Identifying, measuring and reducing low-value care in the context of health system performance assessment

Report by the Expert Group on HSPA

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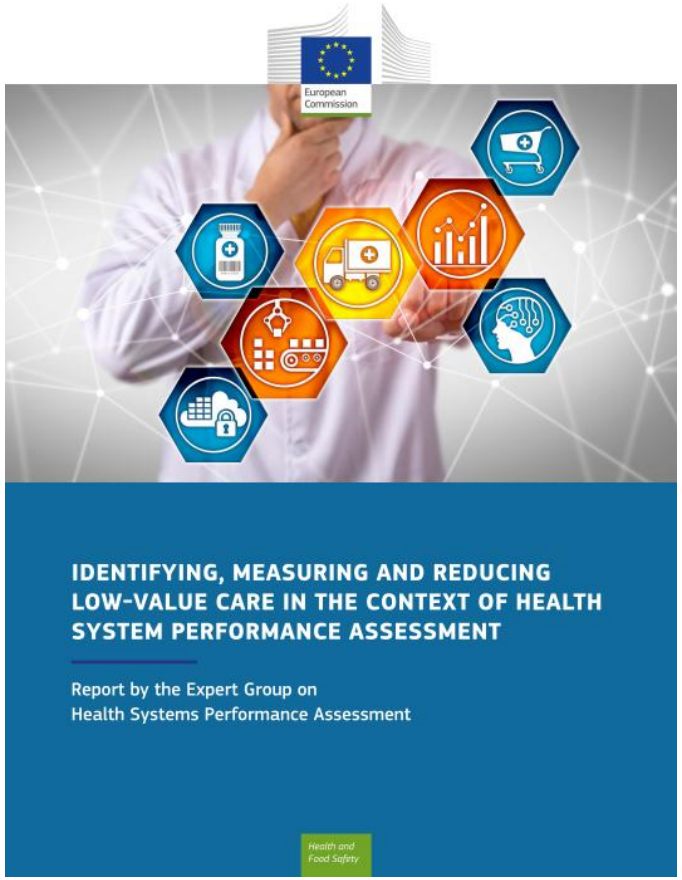

Method

- Literature review
- Survey (20 experts from 17 EU Member States and Norway)
- Expert group discussions

1. Identifiying
2. Measuring
3. Reducing

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1. Definition of low-value care

A new comprehensive definition of low-value care

"From a **health system perspective**, low-value care encompasses **overuse, misuse and underuse** of healthcare services (for example, prevention, diagnostics, treatment, medication). Overuse and/or misuse comprise the delivery of harmful, ineffective, inappropriate, or not cost-effective healthcare services. Underuse refers to healthcare services not provided or used despite being necessary. Low-value care can lead to **negative consequences** for **patients**, their caregivers, the healthcare workforce, the **health system** as a whole and the **wider environment**."

New framework on the types of low-value care

Category of low-value care	Over- and misuse					Unwarranted variation as a sign of potential over- and/or underuse (not explained by different need)		Underuse	
Type of low-value care	**A. The service harms the patient**	**B. The service does not benefit the patient/has no effect (no benefit or benefit/ harm relation unfavourable)**	**C. There are more cost-effective alternatives to the service**	**D. There are more environmentally sustainable alternatives with similar or higher benefits**	**E. The service is delivered in a costlier setting/sector or by costlier professions than necessary**	**F. Geographic variation (entire population and service provision in one area vs. another)**	**G. By patient groups (social, demographic etc.)**	**H. Services which are necessary and considered cost-effective**	**I. Services which are necessary and save costs**
Definition	Services that pose more risks (e.g. adverse patient events, such as healthcare-associated infections, surgical care errors, and unsafe technologies) than benefits to the patients (costs are by definition unwarranted)	Services that lead to additional costs without expected health benefit, i.e. the services have no known benefit for all patients or the services are not appropriate for the individual patient, based on expected outcomes, medical criteria, guidelines, or preferences	Services for which alternatives exist that provide the same benefit for lower cost, or higher benefit for the same cost i.e. are more cost-effective	Services or resources for which alternatives exist that provide similar benefit while being more environmentally sustainable (or higher benefit for the same environmental impact)	Services that could be provided at a lower level of care (setting/ sector/ profession) incurring fewer costs (and reducing potential patient risks) or that could have been prevented by the provision of care at previous levels of care.	Provision/ costs/ quality of services vary between geographic regions not explained by different need.	Provision/ costs/ quality of services vary between patient groups (segmented by social, demographic and or other characteristics) not explained by different need	Cost-effective services not provided despite necessity - meaning that services are not offered to patients fitting a particular clinical description while such services are considered cost-effective.	Services which are not provided despite being considered high value, as they both improve health outcomes and save costs (“dominating” in the cost-effectiveness plane).

