Not necessary.

Policy Ideas for Limiting Low-Value Care in Canada

SEPT 2020

Choosing Wisely Canada™

About Choosing Wisely Canada

Choosing Wisely Canada is the national voice for reducing unnecessary tests and treatments in health care. Choosing Wisely Canada inspires and engages health care professionals to take leadership in reducing unnecessary tests, treatments, and procedures, and enables them with simple tools and resources that make it easier to choose wisely.

About this document:

The views expressed herein are those of Choosing Wisely Canada only, and do not necessarily represent the views of Choosing Wisely Canada's funders, partners, or collaborators.

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Summary

Low-value care is an endemic problem across health systems in Canada. Canadian and international data suggest that as much as 30 percent of tests, treatments, and procedures are low value.[1-7] Yet these tests, treatments, and procedures persist, with consequences that—in normal pre-pandemic times—might not be readily apparent at the everyday level nor urgent enough to warrant drastic action.

But these are not normal times. COVID-19 has ushered in an era of resource scarcity and risk from close human contact. As such, it is has become imperative to address the problem of non-essential health care services that consume limited resources and potentially expose people to harm.

The shutdown of elective and non-urgent services at the onset of the pandemic allowed health systems to mitigate the risk of transmission while conserving resources.[8] These closures may have also had the collateral benefit of curbing many low-value tests and procedures. However, these effects should not be confused with the problem actually being fixed. As health systems return to capacity, there is an anticipated parallel rebound in low-value care because the underlying drivers of overuse have not changed.

Since 2014, Choosing Wisely Canada has worked to bridge the sizeable chasm between scientific knowledge and everyday action that drives the low-value care problem. This includes our work with professional societies to call out approximately 400 specific practices that should be stopped, with medical schools to integrate resource stewardship into education and training, with patient groups to increase awareness about the risks and benefits of tests and procedures, and with provider organizations to re-engineer their internal processes to be more evidence-based. [9]

However, there are many factors contributing to low-value care that are beyond what individual clinicians, patients, and provider organizations can affect.[10] Incentive structures and outdated policies that nudge the system toward doing more need to be examined. Further, investments need to be made in critical areas in order to reduce low-value care in a meaningful and sustainable way.

This document offers policy ideas for how governments and decision-makers can use available levers—incentives, system design and investments—to thoughtfully affect the state of low-value care across Canada during the pandemic and beyond. The suite of ideas presented in this document are informed by Choosing Wisely Canada's extensive work over the past six years, as well as a series of policy dialogues held with experts, senior government officials, and health system leaders in June 2020.[11-13]

The policy ideas include:

- **Idea 1: Streamline the perioperative pathway for scheduled surgeries and procedures to reduce wasteful practices and manage increasing demands for surgery.**

  This includes reducing unnecessary pre-operative testing, redesigning surgical queues, and investing in virtual care to improve efficiency and minimize physical contact across the perioperative journey.

- **Idea 2: Reduce low-value laboratory testing that lead to additional downstream testing and tie up resources that could otherwise be used to provide high-value services.**

  This includes retooling lab requisition processes at the provincial and organizational levels with built in appropriateness considerations, as well as investing in audit and feedback strategies.

- **Idea 3: Reduce low-value imaging that increases wait times and can expose patients to unnecessary harm.**

  This includes investing in interprofessional programs to assess and manage imaging-intensive conditions such as back pain and implementing appropriateness criteria for common imaging requisitions.

- **Idea 4: Reduce overly aggressive life-sustaining measures at the end of life.**

  This includes a concerted and adequately resourced approach to advance care planning, as well as improved palliative care capacity in the community.

- **Idea 5: Sustain the national supply of blood components and products.**

  This includes establishing national appropriateness benchmarks and directing hospitals to measure their performance against benchmarks, as well as exploring whether alternative funding models that could strengthen incentives for hospital blood conservation efforts.

