

Canadian Medical Education Journal
Revue canadienne de l'éducation médicale



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Volume 12, Number 1, 2021

URI: <https://id.erudit.org/iderudit/1076173ar>

DOI: <https://doi.org/10.36834/cmej.70601>

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Publisher(s)

Canadian Medical Education Journal

ISSN

1923-1202 (digital)

[Explore this journal](#)

Cite this document

Gallagher, M., Wong, J., Friedt, J., Cattell, V. & McKague, M. (2021). Personal protective equipment coaching in the pediatric and adult emergency departments: a pilot project for health sciences students during COVID-19. *Canadian Medical Education Journal / Revue canadienne de l'éducation médicale*, 12(1), e184–e185. <https://doi.org/10.36834/cmej.70601>

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Personal protective equipment coaching in the pediatric and adult emergency departments: a pilot project for health sciences students during COVID-19

La formation sur l'équipement de protection personnel dans les services d'urgence pédiatriques et pour adultes : un projet pilote pour les étudiants en sciences de la santé pendant la COVID-19

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Published ahead of issue: September 10, 2020; published: February 26, 2021. CMEJ 2021, 12(1). Available at <http://www.cmej.ca>

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Appropriate personal protective equipment (PPE) procedures are essential for reducing COVID-19 transmission. Current research cites changing protocols, equipment fatigue, lack of management support, and lack of inclusive training as barriers to proper use.¹ Although often underutilized due to lack of resources, direct observation and timely feedback of infection prevention and control (IPC) measures is considered gold standard.^{2,3}

Health sciences students' education in Saskatchewan, Canada, as in other jurisdictions, was significantly impacted during this pandemic, as students were removed from clinical activities. These students have specialized training with translatable skills and wanted to help their communities but lacked an outlet to do so.

We addressed these issues with a novel and reciprocally beneficial model of utilizing health science students as PPE coaches embedded within the adult and pediatric emergency departments (EDs), during this four-week pilot project. We proposed that participation in this program might augment their training and knowledge of IPC procedures in a unique way. Designed as a medical education quality improvement pilot, research questions were:

1. How did students experience serving as PPE coaches?

2. What factors contributed to an effective coaching experience?

Methods

The team recruited students from Medicine and Rehabilitation Sciences and reviewed PPE resources.⁴⁻⁶ Participants attended a 3-hour training session that included IPC content, practice donning/doffing, and peer coaching. During shifts, coaches wore yellow PPE t-shirts. They provided PPE feedback to ED staff, while social distancing and without direct patient contact. Coaches collected data on proper PPE use and barriers using a simplified checklist⁷ and cue cards.

The team, representing medical education, emergency medicine, quality improvement (QI), and IPC, developed a survey with the goal of early feedback to inform changes based on students' experiences. Due to short timelines, the survey was not piloted but was reviewed for face validity. Questions included perceptions on training adequacy, team belonging, and safety based on the 5-point Likert scale. Percentage of time spent on coaching was estimated using quartiles. Open-response questions included safety concerns, reasons for volunteering, strengths, and areas needing improvement. Coaches were emailed duplicate online surveys at weeks two and five. Changes to the pilot

were made in response to early feedback and the pilot was re-evaluated upon completion.

University of Saskatchewan Research Ethics Board deemed this project exempt from ethics review, as a program evaluation.⁸

Preliminary findings

Twelve students were recruited, and eleven students continued with the pilot. Early and final survey response was 64% (7/11) and 55% (6/11), respectively.

Students' narrative reasons for volunteering included providing pandemic support and learning. *"I jumped at the chance... This seemed like a good way to gain new skills, help my community, and be involved."*

Students described feeling comfortable and psychologically safe in their coaching (early = 4.43, final = 4.75). They had no safety concerns and thought appropriate steps were taken to ensure safety (early = 4.7, final = 5.0). Perceived strengths included training, staff reception, identifying t-shirts, and notification of ED staff before the pilot. Areas needing improvement included additional training on coaching techniques, clarification of best PPE practices, and an early modification to shift scheduling to provide coverage during peak hours.

Authors are willing to collaborate and support others in designing a site-specific program.

Summary

This pilot project addressed converging needs of students, medical educators, health care workers and IPC and QI champions.

It effectively involved students in a novel quality improvement initiative during the early days of the COVID-19 pandemic and provides an example of a creative solution to engage students to safely continue learning while being of service.

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