*Unwarranted variation can be a sign of **overuse** or **underuse***

CATEGORY OF LOW-VALUE CARE	OVERUSE AND MISUSE					UNWARRANTED VARIATION as a sign of potential overuse and/or underuse (not explained by different need)		UNDERUSE	
TYPE OF LOW-VALUE CARE	A. The service harms the patient	B. The service does not benefit the patient/has no effect (no benefit or benefit/ harm relation unfavourable)	C. There are more cost-effective alternatives to the service	D. There are more environmentally sustainable alternatives with similar or higher benefits	E. The service is delivered in a costlier setting/sector or by costlier professions than necessary	F. Geographic variation (entire population and service provision in one area versus another)	G. By patient groups (social, demographic etc.)	H. Services which are necessary and considered cost-effective	I. Services which are necessary and save costs
DEFINITION	Services that pose more risks (for example, adverse patient events, such as health-care-associated infections, surgical-care errors, and unsafe technologies) than benefits to the patients (costs are by definition unwarranted)	Services that lead to additional costs without expected health benefit, that is, the services have no known benefit for all patients or the services are not appropriate for the individual patient, based on expected outcomes, medical criteria, guidelines or preferences	Services for which alternatives exist that provide the same benefit for lower cost, or higher benefit for the same cost, that is, are more cost-effective	Services or resources for which alternatives exist that provide similar benefit while being more environmentally sustainable (or higher benefit for the same environmental impact)	Services that could be provided at a lower level of care (setting/ sector/ profession) incurring fewer costs (and reducing potential patient risks) or that could have been prevented by the provision of care at previous levels of care	Provision/ costs/ quality of services vary between geographic regions not explained by different need	Provision/ costs/ quality of services vary between patient groups (segmented by social, demographic and or other characteristics) not explained by different need	Cost-effective services not provided despite necessity – meaning that services are not offered to patients fitting a particular clinical description while such services are considered cost-effective	Services that are not provided despite being considered high value, as they both improve health outcomes and save costs ("dominating" in the cost-effectiveness plane)
LOW-VALUE CARE TERMS	Harm Patient safety risks	Overutilisation/ Overdiagnosis/ Overtreatment "No-value care" Inappropriate care Outdated care	Low value for money Cost-ineffective Low-priority care	Unsustainability Carbon-intensive care	Low value for money Inefficient care Not cost-saving	Geographic variation Small area variation Inequity	Inequity	Underuse Necessity Untimely care	Underuse Necessity Untimely care
IMPLICATIONS FOR PATIENT OUTCOMES	Negatively impacted	Unchanged, exposure to risk	Unchanged or negatively impacted	Unchanged	Unchanged	Unchanged or negatively impacted	Unchanged or negatively impacted	Negatively impacted	Negatively impacted
IMPLICATIONS FOR COSTS/ THE ENVIRONMENT	Unnecessary in terms of costs and the environment. Reduction saves costs and resources.	Unnecessary in terms of costs and the environment. Reduction saves costs and resources	Unnecessarily high costs. Reduction saves costs	Unnecessarily negative environmental impact Reduction saves resources	Unnecessarily high costs Reduction saves costs	Unnecessary in terms of costs and the environment either now or in the future Reduction saves costs and resources	Unnecessary in terms of costs and the environment either now or in the future Reduction saves costs and resources	Lower costs now, but potentially higher costs for compensatory services in the future	Lower costs now, but potentially higher costs for compensatory services in the future
EXAMPLES	Surgical errors (for example, wrong-side surgery) Prescription of contraindicated medications	Computed tomography/imaging of the sinuses for uncomplicated acute rhinosinusitis Cancer screening in patients outside the recommended age group	PCSK9-inhibitors for secondary prevention of cardiovascular disease	Single-use medical material that could be sterilised for multiple use	Inpatient stay instead of day surgery for eligible conditions; unnecessary hospitalisation; services that can be provided by a nurse practitioner but are provided by a physician (for example, wound care)	Share of caesarean sections Length of stay for the same service/condition Patient-reported outcomes post-hip replacement surgery		Indicated cancer screening Indicated chronic disease follow up (for example, diabetes)	Immunizations
POSSIBLE MITIGATION STRATEGIES	Do not provide at all and develop strategies how to eliminate these	Provide alternative or no service	Provide alternative (more cost-effective) service	Promote the use of "more sustainable services" with better reimbursement	Provide service in alternative setting/ sector or by an alternative profession	Evaluate whether variation is due to overuse and/or underuse Implement policies to overcome variation		Provide to more individuals	Always provide