COVID-19 has heightened the urgency to consider the policy ideas in this document. In the short-term, there are major backlogs and waits for surgical services and other procedures that require focused resources, along with the need to create buffer capacity in anticipation of potential COVID-19 waves. In the long-term, unprecedented levels of public debt and deficits will necessitate the need to seek efficiencies in the largest of public sectors—health care.

We recognize that in any particular province or territory, some of these ideas might already be implemented, while others have yet to be considered. Taken together, we believe that they form a robust set of approaches that will help ensure that limited health care resources are directed towards things that add the greatest value for clinicians, patients, and the public.

IDEA 1

Streamline the perioperative pathway for scheduled surgeries and procedures.

Scheduled surgeries and procedures (commonly referred to as elective surgeries) are non-urgent and booked in advance. Therefore, they are among the health services most sensitive to system shocks such as COVID-19 and were among the first to be shut down during the pandemic. Scheduled surgeries and procedures utilize hospital resources such as operating rooms, medications, and laboratory services, along with community supports such as physical rehabilitation. The shutdown of health services in Spring 2020, and gradual resumption of services in response to COVID-19, has led to pent up demand, adding to queues that have long troubled Canadian health care systems. Ensuring an efficient, fair, and ethical approach to managing demand for surgery in the face of finite resources is more important than ever. A low hanging fruit in perioperative care is the sizeable amount of low-value services that can and should be eliminated altogether.

Choosing Wisely Canada has worked with clinician societies representing different surgical specialties to boldly call out a range of scheduled surgeries and procedures that are common but not supported by scientific evidence. This includes unnecessary knee arthroscopies, hysterectomies, spine fusion surgeries, and endovascular repairs in patients without appropriate conditions. Some provinces have taken steps to limit such practices by introducing evidence-based appropriateness criteria into the fee schedule and we encourage all governments and provincial/territorial medical associations across Canada to follow suit.[14]

Beyond surgical procedures, research has shown that many patients are routinely sent for preoperative testing prior to low-risk surgeries. In Ontario, for example, over 30 percent of patients undergoing low-risk surgeries such as cataract removal, endoscopy, and hernia repair had an electrocardiogram, with variations ranging from 3 percent to 90 percent across hospitals.[15] These preoperative tests do not show benefit for patient outcomes, add significant delays to the perioperative journey for patients, and in a pandemic, contribute to unnecessary contact with the health care system. Process improvements in the way scheduled surgeries and procedures are managed, and possibly fee schedule changes, can help to limit unnecessary preoperative tests prior to low-risk surgeries.

Tests and treatments that do not benefit patients often become “baked in” to delivery systems, causing them to occur automatically rather than through the conscious decisions of frontline clinicians. Hospital Acts in many provinces and territories often include a requirement for tissues removed during the course of scheduled surgeries and procedures—especially hip and knee replacements—to be sent to a pathology lab for examination.[16] This practice was based on the theory that routine evaluation may reveal clinical information that would alter patient management. However, recent studies have refuted this theory, demonstrating that routine histopathologic examination is unnecessary and not cost-effective.[17-21] Accordingly, Choosing Wisely Canada recommends against such practices.[22]

However, clinicians and hospitals wishing to stop routinely sending excised tissues for pathological analysis risk contravening provincial/territorial legislation. These outdated and resource-draining requirements can be modernized through regulatory changes.

In response to the backlog in scheduled surgeries and procedures due to the COVID-19 pandemic, there is merit in exploring single-entry models to manage surgical queues.[23] These models, which match available surgeons and operating rooms to patient needs rather than having waitlists for specific surgeons, are an ethical and efficient approach to addressing wait times and constrained resources. Provincial and territorial health systems are encouraged to explore these models, many of which already exist for specific surgeries and procedures in different places across the country. Moreover, emphasis should be given to how such models could be rolled out equitably, with due consideration for those living in rural and remote areas.

