The overcrowded curriculum is alarming
Le programme d'études surcharge est alarmante

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I was reminded recently, as I read articles related to a study one of my research teams has launched about one of the most pressing medical education issues of our time: content overload. Some derisively or dismissively refer to it as "perceived overload,"[1] while, as I have previously called it, it's "the elephant in the room."[2] Content overload perniciously and insidiously inhibits the full academic and intellectual potential of our students while, at the same time, sapping them of their natural curiosity and both mental and physical health, all the while escaping much attention or concern. Not only is medical education hazardous to one's health, but it is somewhat ineffective.[3]

Consider what Ryan wrote: "If, however, veterinary students are to be encouraged to adopt a deeper approach to studying in the future, the most influential issue of workload will have to be addressed."[4] Chambers asserted that excessive workload has a deleterious effect on all students.[5] Yangdon et al. indicated that there is strong evidence linking heavy workload with poor performance and low well-being.[6] Bowyer wrote, "Students experiencing overload are not capable of efficient learning and cannot reach positive learning experiences."[7] . Excessive workload is a factor in poor student learning by moving them to adopt surface and rote learning rather than deep learning. He exhorted teachers to design better learning experiences so they can more readily accomplish what we expect of them. Several authors have recommended the general curricular design principle of balance between too little and too much of a challenge.[8,9]

When Dr. Rhee Fincher interviewed me for the position of Director of the Education Innovation Institute at the Medical College of Georgia back in December 2019, she asked me what I thought the next "big thing" would be in medical education. I was flattered she thought I might know. I did not (and still don't) and apologetically told her so. However, not wanting to disappoint her too much, I said that medical education will not be able to make substantial improvements unless and until we deal with the issue of an overcrowded curriculum. She nodded in silent agreement. Jamshidi and Cook agree and facetiously tell us that medical education is an organism without an excretory system.[10]

The overcrowded curriculum negatively affects learning and simultaneously magnifies the deleterious health effects. Multiple studies attest to the poor health and high burnout among our students. We have often responded with wellness programs loved by many faculty but shunned by students. The Mental Health Commission of Canada's report "Psychological health and safety in the workplace—Prevention, promotion, and guidance to staged implementation" indicated that excessive levels of quantitative demands contribute to a deficit of psychological safety and that programs to enhance psychological safety will be effective only after we address the deficit.[11] Wellness programs will not move the needle for our students. Recent research by my team and reported at the Southern Group on Educational Affairs conference in Nashville, TN, in March 2023 linked burnout and stress to quantitative demands. In fact, quantitative demands was the workplace factor with the highest correlations to burnout and stress. (Further research involving multiple medical schools will be reported shortly.[12]) With mounting evidence, when will medical education leaders act to improve the learning experience

for our students and address the alarming situation of medical student mental health.[13]

I believe that we leaders in medical and health professions education need to do more to highlight this issue, find ways to address the growing problem, and rally support for a massive change effort. If we don't manage the out-of-control content stuffing our curricula, we will be unable to do anything new of much value.

Following are summaries of their full articles published in this issue of the CMEJ that nudge us to do better. We hope you find them helpful in your medical education scholarship.

Original Research

Samantha Halman and team wrote A comparative analysis of graduate preparedness for a career in General Internal Medicine before and after national subspecialty recognition to inform curricular changes: have we met the mark?[14] They found that that the standardization of the General Internal Medicine training closed many previously identified preparedness gaps. However, they noted that new skills, such as point-of-care ultrasound, will require deliberate implementation within the curricula.

Exploring the culture of faculty development: insights from Canadian leaders of faculty development by Lewis and Steinert[15] studied the culture of faculty development (FD) in Canadian medical schools through the lens of each school's FD program director. Although the culture of FD may vary from school-to-school, Lewis and Steinert identified shared values—such as the challenges of balancing competing priorities—that were consistent in the culture of FD across Canada.

"Head of the Class": equity discourses related to department head appointments at one Canadian medical school from Cameron et al.[16] explored equity, diversity, and inclusion (EDI) policies concerning departmental leadership. They acknowledged that while change is slowly happening, it is important to seeking out the perspectives of multiple equity-deserving groups and listening to equity-deserving voices will ensure progress with EDI.

Reviews, Theoretical Papers, and Meta-Analyses

A systematic review of the effectiveness of journal clubs in undergraduate medicine by Bello and Grant[17] evaluated which journal club educational interventions work in undergraduate medical education settings. Their review suggested that the journal clubs are a more effective tool when paired with lectures or mentoring. They also demonstrated that they are better received by students when they are less than two hours long.

In their rapid review, Fostering the development of non-technical competencies in medical learners through patient engagement: a rapid review Massé et al.[18] sought to synthetize studies that focused on patient engagement in medical education. Their results suggested that patient engagement can help foster the growth and improvement of non-technical competencies such as improved attitudes towards patients by seeing the humanness of patient not just the disease.

Sharmin and team's review article, Effect of teaching tools in spatial understanding in health science education: a systematic review,[19] identified literature on teaching tools that have shown to improve spatial understanding in medical education. They aimed to recognize which techniques improve students' ability to make 3D mental models from 2D images, like X-rays, MRI, and CT scans. Their review showed that straightforward techniques had more of an impact on improving spatial understanding.

Brief Reports

Harley and team shared research priorities for Canadian simulation centres in their report, Identifying Royal College-accredited simulation centre research priorities across Canada.[20] They identified common ground in strategic research directions, such as supporting university and hospital faculty-led research. They hope their results will help with creating successful research collaboration.