2. Indicators for measuring low-value care

Indicators for measuring low-value care

- Different **experience levels** among countries
- Some countries measure low-value care as **part of HSPA**
- **Broad range** of services (prevention, diagnostics, procedures, medication)

MEDICATION	- Share of individuals aged over 70 receiving potentially inadequate medication	- Overprescribing of certain medication (for example, antibiotics or polypharmacy) - Alternative medical therapies or treatments without proven benefit (for example, homoeopathy)

CATEGORY OF LOW-VALUE CARE	OVERUSE AND MISUSE					UNWARRANTED VARIATION as a sign of potential overuse and/ or underuse (not explained by different need)		UNDERUSE	
TYPE OF LOW-VALUE CARE	A. The service actively harms the patient	B. The service does not benefit the patient/has no effect (no benefit or benefit/ harm relation unfavourable)	C. There are more cost-effective alternatives to the service	D. There are more environmentally sustainable alternatives with similar or higher benefits	E. The service is delivered in a costlier setting/sector or by costlier professions than necessary	F. Geographic variation (entire population and service provision in one area versus another)	G. By patient groups (social, demographic ...)	G. Services which are necessary and considered cost-effective	H. Services which are necessary and save costs
PREVENTION		- Non-targeted screening - Non-indicated health check-ups				- Indicated cancer screening		- Indicated cancer screening - Health check-ups	- Immunisation (for example, flu)
DIAGNOSTICS		- Imaging for low back pain without presence of red flags - Number or percentage of tests that do not need to be carried out, for example, PSA testing; tumour markers; chest radiography pre-operatively - Reliability of tests (false-positive may lead to overtreatment) - Vitamin D screening	- MRI: Avoid inappropriate surcharges during non-urgent outpatient services			- Diagnosis, for example, of ADHD in children - CT, MRI and PET examinations per 1 000 population		- Reliability of tests: false-negative may lead to lack of treatment - Follow up for chronic diseases (for example, diabetes)	
TREATMENT	- Nosocomial infections - Pressure ulcers - Wrong-site surgery - Health-care-associated infections caused by multidrug-resistant pathogens	- Percentage of caesarean section in low-risk births - Hernia operations - Routine operating for acute appendicitis - Chemotherapy in the last weeks of life - More than one emergency department visit in last 30 days of life		- Single use medical material that could be sterilised for multiple use	- Unnecessary inpatient visits which could be handled in outpatient care (ambulatory care sensitive conditions like asthma, hypertension, COPD, congestive heart failure, diabetes) - Avoidable specialist visit	- Elective surgery, such as knee replacement or benign hysterectomy - Caesarean section - Procedures with the highest costs - Implantation of defibrillator - Day care of services performed as such - Average waiting time, for example, for trauma surgery			
MEDICATION	- Share of individuals aged over 70 receiving potentially inadequate medication	- Overprescribing of certain medication (for example, antibiotics or polypharmacy) - Alternative medical therapies or treatments without proven benefit (for example, homoeopathy)	- Brand name medication when generic medication is available			- Antibiotic prescription - Antidepressants - Self-reported use of non-prescribed medicines		- Cost-effective medication for chronic diseases (for example, insulin for diabetes, blood-pressure-lowering medication for hypertension)	
OTHER	- Treatment not in line with guidelines - Doctors are not providing easy-to-understand explanations			- Non-clinical required visits to doctors (proof for work, school)		- Inpatient mortality - Avoidable hospital (re-)admissions - Causes of hospitalisation - Length of stay - Bed occupancy rates - Case-mix per physician - Number of specialist consultations			

