

Virtual Culinary Medicine Labs: A NOSM and UBC Collaboration

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Introduction












Nutrition and lifestyle interventions are the **cornerstone** of chronic disease prevention¹⁻⁴ yet diet remains underappreciated as an intervention to empower patients⁵. Physicians are not comfortable, confident or adequately prepared to provide nutrition counselling due to minimal education in basic nutrition and nutrition interventions in medical school⁵⁻⁸. Canadian medical students are dissatisfied with the nutrition training they receive⁹⁻¹¹. Efforts to improve this nutrition education have been undertaken by the Registered Dietitian (RD) faculty at the Northern Ontario School of Medicine (NOSM) and the University of British Columbia (UBC) through Culinary Medicine Labs (CMLs), which combine food literacy with clinical nutrition recommendations for medical learners¹².




Innovation

To mitigate COVID-19 challenges, a NOSM and UBC partnership was established to assess feasibility, acceptability, and impact of virtual versus previously successful in-person programming at both schools. Two 2-hour sessions in spring 2020 included 47 NOSM and UBC medical and dietetic learners (57 registered; attendance rate 82%). Five 90-minute sessions were delivered between September 2020 and January 2021 plus four additional sessions (February-May 2021) with RD facilitation support from the Wellness Kitchen at Alberta Health Services. Additional sessions were also promoted to medical and dietetic learners at University of Alberta, Calgary and Toronto. Topics were aligned with the NOSM UME Years 1 and 2 curriculum; recipes electronically hosted by NOSM.

Virtual CML Topics and Recipes

 April 2020/ April 2021 Elder Care	 May 2020 Renal	 Sept 2020 Self-Care
 Oct 2020 GI	 Nov 2020/ May 2021 Endocrine	 Dec 2020 CVD
 Jan 2021 Repro	 Feb 2021 Neuro	 March 2021 MSK

Facilitators and Barriers

	Academic Requirements, Schedules & Workloads <ul style="list-style-type: none"> • Time zone differences and schedules • Virtual learning overload • Voluntary vs mandatory curriculum
	Facilities, equipment and supplies <ul style="list-style-type: none"> • Physical vs virtual kitchen spaces • Virtual learning platforms • Food supplies and costs • Personal kitchen equipment & safety
	Professional/Student Connections <ul style="list-style-type: none"> • RD faculty expertise • Interprofessional student experiences • Multi-school/provincial collaborations

UME Student Feedback

Teaching Format

“cook-along idea is great”
“diversity of content and speakers”
“tying knowledge back to a realistic case presentation. Also excellent muffins!”

Nutrition Competence

“24-hour diet history with the patient”
“psychosocial factors in nutrition”
“multidisciplinary approach”
“recognize opportunity to “prescribe nutrition”

“very evidence-based and super useful for my future practice!”

Personal Wellbeing

“more cooking skill workshops (ie. basic cooking skills), and how to maintain a healthy diet as physicians”

<https://www.nosm.ca/education/nodip/>
(NODIP and NOSM Medical Students tab)

Discussion

To date, 7 of 9 sessions have been delivered since April 2020. From September 2020 to March 2021, a total of 200 students registered yet actual attendance was 72%; a steady decline despite reduced length of sessions; additional schools included; personal invitations to past registrants; and \$10 grocery cards/CML for NOSM learners through a previous grant. Reported challenges include scheduling conflicts; virtual learning overload of mandatory curriculum; and in-person session preferences. Regardless, participants reported the teaching strategy improved nutrition competence and confidence as future physicians while recognizing the importance of nutrition and personal wellbeing. This interprofessional learning model with medical students, dietetic interns and RDs enhanced a greater understanding the roles of the health care team including the RD^{8,10,13}. The CML model is not unique; widely implemented in over 50 US medical schools as *Simulation-based medical education with deliberate practice* (SBME-DP), and has been shown to be superior for skill acquisition in mastery learning^{14,15}.

Conclusions

The CML model increases nutrition competence including familiarity with evidence-based nutrition interventions, improves personal health behaviours and perspectives, and as a result medical graduates may be better able to counsel their patients as they progress towards the Entrustable Professional Activities (specifically 12) for residency¹⁶. A multi-school virtual education strategy supported ongoing delivery of culinary nutrition training across Canadian medical schools and enhanced national RD collaborations in medical nutrition education. Advances in nutrition curriculum in UME including mandatory culinary medicine training will prepare nutrition competent physicians; support accreditation requirements including interprofessional learning experiences and personal wellbeing; and ultimately address chronic disease prevention and management.

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