If we assess, will they learn? Students' perspectives on the complexities of assessment-for-learning by Dory et al.[21] implemented a mandatory course specifically for the purpose of assessment-for-learning system to evaluate and assess its impact on medical students. They noted several challenges to assessment-for-learning as most participants did not fully engage the assessment-for-learning process. They noted that assessment designers should expect significant collaborative work so that assessment-for-learning to reach its full potential.

Joanie Poirier and co-authors wrote Assessing commitment to reflection: perceptions of medical students.[22] In their article, Poirier and team conducted interviews with first and second-year medical students to explore students' perception of this assessment by their mentor. They found that while the assessment motivated students to reflect, they were unsure if their reflections were genuine due to the assessment pressure.

Black Ice

Practical and customizable study strategies for clerkship year success by Johnston, Zhao, and Hu,[23] addressed the challenges of transitioning from pre-clerkship to clinical phase of medical school by providing ways for developing effective study habits for clinical examinations. The authors maintained that getting a grip on efficient and effective studying through time management and self-reflection would empower students and improve performance.

Peters and team gave Five practical strategies to get a grip on large group cooperative virtual learning in medical education.[24] Their five ways, including using small group breakout sessions during large group learning, promote engagement and facilitate best practices for virtual learning in medical education.

You Should Try This!

Preti and Sanatani explored a direct-observation simulation in True transition to practice: a role-reversal simulation[25] to assess competency in residency. By swapping resident and consultant roles, their approach allowed for real-world experience for the resident and direct observation by the consultant.

Do and co-authors wrote Design thinking sprints as a facilitation process to enact change in the residency match process and beyond[26] in response to the urgent need for the Association of Faculties of Medicine of Canada (AFMC) to transition the residency interview tour to virtual and cancel visiting electives for the class of 2021 as a result of the COVID-19 pandemic. In 2021, they developed the virtual interviews and program promotion (VIPP) working group which used design thinking sprints to ensure a successful match for programs and applicants.

Singh and co-authors' wrote Introducing change management education program for family medicine residents: a demonstration project.[27] Their program focused on educating residents on change management to plan and evaluate new initiatives in healthcare settings.

Cindy Schmidt and co-authors wrote Teaching peer reviewing to medical students through authentic peer reviews: how to build the next generation of scholars.[28] Schmidt described a novel course in which medical students completed peer reviews for the *Canadian Medical Education Journal.* The course addressed a well-known gap in teaching peer review and gave medical students the opportunity to learn how to write quality peer reviews.

Canadiana

From mentee to mentor: reflections on a pre-medical student mentorship program for underrepresented groups in medicine by Zhou and Olagunju[29] commented on the need to increase enrollment of underrepresented groups in medicine to improve diversity among Canadian medical students. They used reflections of a past mentee and current mentor in a mentorship program to identify ways to reduce barriers to admission and increase diversity among medical students.

Commentary and Opinions

Cost and effectiveness in fostering resident physician scholarly activity by Tumin and team[30] argued for a cost analysis of interventions aimed to increase resident physician scholarly activity. They maintained that identifying the most cost-effective approaches that serve a greater number of residents would help improve equity in academic medicine.

Caroline Esmonde-White's article, Let food be thy knowledge gap: the lack of nutrition education in medical curricula,[31] commented on the lack nutritional education in medical school curricula in Canada. Esmonde-White advocated for increasing formal education around dietary interventions and nutrition.

COVID-19 exposes the need for public health preventive medicine physicians: a proposal for a Gazan public health preventive medicine residency program by Sabra and co-authors[32] commented on the lack of public health education in Gaza. They expressed the importance of this specialty and proposed that Palestine Medical Council support the Gaza Medical Reserves in creating and promoting a public health preventive medicine residency program.

Academic designations for the modern age by Shankar[33] discussed the question, "Why are most medical school teachers still designated as lecturers and senior lecturers if lectures are no longer a common and important teaching method?" Shankar's opinion piece argued that teacher-directed learning may not be the ideal teaching method due to increasing student responsibility for their own learning.

Beyond resiliency: shifting the narrative of medical student wellness by Yuan and team[34] commented on the limits associated with use of resiliency in medical school wellness programs. They argued that resiliency should only be one component to the programs. Instead, they proposed a collective responsibility shared between medical training

programs and medical trainees with a priority on organization-directed interventions.

Letter to the Editor

In the letter, Knowledge is power: bolstering student efforts to improve learner well-being,[35] LaPlante added to the works Yuan[34] (this issue) and the previously published commentary by Neufeld[36] on the topic of student well-being. LaPlante encouraged students themselves to be informed to effectively address the situation of medical student wellness.

Works-in-Progress

In Bodell and team's work, Recruiting rural youth to healthcare careers: a scoping review protocol,[37] they proposed a scoping review to map recruitment initiatives for getting rural youth into healthcare careers. Their review intends to identify the gaps in recruitment to inform future research.

Development of a bilingual interdisciplinary scale assessing self-efficacy for participating in Medical Assistance in Dying by Diane Tapp et al.[38] described their aim to create a French-English interdisciplinary scale involving the process for Medical Assistance in Dying. The scale intends to help decision-makers and researchers identify knowledge gaps in the process.

Book Review

In Book review: Understanding and Promoting Transformative Learning (2nd edition),[39] Husain presented Craton's book[40] as a must-read guide to Transformative Learning Theory (TLT).

Conferences

The International Conference on Residency Education (ICRE) offered abstracts from their 2023 conference in From caring for patients to protecting our planet: advocacy in residency education.[41] The conference for ICRE 2023 is in Halifax, Nova Scotia, from October 19-21, 2023.

Image

Finally, our cover image is called by "Discharged." This image was previously published along with a commentary called, Managing patients with substance use disorders: reflections of a medical trainee,[42] in our January 2021 issue.

Enjoy!

Marcel D'Eon
CMEJ Editor-in-Chief

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