Methodological obstacles with low-value care indicators

- **Conceptual:** consensus on definition and “low-value services”
- **Methodological:** standardized operationalization of indicators/proxies
- **Data-related:** data availability and quality
- **Political:** pushback from stakeholders

Need for **consensus** on **definition** and **indicators** for facilitating cross-country and within-country comparisons

3. Reduction strategies

Low-value care reduction measures

Addressing	Low-value care reduction measures
Healthcare professionals	• **Quality assurance** systems like auditing and providing feedback e.g. through scorecards • **Education** through developing and disseminating new guidelines • **(Electronic) decision support tools** • **Financial systems** including removing services from the benefits basket, applying financial penalties and pay-for-performance schemes • **Behavioral science measures** such as behavioral substitution strategies or nudges **Regulatory structures** such as policy implementations
Patients	• **Education** through information material, guidelines and campaigns • **Shared decision-making**

Multicomponent interventions including an educational component and address both patient and clinician roles are effective in reducing low-value care

Statement from Sweden's expert on the successful reduction of low-value care

"To de-implement care that should not be conducted, change needs to be enabled at various levels ofthe health system:

- **At national, regional, and local level** there is a need to *spread knowledge and enable competence development*. The need for change, the status of current evidence and results from monitoring and evaluation also need to be communicated and discussed.

- **Change needs to be facilitated at organisational and structural levels** within health care and dentistry: decision-makers at regional level have the possibility and mandate to influence, for example, *hospital bed availability, financial models and the workforce.*

- **At caregiver level,** organisations can develop to become learning organisations that promote cooperation and collegial support. NBHW's [National Board of Health and Welfare] evaluation has shown that *soft steering mechanisms are often used to de-implement care that should not be conducted. These often include educational and communication efforts* directed toward healthcare staff. Often these are sufficient to de-implement care practices. However, practices that have been used for a long time and despite recommendations are still used may warrant structural or financial steering mechanisms."

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Take Aways

Main takeaways

1. Identifiying
2. Measuring
3. Reducing

New extended definition of low-value care considers additional value components such as underuse and the environmental and system impact

Indicators for low-value care measurement in EU Member States vary; **great potential for cross-country learning** due to different experience levels

+ Need for further indicators

+ Tackling obstacles could be supported through EU efforts

Inspiration through examples of reduction strategies

Thank you for your attention!

Questions?

