



## Engaging medical trainees in resource stewardship through resident-led teaching sessions: a choosing wisely educational initiative

### Faire participer les étudiants en médecine dans la gestion des ressources par le biais d'ateliers d'enseignement animés par les résidents : une initiative éducative « choisir avec soin »

Chandandeep Bal, Megan E Tesch, Geoffrey Blair, Olivia Ostrow and Laila Premji

Volume 12, Number 1, 2021

URI: <https://id.erudit.org/iderudit/1076160ar>

DOI: <https://doi.org/10.36834/cmej.70563>

[See table of contents](#)

Publisher(s)

Canadian Medical Education Journal

ISSN

1923-1202 (digital)

[Explore this journal](#)

Cite this document

Bal, C., Tesch, M., Blair, G., Ostrow, O. & Premji, L. (2021). Engaging medical trainees in resource stewardship through resident-led teaching sessions: a choosing wisely educational initiative. *Canadian Medical Education Journal / Revue canadienne de l'éducation médicale*, 12(1), e98–e100.  
<https://doi.org/10.36834/cmej.70563>

Article abstract

Implication Statement: Overuse of healthcare resources is prevalent, including among medical trainees. As front-line clinicians and near-peers, residents are well-positioned to teach resource stewardship to medical students and address barriers students may face while trying to “choose wisely.” We describe the implementation of two resident-led, case-based teaching sessions for medical students that focus on resource stewardship. Similar teaching models can be adapted by residents at their own institutions to enhance resource stewardship proficiency amongst trainees.

© Chandandeep Bal, Megan E Tesch, Geoffrey Blair, Olivia Ostrow, Laila Premji, 2020



This document is protected by copyright law. Use of the services of Érudit (including reproduction) is subject to its terms and conditions, which can be viewed online.

<https://apropos.erudit.org/en/users/policy-on-use/>

Érudit

This article is disseminated and preserved by Érudit.

Érudit is a non-profit inter-university consortium of the Université de Montréal, Université Laval, and the Université du Québec à Montréal. Its mission is to promote and disseminate research.

<https://www.erudit.org/en/>

## Engaging medical trainees in resource stewardship through resident-led teaching sessions: a choosing wisely educational initiative

Faire participer les étudiants en médecine dans la gestion des ressources par le biais d'ateliers d'enseignement animés par les résidents : une initiative éducative « choisir avec soin »

Chandandeep Bal,<sup>1</sup> Megan E Tesch,<sup>2</sup> Geoffrey Blair,<sup>3</sup> Olivia Ostrow,<sup>1,4</sup> Laila Premji<sup>1,5</sup>

<sup>1</sup>Department of Paediatrics, Faculty of Medicine, University of Toronto, Ontario, Canada; <sup>2</sup>Department of Medical Oncology, British Columbia Cancer, British Columbia, Canada; <sup>3</sup>Department of Surgery, Faculty of Medicine, University of British Columbia, British Columbia, Canada; <sup>4</sup>Division of Emergency Medicine, Department of Paediatrics, The Hospital for Sick Children, Ontario, Canada; <sup>5</sup>Division of Paediatric Medicine, Department of Paediatrics, The Hospital for Sick Children, Ontario, Canada

Correspondence to: Dr. Laila Premji, Division of Paediatrics, The Hospital for Sick Children, 555 University Avenue, Toronto, ON, M5G 1X8, Canada; email: [laila.premji@sickkids.ca](mailto:laila.premji@sickkids.ca)

Published ahead of issue: December 15, 2020; published: February 26, 2021. CMEJ 2021, 12(1). Available at <http://www.cmej.ca>

© 2021 Bal, Tesch, Blair, Ostrow, Premji; licensee Synergies Partners

<https://doi.org/10.36834/cmej.70563>. This is an Open Journal Systems article distributed under the terms of the Creative Commons Attribution License. (<https://creativecommons.org/licenses/by-nc-nd/4.0>) which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is cited.