Finally, virtual care has an important role to play in terms of re-engineering the perioperative journey and to eliminate low-value and redundant testing. Virtual care modalities for some touchpoints such as an anesthesiologist assessment and post-operative visit can optimize providers' time and health care spaces. Policymakers can invest in and run demonstration projects, which test alternative models as there is a growing body of evidence that virtual care can improve quality and patient experience in the perioperative period.[24]

POLICY IDEAS FOR STREAMLINING THE PERIOPERATIVE PATHWAY FOR SCHEDULED SURGERIES AND PROCEDURES

	Incentives	System Design	Investments
Short-Term	Adjust fee schedule to restrict preoperative testing in low-risk surgeries. Adjust fee schedule to put appropriateness criteria on a basket of common but low-value surgeries.	Modernize regulations to eliminate blanket requirement for tissues excised during a surgical procedure to be analyzed by a pathology lab.	
Medium-Term		Transition to single provincial or regional queue for common scheduled surgeries and procedures, with common appropriateness criteria.	Invest in virtual care demonstration projects to test alternative perioperative models that improve efficiency, safety and patient experience.
Long-Term		Implement regular legislative and regulatory review of mandated medical treatments/ procedures/services to ensure appropriateness.	

IDEA 2

Reduce low-value laboratory testing.

The sheer volume of laboratory tests that are ordered on a daily basis in Canada is staggering. They are by far the most common medical activity, with an average Canadian receiving about 15 medical laboratory tests per year.[25] Estimates suggest that 16 to 56 percent of laboratory tests offer no clinical value in the diagnosis, treatment, and monitoring of patients.[26] Many low-value laboratory tests are also major drivers of additional low-value care. False positive or negative results alongside follow-up referrals and procedures are all downstream consequences of low-value care. Low-value laboratory tests also tie up resources that could otherwise be used to provide high-value services. Testing for COVID-19 and the need for rapid laboratory test turnaround in both hospital and community settings is an example of the importance of prioritizing to maximize value from existing resources. Reducing low-value laboratory testing would make the health care system as a whole more efficient.

In some narrow clinical conditions, changes to remuneration can reduce low-value laboratory testing. For example, in December 2010 the fee codes for vitamin D test ordering in Ontario were removed, resulting in over 90 percent decline in this low-value test in primary care.[27] However, relatively few tests lend themselves to "delisting" because the clinical nuances require medical decision-making about whether the test is needed for the individual patient and clinical circumstance. In contrast, there are an abundance of opportunities to retool test requisition systems to eliminate automatic and duplicate orders, whether they be within a short time frame or at different laboratories. Overuse is common in laboratory ordering, for example when tests are bundled together and part of outdated panels or order sets within a hospital's order entry system. In some hospitals, laboratory software may also automatically run both tests even if only one was ordered, embedding waste and overuse with no clinical indication or order. At many hospitals, "daily labs" appear as an option on admission order sets, making it too easy just to check off the box, which can lead to indiscriminate testing. Historical practices that have, over time, become routinized and "baked in" to the system and thereby set overuse on auto-pilot and take decision-making out of clinicians' hands.

Choosing Wisely Canada has developed and worked with many hospitals across Canada to break the cycle of automatic laboratory test orders through simple process redesign.[28] A hospital receives a Choosing Wisely Canada designation by adopting a suite of measures to reduce low-value laboratory testing. However, adoption of these measures is not universal across Canada, and governments can play a big role in encouraging adoption.

Low-value laboratory tests can also be addressed through standard order sets and lab panels that incorporate clinical appropriateness considerations. In Spring 2020 during the initial response to the COVID-19 pandemic, provinces with centralized laboratory systems were efficient at prioritizing diagnostic tests based on need. This can be effectively implemented in regional or large health systems with test ordering forms embedded in electronic medical records.

Audit and feedback strategies to provide physicians with data on test ordering in comparison to their peers is particularly effective in reducing variation and decreasing overuse, and research has found that audit and feedback coupled with other education strategies lead to sustained change.[29] Some jurisdictions have used audit and feedback effectively to change physician behaviours in test and procedure ordering, but a lot more could be done.

