice, particularly in conjunction with information from the Online FHS Manual and exam;
- Overall high participant satisfaction.

When planning to facilitate a FHS Refresher workshop instructors can choose to use case studies from the Fundamentals of FHS PowerPoint file, the more complex case studies in the Refresher workshop, or by developing local cases using EFM tracings from your own facility (de-identified, with appropriate consents, and in adherence to organizational privacy policies and the Personal Health Information Act). Case studies should be selected based on local learning needs.

Refresher workshops are designed for providers with sufficient experience to support a strong foundation of knowledge and skill in intrapartum FHS.

A minimum of 1 year of experience is suggested.

The Refresher education program is not appropriate for the inexperienced practitioner.

The power point presentation for the FHS Refresher workshop is currently available on the Canadian FHS Instructor Portal.

Canadian FHS Instructor Portal

The FHS Instructor Portal was opened in June 2019 to provide FHS instructors with easy access to the latest version of the Fundamentals of FHS and the FHS Refresher course materials. In addition, the portal provides a forum for instructors to engage with each other for the purpose of helping one another clarify interpretation of course content or course delivery, and seek general support with delivering the course. As of January 2020 there were 235 registered instructors in the portal. The Canadian FHS Instructor Portal registration fee is \$75 for a three year term.



Benefits of registering with the Canadian FHS Instructor Portal include:

- Access to current Fundamentals and Refresher presentations.
 - Current Fundamentals presentations to choose from:
 - The Perinatal Services of BC Fundamentals of FHS.
 - The CMNRP Fundamentals of FHS (also used by Reproductive Care Program NS).
 - You could use either of these presentations. Both are based on the 2018 reaffirmed SOGC guidelines (no changes from 2007 publication). You might be most comfortable teaching from the presentation that is familiar to you depending on where you received your instructor training, and which presentation was delivered.
 - There have been minor revisions to the PowerPoint to remove the delivery of in-class quizzes and increase the opportunity for more interactive activities.

This will be your access to the 2020 Fundamentals presentation in coming months.

Based on the anticipated SOGC clinical practice guidelines for intrapartum FHS.

- **Course Accreditation:** CME credits are awarded to participants of workshops facilitated by registered instructors.
 - *Currently only the 8-hour Fundamentals of FHS is accredited for OBS specialists; accreditation for the refresher workshop is in progress.
- **Teaching Resources:** Access to additional teaching resources that have been shared by your peers.
- **Discussion Forum:** Access to a discussion forum that you can use to share information or pose questions about topics related to providing FHS workshops, clinical questions, challenging situations, emerging evidence, etc.

Discussion Forum: Note of Caution

While we encourage active use of the discussion forum to pose questions and seek input from fellow instructors across the country we need to ensure that we abide by legislation surrounding privacy and adherence to the Personal Health Information Act (PHIA). We want to caution instructors and ask that they refrain from sharing personal health information, (e.g. pictures of EFM tracings and clinical details) without following due process for obtaining appropriate consent and ensuring de-identification.

The Instructor Portal is a work in progress. The CFHSSC is developing a strategy to best meet the needs of our national instructor pool. We are working on: roster submission, new registrations, renewals, and supporting national accreditation requirements.

We thank you for your patience as we continue to enhance this resource and advance FHS education across the country. If you have any feedback or suggestions please let us know.

SOGC Clinical Practice Guidelines: Intrapartum FHS



The update to the SOGC Clinical Practice Guideline: Intrapartum FHS is in press and expected in March 2020. The Canadian FHS Steering Committee will ensure the Fundamentals of FHS online manual, the online exam, and all teaching resources for both workshops will reflect the new guideline. We will notify you when these are posted in the Portal.

Canadian FHS Instructors will be invited to attend scheduled webinars where the Guideline updates will be highlighted, and strategies to support knowledge translation within your facilities will be explored. There will be several opportunities to review the new teaching resources and help you with a proactive approach to implement the 2020 FHS Education Program.

FHS Education Recommendations for Nurses

In February 2018 CAPWHN issued a position statement pertaining to FHS Education for Nurses. The Position Statement provides key recommendations including:



- All nurses providing pregnancy and intrapartum assessment using FHS should participate in FHS education every 2 years and maintain documentation of their continuing education.
- FHS education programs should incorporate defined expected outcomes consisting of theory review and in-person, interdisciplinary, case based education and discussion.
- All health care facilities providing antenatal and intrapartum FHS should:
 - Provide opportunities for nurses to attend FHS education,
 - Fund opportunities to enhance FHS knowledge by way of workshops, paid work days, or conference attendance, and
 - Assist in the development and implementation of regularly scheduled 'obstetrical skills drills' for all practitioners (nurses, midwives, physicians and support staff).

The Position Statement can be downloaded at:

http://www.capwhn.ca/en/capwhn/Position_Statements_Guidelines_p4614.html

Resources of Interest

As FHS instructors, our role includes mentorship of colleagues and advocacy for safe care that leads to good outcomes for mothers and their newborns. Two Canadian resources published in 2016 and 2018 provide compelling information that supports the need for ongoing interprofessional education in FHS.

