



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

REFERENCES

1. Chen I, Mallick R, Allaire C, et al. Technicity in Canada: a nationwide whole-population analysis of temporal trends and variation in minimally invasive hysterectomies. *J Min Invasive Gynecol* 2021;28:1041–50.
2. Sanaee MS, Tannenbaum E, Papillon-Smith J, et al. Graduating obstetrics and gynaecology residents' readiness for practice: a cross-sectional survey study. *J Obstet Gynaecol Can* 2019;41:1268–75. e4.
3. Li C-b, Hua K-q. Transvaginal natural orifice transluminal endoscopic surgery (vNOTES) in gynecologic surgeries: a systematic review. *Asian J Surg* 2020;43:44–51.

J Obstet Gynaecol Can 2021;43(12):1359–1360

<https://doi.org/10.1016/j.jogc.2021.07.011>

© 2021 The Society of Obstetricians and Gynaecologists of Canada/La Société des obstétriciens et gynécologues du Canada. Published by Elsevier Inc. All rights reserved.

A Novel, Asynchronous Urogynaecology Online Curriculum Developed in Response to COVID-19: Is There an Unexpected Upside to Remote Learning Platforms?

COVID-19 posed unprecedented challenges to medical education, including a shift in the delivery of didactic teaching to remote learning platforms. This disrupted established models of postgraduate education. However, this shift may have produced an unintended upside by facilitating the development of asynchronous curriculum resources.

Prior research on asynchronous learning in medical education suggested that learners make use of a variety of unvetted, asynchronous resources to supplement their learning.^{1,2} However, these may not cover the required curriculum, may not represent local best practice, and may be of variable quality.³

We leveraged remote learning platform features to create an evidence-based, asynchronous curriculum for obstetrics and gynaecology residents that covers core topics in urogynaecology. This created a “flipped classroom” model that reserved limited in-person contact time for clarification and discussion. The aim of this cross-sectional pilot study was to evaluate resident perceptions of this curriculum.

We identified topic areas using the Royal College Entrustable Professional Activities for obstetrics and gynaecology and prior rotation feedback from residents. The urogynaecology faculty and fellow reviewed proposed module topics and agreed on final topics by consensus (Figure). We prepared a 1 hour, evidence-based lecture for each module topic and delivered them to residents on urogynaecology core rotation using a remote learning platform (Zoom Video Communications Inc.; <https://zoom.us>) during June 2020. We recorded these lectures using the remote learning platform's recording function, and recordings were uploaded to the university's curriculum delivery platform (Brightspace, D2L Corporation; <https://www.d2l.com>), along with an annotated collection of resources related to the topic, including surgical tutorials, review articles, and society guidelines. We gave residents who were on urogynaecology rotation or preparing for the Royal College Specialty Examination in Obstetrics and Gynaecology during the 2020–2021 academic year access to the asynchronous teaching modules via the curriculum delivery platform. We also scheduled brief, synchronous sessions for concept review around clinical activities.

We invited all residents who were given access to the modules to participate in a cross-sectional survey to determine residents' perceptions of this initiative and ways in which it could be improved (REB approval no. 1026882). The survey was delivered via email by a research assistant, and electronic responses were collected anonymously (online Appendix). Eight residents responded to the survey (eight of nine eligible residents; 89% response rate). All eight residents found the modules to be helpful or very helpful to their learning on their urogynaecology rotation. All five residents who sat the Royal College Specialty Examination during the 2020–2021 academic year found the modules to be helpful to their preparation for the exam. Most residents (six of eight; 75%) preferred the asynchronous curriculum delivery to live didactic sessions.

This initiative represents a didactic teaching supplement that could easily be compiled by leveraging both the recording feature of remote teaching platforms to record lectures that are already being delivered to residents and the existing institutional curriculum delivery platforms. The initiative provided residents with a library of resources that are evidence based, relevant to resident learning objectives, and applicable to local context, and residents viewed these resources favourably. By creating a flipped classroom model, we were able to adapt to COVID-19 restrictions and reserve limited in-person teaching for problem solving and application of concepts.

Figure. Urogynaecology asynchronous teaching module topics.

Module 1: Prolapse I: Definitions, Epidemiology, Diagnosis
 Module 2: Prolapse II: Management
 Module 3: Incontinence I: Definitions, Pathophysiology, Diagnosis
 Module 4: Incontinence II: Management
 Module 5: Genitourinary Syndrome of Menopause
 Module 6: Recurrent Urinary Tract Infection
 Module 7: Obstetrical Anal Sphincter Injury (OASI)
 Module 8: Interstitial Cystitis
 Module 9: Microscopic Haematuria
 Module 10: Urodynamic Study Interpretation*
 Module 11: Management of Urinary Tract Injury*

*Under development

A future study will examine the impact of this initiative on knowledge acquisition. There is also an opportunity for future collaboration that focuses on the development of wider, interdepartmental resource libraries to promote scientifically accurate, relevant content to support resident education and ensure access for all residents across Canada.

SUPPLEMENTARY MATERIAL

Supplementary material related to this article can be found at <https://doi.org/10.1016/j.jogc.2021.08.004>.

Jocelyn Stairs, MD; Anita Smith, MD

Department of Obstetrics and Gynaecology, Dalhousie University, Halifax, NS
jocelyn.stairs@dal.ca

REFERENCES

1. Mallin M, Schlein S, Doctor S, et al. A survey of the current utilization of asynchronous education among emergency medicine residents in the United States. *Acad Med* 2014;89:598–601.
2. Purdy E, Thoma B, Bednarczyk J, et al. The use of free online educational resources by Canadian emergency medicine residents and program directors. *CJEM* 2015;17:101–6.
3. Lin M, Thoma B, Trueger NS, et al. Quality indicators for blogs and podcasts used in medical education: modified Delphi consensus recommendations by an international cohort of health professions educators. *Postgrad Med J* 2015;91:546–50.

J Obstet Gynaecol Can 2021;43(12):1360–1361

<https://doi.org/10.1016/j.jogc.2021.08.004>

© 2021 The Society of Obstetricians and Gynaecologists of Canada/La Société des obstétriciens et gynécologues du Canada. Published by Elsevier Inc. All rights reserved.