POLICY IDEAS FOR REDUCING LOW-VALUE LABORATORY TESTING

	Incentives	System Design	Investments
Short-Term		Encourage hospitals to obtain the Choosing Wisely Canada Hospital designation by adopting a suite of measures to reduce low-value laboratory testing.	
Medium-Term			Invest in audit and feedback strategies to provide physicians with data on test ordering patterns.
Long-Term		Standardize provincial lab requisition processes, with built in appropriateness considerations.	

IDEA 3

Reduce low-value imaging.

In the past two decades, Canada has seen national and provincial level initiatives targeting optimization of wait times for diagnostic imaging. In 2007 Canada's first ministers included wait times for diagnostic testing as part of the five national priorities.[30] Indicators and efforts did not address the issue of appropriateness and volumes, but rather on optimizing resources and investing additional dollars to meet growing demand.

The shut down in response to the COVID-19 pandemic led to a dramatic decline in imaging services and output. A survey from the Canadian Association of Radiologists and Canadian Association of Medical Radiation Technologists found that overall radiology service output dropped 50-70 percent, with mammography decreasing by over 90 percent from March 11 to April 30, 2020.[31] The service restrictions resulted in many patients having to wait, adding to the existing backlog, and calling into question longstanding issues about who gets priority in the face of limited imaging capacity.

At the height of the pandemic, provinces moved quickly to reduce low-value imaging. In British Columbia, five high-volume low-value imaging tests were deprioritized: low back pain, minor head injuries, uncomplicated headache, hip and knee pain in patients over the age of 40 years, and suspected pulmonary embolism.[32] Requisitions were prioritized based on urgency, with appropriateness considerations built into the process.

While this approach is sensible in the short-term, a longer-term strategy is needed to address more complex appropriateness issues for imaging. For example, in 2017, the Canadian Institute for Health Information reported that 30 percent of patients with low back pain received an imaging test inappropriately.[1] When patients present to a primary care physician with persistent or recurrent low back pain, it is common to receive a referral to a spine surgeon. Research suggests approximately 80 percent of patients referred to a spine surgeon are not surgical candidates and are often screened in advance through MRI imaging to determine if they are appropriate for surgery. The Interprofessional Spine Assessment and Education Clinics (ISAEC) in Ontario is a program which aims to improve access, referral, and importantly imaging appropriateness for chronic low-back pain patients.[33] Similar programs exist in Saskatchewan, Quebec, and Manitoba that bring together interprofessional teams to assess and educate patients referred to spine surgeons managing low-back pain. These programs have been found to reduce MRI imaging for low back pain and investments should be made to expand them.[34]

Finally, there are concerns about variation in imaging appropriateness and access across regions. The "Imaging Wisely" initiative in southwestern Ontario developed standardized MRI requisition forms with appropriateness checklists for select imaging procedures across all 13 hospital sites to address regional variation.[35] Similarly, Vancouver Coastal Health's MRI central intake provides referring clinicians with a central office to direct outpatient MRI referrals for 11 MRI sites across the lower mainland, with an common appropriateness checklist.[36]

The checklists allow physicians to determine if an MRI is necessary and conditions that may not benefit from a scan. Completing the form also provides referring physicians with a tool to educate and advise patients on the appropriateness of MRIs based on their specific symptoms. Single-entry models that triage imaging requisitions based on need across an entire region can reduce wait times and ensure a common approach to appropriateness across multiple imaging centres.

POLICY IDEAS FOR REDUCING LOW-VALUE IMAGING

	Incentives	System Design	Investments
Short-Term			Expand/invest in interprofessional programs to assess and manage imaging-intensive conditions such as back pain.
Medium-Term			Invest in audit and feedback strategies to provide physicians with data on test ordering patterns.
Long-Term		Transition to single provincial or regional queue for imaging, with common appropriateness criteria.	