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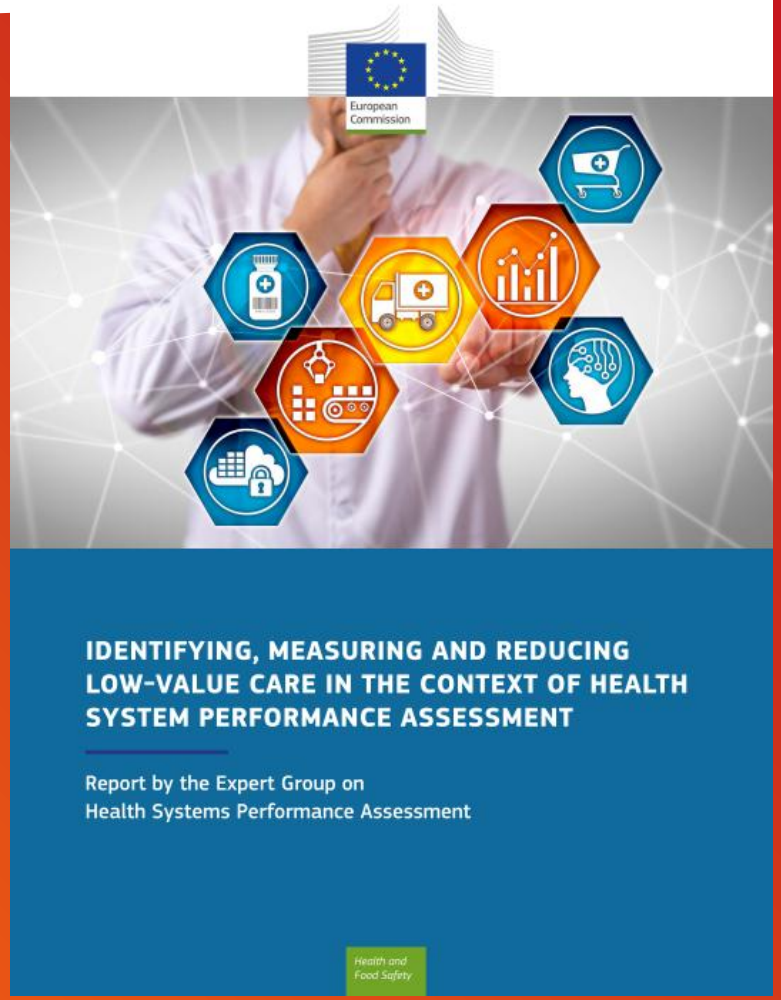
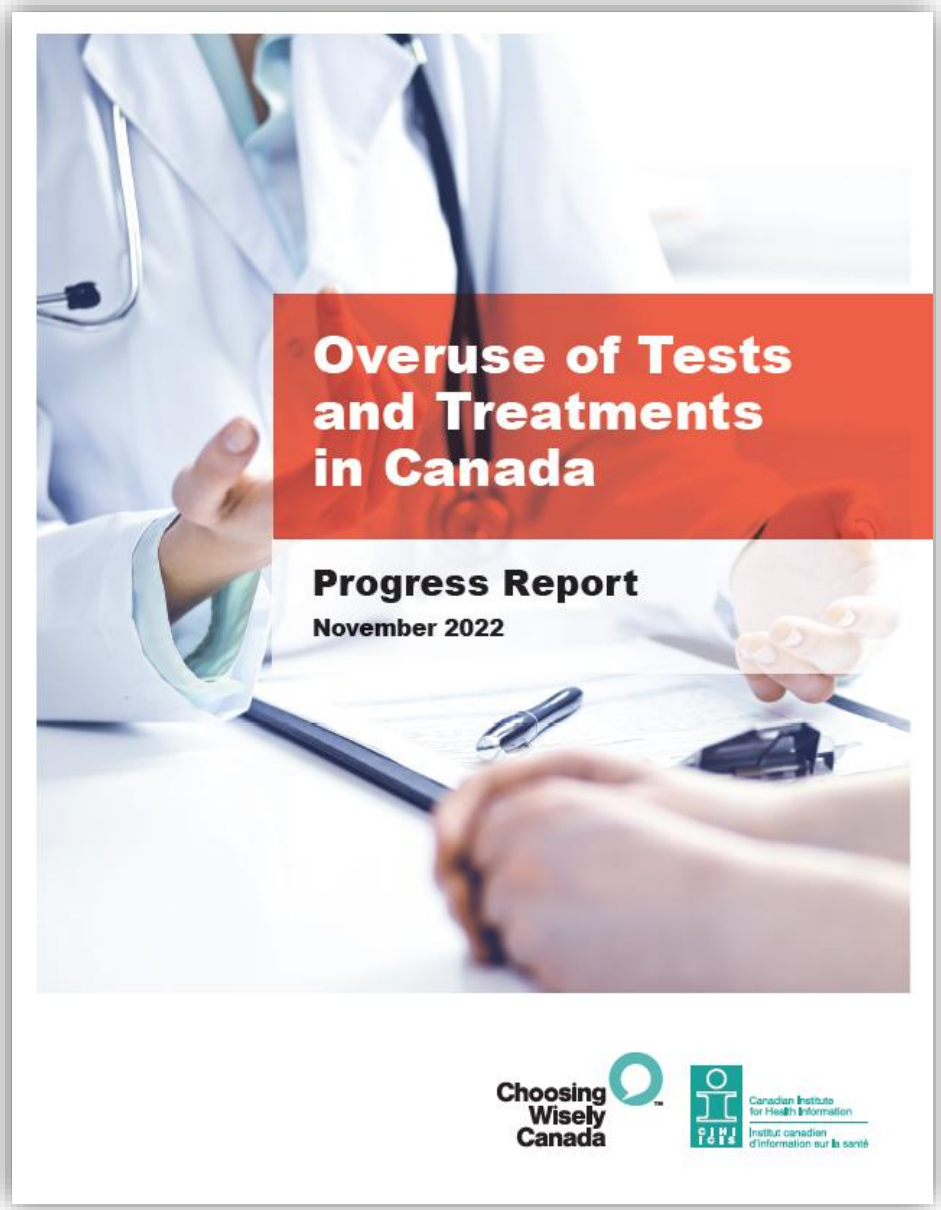


