The Costs of Care

By Victoria YY Xu, BHSc, MD; and Dr. Shirley Chow, MD, FRCPC, MSc (QIPS)

In 2013, 350 HLA-B27 tests were ordered in Alberta.[1] In Ontario, approximately 21,000 were done.[2] The population of Ontario is three times that of Alberta; with relatively similar incidence of inflammatory back disease, one cannot account for the difference in number of tests that are ordered. The difference is that, in Alberta, only rheumatologists can order the test.

More and more, there has been increasing acknowledgement of rising costs and inefficiencies within our healthcare system. In response to this, the CRA joined the **Choosing Wisely Canada©** campaign, with the goal to identify and promote care that is evidence-based, not duplicative, free of harm, and truly necessary.[3] The campaign helps physicians and patients engage in conversations about when a test, treatment, or procedure may be wasteful, harmful, and/or unnecessary.

Physicians have a key role to play in providing high-value care, meaning the highest quality care at the lowest costs. Most physicians are unfamiliar with costs of care and information about costs can be difficult to find. In educating the future generation of physicians, the CanMEDS 2015 learning milestones emphasizes the importance of engaging in the stewardship of healthcare resources. However, cost-conscious care is not featured within most medical curricula.

At the 2016 CRA Annual Scientific Meeting (ASM) in Lake Louise, all attendees were invited to estimate the costs of common lab and imaging tests ordered in rheumatology. These costs across Canada, along with participants' estimates, are shown in Table 1 and Table 2. Given the considerable discrepancies among estimated and actual costs, this topic is certainly an area of education for trainees and health care practitioners. Greater knowledge and transparency of costs are important for healthcare practitioners and trainees alike to gain competence in resource stewardship and provide high-value care to patients.

Beyond financial costs, misuse or overuse of healthcare resources incurs other harms, such as direct costs, opportunity costs, and downstream costs. Direct costs to patients include time, anxiety, out-of-pocket expenses, and clinical harm (*e.g.*, radiation, drug side effects, and infections). Direct costs to the healthcare system include time, resources, and overburdened emergency departments. Opportunity costs include time the patient

Table 1
Costs in dollars of common laboratory tests ordered in rheumatology*

	BC	AB	SK	MB	ON	QC	NB	NS	Participant estimates (n = 50), median (range)
CBC	21	17.94	5.65	5.65	8.67	2.1	2.6	2.77	15 (0.5-300)
ESR	60	3.82	3.25	3.25	1.55	1.5	0.6	3.97	15 (1-700)
CRP	26	9.94	8.75	8.75	3.1	2.1	1.36	3.56	20 (1.5-300)

*Costs listed are the costs billed to the provincial health organizations.

Table 2
Costs in dollars of common imaging tests ordered in rheumatology*

	AB	SK	MB	ON	NS	NFLD	Participant estimates (n = 50), median (range)
X-ray hands and feet	63.58	48.5	39.4	45.8	73.9	21.99	85 (10-500)
MRI spine	67.74	--	65.55	59.5	159.26	116.15	500 (44-500)
Bone density test	139.26	--	--	103.2	69.62	75.22	187.5 (45-200)
Whole-body bone scan	409.83	--	--	163.35	320.75	--	250 (49-2,500)

*Costs listed are the costs billed to the provincial health organizations.

must spend away from work and other responsibilities, time and resources healthcare staff must direct away from other patients in greater need, and system delays due to unnecessary or overused resources. On a larger scale, wasteful healthcare spending affects other sectors within the provincial budget, such as education. Finally, downstream costs for patients who receive unnecessary testing include follow-up appointments, further procedures, long-term side effects, nosocomial infections, and antimicrobial resistance.

Ultimately, the campaign hopes to encourage practitioners that in medicine, more care is not always better.

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References
1. Alberta figures based on unpublished provincial laboratory data, 2013.
2. Ontario figures based on Ontario Health Insurance Plan (OHIP) codes for HLA-B27 . Data provided by the Institute for Clinical Evaluative Sciences (ICES), March 9 2015.
3. CRA Choosing Wisely Recommendations. Available at: *www.rheum.ca/en/the_cra/choosing_wisely_canada1.*

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HAVE YOU BEEN CHOOSING WISELY?

Have you been choosing wisely? Have you developed an innovative initiative to implement any of the CRA Choosing Wisely recommendations?

Share them with us! Send them to *claire@rheum.ca* and you may be featured in a future *CRAJ* article.

UNIVERSITÉ DE SHERBROOKE

Choosing Wisely at the Université de Sherbrooke

In 2014, one year after the launch of the national **Choosing Wisely Canada** campaign, physicians—including rheumatologists—in Sherbrooke organized some local conferences about the issues, and the urgency to act, regarding the subject of appropriate use of scarce medical resources. After initial enthusiasm, the desire to pursue the **Choosing Wisely** philosophy progressively wore off, and no concrete changes in practice were observed. Inspired by successful experiences at other Canadian medical institutions, the Université de Sherbrooke aimed to adopt a better strategy in 2016 to actually change medical practice.

We recently received an internal grant to develop IT resources to continually promote wise choices. In our hospital, diagnostic tests are prescribed by a computerized physician order entry (CPOE) system. Our approach will be to add a function to the software to automatically generate a pop-up window presenting the **Choosing Wisely Canada** recommendation as clinical decision support for some targeted radiologic tests. For instance, in a CPOE prescription for a magnetic resonance imaging (MRI) scan for lower back pain, a pop-up will briefly remind users of its recognized scientific indications. A second function will generate a dashboard allowing physicians and residents to consult their own statistics about tests prescribed within the last year, comparing themselves anonymously to their peers. This exercise will allow physicians to easily obtain Type 3 credits from the CRCSP.

Even if we are now more optimistic than in 2014, we remain conscious that changing practice is probably one of the biggest institutional challenges. We hypothesize that a few inexpensive electronic resources promoting continuous educational feedback could be a pragmatic strategy to promote changes in practice patterns.

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