### Implication Statement

Overuse of healthcare resources is prevalent, including among medical trainees. As front-line clinicians and near-peers, residents are well-positioned to teach resource stewardship to medical students and address barriers students may face while trying to “choose wisely.” We describe the implementation of two resident-led, case-based teaching sessions for medical students that focus on resource stewardship. Similar teaching models can be adapted by residents at their own institutions to enhance resource stewardship proficiency amongst trainees.

### Énoncé des implications de la recherche

L'utilisation excessive des ressources en soins de santé est fréquente, y compris parmi les étudiants en médecine. En tant que cliniciens de première ligne et quasi-pairs des étudiants en médecine, les résidents sont bien placés pour leur enseigner la gestion des ressources et pour les aider à surmonter les obstacles à « choisir avec soin ». Nous décrivons la mise en œuvre de deux sessions d'enseignement animées par des résidents fondées sur l'étude de cas et axées sur la gestion des ressources. Des modèles d'enseignement similaires peuvent être adaptés par les résidents dans leurs institutions respectives afin d'améliorer les compétences des étudiants en matière de gestion des ressources.

### Introduction

Medical trainees order more tests than practicing physicians.<sup>1,2</sup> This variation may stem from insecurity, inadequate understanding, or misguided expectations.<sup>3</sup> Residents are active on the frontlines of medical care and, as recent graduates, they are in a unique position as near-peer educators to medical students to address trainee-specific barriers to resource stewardship, while simultaneously building their own skills in this area.

Medical students benefit significantly from having residents as teachers, and report up to one third of their medical education is provided by them.<sup>4</sup> Residents may also benefit as teachers through improved knowledge acquisition and job enthusiasm,<sup>5</sup> and thus strengthen their own resource stewardship engagement. Educating medical learners on minimizing unnecessary testing has been shown to have a lasting effect on clinical practice patterns.<sup>6</sup> Therefore, we set out to teach resource stewardship to

medical students through two near-peer, resident-led case-based teaching sessions. Upon consultation with our REB, it was determined that this project is not considered human subjects research and does not require REB approval.

## Intervention

Residents from the Universities of Toronto (U of T) and British Columbia (UBC) led 60-minute teaching sessions in collaboration with members of the Students and Trainees Advocating for Resource Stewardship (STARS) program and the Choosing Wisely National Campaign. Resident leads from each site designed their own formats using input from local collaborators. Cases of childhood bronchiolitis (U of T) and adult kidney disease (UBC) were reviewed with a resource stewardship lens. Clinical cases focused on topics aligned with the medical student curricula and evidence-based guidelines were used to guide the discussions. As per residents' availability and medical students' preferences, the U of T session was held in the evening and consisted of two resident-led small-group sessions of first- and second-year medical students. The UBC session was led by two residents during the lunch hour for second year medical students. Faculty supported content development and delivery. Funding was provided for participant meals and STARS representatives advertised the sessions. Students completed a post-session survey (Table 1).

## Results

Seventy-seven student participated in the sessions, and 42/77 (55%) post-session surveys were received, 35/70 from UBC and 7/7 from U of T (See Table 1). Prior to the sessions, 88% (37/42) of students were familiar with the Choosing Wisely campaign. 95% (40/42) of participants felt that the content was valuable to their training and 93% (39/42) indicated that they learned new strategies to decrease ordering of unnecessary tests and treatments. The opportunity to interact with residents was considered valuable among 20% (7/35) of UBC students compared to 86% (6/7) of U of T students. When answering open-ended questions about their learnings, common themes included "asking why a test is being ordered" and "bringing up concerns with supervisors."

Table 1. Survey results of multiple-choice questions.

