

# Choosing Wisely: Resource Stewardship Education in Canadian Medical Schools

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### ABSTRACT

Resource stewardship has important implications in terms of healthcare costs as well as patient safety. Currently, there is limited formal teaching in the undergraduate curriculum in Canadian medical schools that addresses this topic. Recently, Choosing Wisely Canada has launched a student campaign to integrate Choosing Wisely concepts into the curriculum, hoping to challenge medical students into thinking about value-based healthcare and patient safety. This article intends to highlight need for resource stewardship education, including associated test costs and its impact on the healthcare system. The strategies currently being implemented at the University of Ottawa will also be discussed.

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### RÉSUMÉ

L'intendance des ressources a d'importantes répercussions sur les coûts liés aux soins de santé, ainsi que sur la sécurité des patients. À l'heure actuelle, le curriculum de premier cycle des écoles de médecine canadiennes comporte peu d'enseignement formel à ce sujet. Récemment, Choisir avec soin (version francophone de « Choosing Wisely Canada ») a lancé une campagne étudiante pour intégrer les concepts de Choisir avec soin au curriculum, dans l'espoir d'encourager les étudiants en médecine à réfléchir aux soins de santé et à la sécurité des patients fondés sur la valeur. Cet article cherche à souligner l'importance de la formation sur l'intendance des ressources, incluant les coûts associés aux examens et leur impact sur le système de soins de santé. Les stratégies mises en œuvre à l'Université d'Ottawa à l'heure actuelle seront également présentées.

### BACKGROUND

Resource stewardship plays an important role in delivering high-quality, cost-effective medical care. To deliver optimal healthcare within the constraints of a budget-limiting system requires the elimination of unnecessary tests, which are detrimental to the healthcare system and may cause significant harm to the patient. For example, the Cochrane group reported that a slightly elevated blood pressure does not increase the risk of strokes or cardiac infarcts, but overmedication could lead to side effects in a subset of patients [1]. Current research shows that up to 30% of services offered in the United States are indeed unnecessary [2]. Another recent study recorded the responses of graduating residents with regards to their knowledge of test costs; only 4.3% strongly agreed that they were aware of the costs and 70% stated that they would reconsider ordering if they had more knowledge about the costs [3]. These results indicate that residents are self-aware of the limitations in their knowledge about test costs and, if better informed, would reconsider ordering tests that do not add value to patient care. Formal teaching about cost effective care is therefore needed at both the undergraduate and graduate level.

### RESOURCE STEWARDSHIP INITIATIVES

Choosing Wisely, a physician-led international organization,

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has been introduced with the aim to control medical overuse around the world. Many national societies have introduced the “Five Things Clinicians and Patients Should Question” to reduce the number of unnecessary tests ordered, including those not supported by evidence or potentially harmful to patients [4]. However, once practicing physicians develop their approach in the early stages of their education, it becomes very difficult to change these practices later in their careers. To implement a long-standing solution to the problem, the issue must be targeted at the most fundamental level of training – medical school.

Founded by Dr. Andrew Burke at McMaster University, the SCARCE Program (Stewardship Curriculum and Audit for Residents to Cultivate Efficiency) was the first initiative on resource stewardship in Canada. This program provided feedback to residents with regards to their test ordering practices and concluded that 60% of tests ordered did not have clinical utility [5]. The need to address resource stewardship in medical education is now reflected in the CanMEDS 2015 Physician Competency Framework [6].

Furthermore, Choosing Wisely Canada has recently released a list of “Six Things Medical Students and Trainees Should Question” [7], which focuses on behaviours and approaches learned in medical school. For example, one point states, “Don’t hesitate to ask for clarification on tests, treatments, or procedures that

you believe are unnecessary” [7]. This acknowledges that, due to the hierarchy that exists within some learning environments, it may be difficult for students to voice their concerns. With further development in this area, students will be encouraged to engage in discussion with their supervisors with regards to test ordering practises. Additionally, Choosing Wisely Canada has introduced the STARS (Students and Trainees Advocating for Resource Stewardship) program across 17 Canadian medical schools in order to integrate these principles into undergraduate teaching across the country [8]. The goal of this program is for students to become informed about the impact unnecessary testing can have on the healthcare system, as well as patients.

The STARS student ambassadors from each of the 17 Canadian Medical Schools met earlier this year to discuss ways in which Choosing Wisely principles could be implemented in the curriculum. The authors of this paper, at the University of Ottawa, have been working on introducing Choosing Wisely concepts into Case-Based Learning (CBL) settings, giving students the opportunity to discuss the issues of resource allocation among peers with the expertise of a physician doctor. Currently, a case is presented to students, and they are asked to develop an approach that involves extracting pertinent positives and negatives from a given history, order investigations, develop a differential diagnosis, and create a management plan based on the most likely final diagnosis. Our project involved making changes such that students would be prompted to discuss what kinds of tests they would not order, despite it being an option. This discussion would be in the context of resource stewardship and value-based healthcare, where the ordering of certain tests does not necessarily add to the management of the patient based on evidence. For example, it is not necessary to order a CT head scan for all patients who have suffered a minor head injury (GCS score of 13-15), as most of these patients do not suffer from serious brain injuries that require hospitalization or surgery and instead will be exposed unnecessary radiation [2]. The students are currently working with Dr. Peter Kuling, who is an expert in the field and teaches seminars on the topic for the Ontario College of Family Physicians.

Finally, Choosing Wisely Canada has initiatives to address resource stewardship for patients, including the distribution of pamphlets intended to educate patients on the necessity of certain tests and/or treatments. This encourages patients to engage in discussion with their physicians about the care they are being offered. In a recent study, it was reported that patient knowledge improved in 48% of participants about electrocardiogram testing, in 74% about the use of antipsychotics, in 66% about the use of antibiotics for sinusitis, in 60% about imaging for low back pain, and in 40% about sedative-hypnotic use in the elderly, as a result of reading pamphlets provided by three Ontario outpatient practices [9]. These statistics indicate the important role that

information can play in empowering patients to be active players in their own care.

### CONCLUSION

Resource Stewardship is a critical concept in today's healthcare, both for the patients and the system. Only recently has Canada begun to implement initiatives that target physicians, medical students, and patients. This will encourage these three key stakeholders to engage in conversation with each other and think critically about the appropriate use of tests and treatments. It is the hope that as these initiatives develop, future clinicians will become accustomed to the Choosing Wisely principles and will naturally implement patient-centred and value-based healthcare into daily practice.

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