Obstetrics Services in Canada: Advancing Quality and Strengthening Safety: A Collaborative Report from Accreditation Canada, Healthcare Insurance Reciprocal of Canada (HIROC), the Canadian Medical Protective Association and Salus Global (2016) compiled a list of the top risks which lead to the most costly claims in acute care organizations. Four of the top five maternal / newborn risks from the Risk Assessment Checklist (RAC program) for HIROC identified aspects directly related to fetal health surveillance:

- 1) Failure to interpret / respond to abnormal fetal status. Key mitigation strategies included:
 - Monitoring adherence to fetal surveillance protocols
 - Having a decision tree / algorithm for atypical or abnormal fetal heart rate
 - Ensuring initial and ongoing competence of nursing staff in fetal health surveillance
 - Adopting a standardized decision tool for emergency delivery preparations.
- 2) Mismanagement of induction / augmentation medications - often based on the fetal heart tracing, identification of tachysystole and fetal response
- 3) Failure to monitor fetal status
- 4) Failure to communicate fetal status. Key mitigation strategies identified included:
 - Monitoring adherence to fetal surveillance protocols
 - Implementing the on-call / second on call contingency plan each time it is activated
 - Implementing an obstetrical chain of command / escalation protocol
 - Implementing an on-call and second on-call contingency plan.

In addition, the Canadian Medical Protective Association (CMPA) found that a large proportion of cases they reviewed involved a delay in recognizing an atypical or abnormal fetal heart rate pattern by nurses and physicians. This was linked to poor situational awareness (e.g. anticipating what may occur and anticipating what may be required in an individuals' care), or inadequate interpretation of the fetal heart tracing.

Recommendations for improvement included:

- Recognize gaps in skills and training with the obstetrical team and provide appropriate professional development;
- Invite input from all health care professionals to maintain situational awareness;
- Be mindful of changes in patient condition using high-alert medications such as oxytocin or magnesium sulfate; and
- Reinforce the need the regular training in fetal assessment and situational awareness.

Team issues were reported in 70% of obstetrical sentinel events. “Common communication issues included nurses not providing sufficiently detailed information on maternal and fetal status; physicians not seeking out or questioning the clinical information provided to obtain a more complete clinical picture, and clinical staff not providing sufficient detail at shift change or handover”. Another issue identified included not

The Health Insurance Reciprocal of Canada have published several resources, including “Risk Reference Sheets” which identify specific concerns related to obstetric practice. They provide a case study, common claim themes, mitigation strategies and references. They provide valuable information which you can incorporate into discussions at your course.

They can be found at:
<https://www.hiroc.com/resources>.

communicating the urgency of requests for consultation or delivery contributing to delayed response and subsequent patient harm.

Recommendations for improvement included:

- Communication of sufficient information to promote situational awareness about the patient’s condition and progress;
- Implementation of a standardized communication tool for patient consultations and handovers; employing strategies to escalate clinical concerns within the team;
- Clearly communicating persistent fetal heart and clinical concerns to emphasize timely attendance of appropriate staff or delivery;
- Provide simulation training and drills to practice shared awareness, communications, and crisis response within the team; and
- Foster a culture of safety with open and respectful communication.

The full report can be accessed and downloaded at:

https://www.cmpa-acpm.ca/static-assets/pdf/research-and-policy/system-and-practice-improvement/Obstetrics_Joint_Report-e.pdf

Delivery in Focus: Strengthening Obstetrical Care in Canada. 10-Year Review of CMPA and HIROC Data. Report from the Healthcare Insurance Reciprocal of Canada (HIROC) and the Canadian Medical Protective Association (CMPA) (2018), expanded on the findings from the 2016 report described above. Their ten-year review of CMPA data identified two main issues related to FHS; delays in notification of the primary care provider of abnormal fetal heart rate (FHR) patterns (45 %) and misinterpretation of FHS patterns by physicians and nurses. Another issue noted was the primary care provider not adequately attending to the patient during critical periods and the team’s reduced capacity to respond to obstetrical emergencies. The Report identifies a number of strategies addressing clinical decision-making by providers, team communication and system issues.

The full report can be accessed and downloaded at:

https://www.hiroc.com/system/files/resource/files/2018-10/Delivery-in-Focus_-Strengthening-obstetrical-care-in-Canada-10-Year-Review-of-CMPA-and-HIROC-Data.pdf

Topping, M., Lett, C., & and Thorp, L. (2019). Intermittent sinusoidal fetal heart rate and massive maternal-fetal hemorrhage: A case report. *Journal of Obstetrics and Gynecology of Canada*, 41(11), 1619-1622.

“Sinusoidal fetal heart rate pattern is a well-documented sign of maternal-fetal hemorrhage; however, an intermittent sinusoidal pattern is rare. This is a case of a 26-year-old primigravida who presented with decreased fetal movement. On fetal heart rate monitoring there were episodes of intermittent sinusoidal fetal heart rate pattern, and the baby was born with anemia. This case highlights the need for increased vigilance and consideration of a diagnosis of maternal-fetal hemorrhage when an intermittent sinusoidal fetal heart rate pattern is identified.”

Abstract available at: [https://www.jogc.com/article/S1701-2163\(19\)30070-2/abstract](https://www.jogc.com/article/S1701-2163(19)30070-2/abstract) SOGC members can access full article. Congratulations to Canadian FHS Steering Committee member Leah Thorp on this publication.