IDEA 4

Reduce overly aggressive life-sustaining measures at the end of life.

Patients and their families often prefer to avoid invasive or overly aggressive life-sustaining measures at the end of life. However, in the end-of-life period, patients often receive non-beneficial treatments, which may not reflect their needs and wishes. This can cause stress and anxiety for themselves and their loved ones and consume valuable health care resources, especially in hospital intensive care units. Canadian Institute of Health Information data indicate that while 75 percent of Canadians wish to die at home, only 15 percent are able to do so, while 61 percent end up dying in hospital.[37] In fact, compared with other countries, Canada has one of the highest rates of in-hospital deaths.[38]

This is a complicated problem to solve. A contributing factor is the availability of community-based palliative care options, which varies across Canada. What is consistent is the fact that while most Canadians do not want aggressive interventions at the end of life, many end up getting them because they have never made their wishes explicit. Surveys of the public have uncovered this paradox: while 93 percent of Canadians think it is important to discuss end-of-life wishes and values in advance, only 36 percent have done so and only 18 percent have documented them.[39] Cultural norms around death and dying play an important role in the reluctance to have these discussions.

COVID-19 has underscored the importance of encouraging the public, and particularly people with life-limiting illness or frailty, to do advance care planning or discuss their end-of-life wishes. This can come in the form of supporting clinicians to have advance care planning discussions with patients, as well as efforts that engage the public more broadly. The Canadian Hospice Palliative Care Association's advance care planning initiative, Speak Up Canada, is an example of current efforts in this area.[40]

However, only 24 percent of primary care physicians feel experienced and comfortable with advance care planning conversations, and 60 percent of physicians do not feel well prepared to help people in need of palliative care.[41,42] This is clearly a major obstacle that needs to be addressed. In December 2017, *An Act Providing for the Development of a Framework on Palliative Care in Canada* was passed in Parliament. After several months of consultations, the Framework for Palliative Care in Canada was tabled in Parliament in December 2018.[43] Among the major priorities of the Framework is palliative care training and education for health care providers and other caregivers. Implementation of the Framework is critically important, and we encourage governments, medical schools, and professional bodies to move swiftly to address this competency gap.

The portability and enforceability of advance care planning information along with any specific health care directives across different providers and settings of care are an ongoing challenge. Governments are well-positioned to address this by investing in supportive electronic medical record infrastructure, remuneration for advance care planning discussions, and related policies.

POLICY IDEAS FOR REDUCING OVERLY AGGRESSIVE LIFE-SUSTAINING MEASURES AT THE END OF LIFE

	Incentives	System Design	Investments
Short-Term	Create advance care planning billing codes to increase goals of care discussions between physicians and patients.		Invest in palliative care training and education for health care providers, per Framework for Palliative Care in Canada.
Medium-Term		Retool information technology systems to ensure advance care planning information is accessible across the system.	Increase palliative care capacity in lower-intensity settings (i.e. home and community).
Long-Term			Nudge and support Canadians to engage in advance care planning discussions.

IDEA 5

Sustain the national supply of blood components and products.

Canada has a robust national supply chain for blood components and products. This is a testament to the generosity of countless Canadians who donate whole blood, platelets and plasma, and to organizations like Canadian Blood Services and Héma-Québec that collect, manufacture, and distribute products to hospitals. However, as occurred during the height of the COVID-19 pandemic, this supply chain can come out of balance when there are sudden shifts in demand and supply patterns, resulting in misalignment and potential product shortages or excess, and hence wastage.[44,45]

Blood is donated by the public and is a limited as well as costly resource. Each year, Canadian hospitals consume over $1 billion worth of blood components and products, including red blood cells, platelets, plasma, albumin, IVIg and clotting factors. There is evidence of inappropriate use across many of these categories, which can lead to avoidable harm to patients in addition to placing an unnecessary strain on the national blood supply.[46-51]