Question	Answers
1. Prior to this session, were you aware of the Choosing Wisely Campaign?	Yes: 37/42 (88%) No: 5/42 (12%)
2. The content was relevant to my level of training.	Strongly Agree: 23/42 (55%) Agree: 18/42 (43%) Neither agree or disagree: 1/42 (2%) Disagree: 0 Strongly Disagree: 0
3. The content will be valuable to me as I progress through my training.	Strongly Agree: 24/42 (57%) Agree: 16/42 (38%) Neither agree or disagree: 2/42 (5%) Disagree: 0 Strongly Disagree: 0
4. In follow-up to question 3, what was (were) the most valuable part(s) of the session for your medical training? Please select all that apply.	Case based examples: 24/42 (57%) Clinical relevance of the topic: 19/42 (45%) Application of Choosing Wisely principles: 9/42 (21%) Opportunities to interact with peers: 1/42 (2%) Opportunities to interact with residents: 13/42 (31%)
5. This session stimulated my interest in the Choosing Wisely Canada campaign.	Strongly Agree: 11/42 (26%) Agree: 21/42 (50%) Neither agree or disagree: 10/42 (24%) Disagree: 0 Strongly Disagree: 0
6. After attending this session, I have learned new strategies that will help me reduce unnecessary tests and treatments.	Strongly Agree: 19/42 (45%) Agree: 20/42 (48%) Neither agree or disagree: 3/42 (7%) Disagree: 0 Strongly Disagree: 0
7. How likely are you to attend a similar session in future?	Very Likely: 21/42 (50%) Likely: 17/42 (40%) Neutral: 4/42 (10%) Unlikely: 0 Very Unlikely: 0

## Next steps

This initiative was well-received by medical students, as indicated in the surveys. Previous familiarity with the Choosing Wisely campaign may reflect the campaign's efficient dissemination. The application of Choosing Wisely principles was indicated to be most valuable for their medical training by only a minority of students (Table 1). Collaboration with stakeholders from the national campaign might be helpful in strengthening the impact of the Choosing Wisely key messages for future sessions. It seems both the small and large-group formats were effective in conveying resource stewardship principles and providing implementation strategies to students. However, the lunch hour UBC session attracted more participants. Perhaps virtual sessions would garner even wider participation.

Our data encourage pursuit of larger-scale opportunities for near-peer, resident-led education on the importance of, and barriers to, resource stewardship. Future directions include evaluating the resident teacher experience, and developing a larger program for integration of near-peer teaching of resource stewardship into current undergraduate medical curricula.

**Authorship:** Chandandeep Bal and Megan E Tesch contributed equally to the work.

**Funding:** None

**Conflicts of Interest:** None

**Acknowledgements:** We would like to thank STARS students Ethan Zhang, Michael Mehta and Rachel Greben for their help in organizing the sessions, as well as Drs. Wayne Hung, Michael Prodanuk, Celine Conforti and Lindsay Reddeman for assistance in delivering the sessions. We would also like to thank the Department of Paediatric Medicine at The Hospital for Sick Children and the Department of Surgery at the University of British Columbia for providing funding for food at the sessions.

## References

1. Hall J, Mirza R, Quinlan J, et al. Engaging residents to choose wisely: Resident Doctors of Canada resource stewardship recommendations. *Can Med Educ J*. 2019;10(1):e39-e55. <https://doi.org/10.36834/cmej.43421>
2. Valencia V, Arora VM, Ranji SR, Meza C, Moriates C. A comparison of laboratory testing in teaching vs nonteaching hospitals for 2 common medical conditions. *JAMA Intern Med*. 2018;178(1):39-47. <https://doi.org/10.1001/jamainternmed.2017.6032>
3. Vrijzen BEL, Naaktgeboren CA, Vos LM, van Solinge WW, Kaasjager HAH, Ten Berg MJ. Inappropriate laboratory testing in internal medicine inpatients: Prevalence, causes and interventions. *Ann Med Surg (Lond)*. 2020;51:48-53. <https://doi.org/10.1016/j.amsu.2020.02.002>
4. Bing-You RG, Sproul MS. Medical students' perceptions of themselves and residents as teachers. *Med Teach*. 1992;14(2-3):133-8. <https://doi.org/10.3109/01421599209079479>
5. Morrison EH, Shapiro JF, Harthill M. Resident doctors' understanding of their roles as clinical teachers. *Med Educ*. 2005;39(2):137-44. <https://doi.org/10.1111/j.1365-2929.2004.02063.x>
6. Sirovich BE, Lipner RS, Johnston M, Holmboe ES. The association between residency training and internists' ability to practice conservatively. *JAMA Intern Med*. 2014;174(10):1640-8. <https://doi.org/10.1001/jamainternmed.2014.3337>