The largest single category of blood components and products is red blood cells. Although there has been a gradual decline in the overall utilization of red blood cells in Canada over recent years, there remains significant variation in their usage, as well as evidence of inappropriate transfusions.[52] A recent province-wide audit of Ontario hospitals showed a 10-fold difference in red blood cell transfusion rates between the highest and lowest users.[53] In addition, an audit of 10 hospitals in Ontario found 1 in 5 red cell transfusions may be unnecessary.[54] In Alberta, an analysis of red blood cell transfusions in stable, non-bleeding adult patients in nine ICUs found that over half of the transfusions may not have aligned with recommended best practice.[55]

Seven national specialty societies have partnered with Choosing Wisely Canada to develop recommendations on overuse of red blood cells, and local efforts to reengineer hospital internal processes have demonstrated that significant reductions are possible without negative impact on patient care.[56] However, widespread adoption of these practices remains elusive. Choosing Wisely Canada, in partnership with Canadian Blood Services, have launched a national initiative to benchmark hospitals on measures of transfusion appropriateness. Since participation is voluntary and through self-audits and reporting, there is a significant role for provincial governments. Provinces, which fund blood components and products used by hospitals, can push provider organizations and the system towards universal benchmarking on appropriateness.

Other blood components and products are also likely overused in Canada. A recent audit of 57 Ontario hospitals showed 42 percent of platelet transfusions were inappropriate.[57] The international guidance on platelet transfusion, published in 2015 by the International Collaboration for Transfusion Medicine Guidelines, has been endorsed here in Canada, and can be used as the evidentiary basis for the development of best practice tools and benchmarking exercises, much like what has been done with red blood cells.[58]

Appropriateness benchmarks for other blood products and components like albumin and IVIg in Canada need to be done but are more challenging due to the heterogeneity of diseases they are used for and a lack of clear agreement on appropriateness criteria. Since these blood components are also a precious resource and very costly, developing systems to measure and audit appropriateness will be critical in the future.

Finally, incentives to implement the many guidelines regarding appropriate blood transfusion are weak due to health system structures where provincial governments pay centrally for blood products and components. This is unique because unlike many consumables such as drugs and other supplies used in the course of care, hospitals are not directly responsible for managing the cost of blood components and products they use. This is particularly relevant when treatment alternatives may be drugs that come at a cost to the hospital while blood products and components do not. Governments, blood suppliers and hospitals/health regions are encouraged to work together to explore whether alternative funding models could be effective at improving appropriate use of blood components and products.

POLICY IDEAS TO SUSTAIN THE NATIONAL SUPPLY OF BLOOD COMPONENTS AND PRODUCTS

	Incentives	System Design	Investments
Short-Term		Develop national benchmarks for use of blood products and components. Direct hospitals to measure their performance against appropriateness benchmarks starting with red blood cell transfusions.	
Medium-Term			Invest in data systems that are able to more readily track appropriateness.
Long-Term	Explore whether alternative funding models could be effective at improving appropriate use of blood components and products.		

Conclusion

Low-value care is a significant and long-standing problem within Canada's health care systems. The COVID-19 pandemic has created much turbulence in the sector, but it has also sharpened our views about what is urgent and necessary, versus what is wasteful and risky.

Up to a third of health care is unnecessary. This is both a point of concern and an opportunity. In the preceding sections, we zeroed in on five targeted areas where we believe sensible policy action could yield significant gains for patients, providers, and the public. Such actions would help free up resources so that they could be diverted from low- to high-value services that patients need and clinicians want to provide.

In the face of a public health threat with unclear resolution and an increasingly uncertain economic future, the sustainability of the health care system has never been more important. We urge federal, provincial, and territorial governments to move swiftly to turn these ideas into action. We also ask our partners, collaborators, and stakeholder community to join us in championing these ideas and pushing for changes that will reduce to overuse, waste and harm.

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