Choosing Wisely: Sometimes Less is Better

Wendy Levinson, MD, OC
Professor of Medicine, University of Toronto
Chair, Choosing Wisely Canada & International

September 30, 2025



- 2017 Report: **30%** of tests/treatments are unnecessary
- 2022 Report: **8 out of 12 tests** and treatments saw reductions/improvements

1 in 12 older adults

used benzodiazepines and other sedative–hypnotics regularly (all provinces except Quebec).

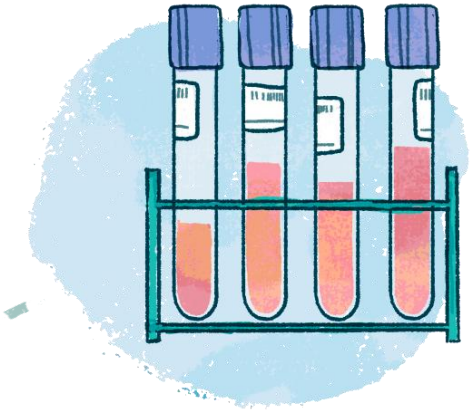
1 in 5 long-term care residents

were taking antipsychotics without a diagnosis of psychosis (Newfoundland and Labrador, Nova Scotia, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia and Yukon).

The rate of knee arthroscopies in **adults age 60 and older was 99 per 100,000** across Canada, except Quebec, even though most are inappropriate regardless of the diagnosis.

Co-Benefits of
Choosing Wisely

Reduce Potential Patient Harm



Protect Finite Health Care Resources

Ease Workload Burden

Reduce Environmental Impact

Family Medicine

Fourteen Tests and Treatments to Question

by
College of Family Physicians of Canada
Last updated: December 2024

8 **Don’t do imaging for lower-back pain unless red flags are present.**

the foundation for managing osteo-arthritis and chronic low back pain.

3 Don’t continue opioid analgesia beyond the immediate postoperative period or other episode of acute, severe pain.

4 Don’t do annual physical exams on asymptomatic adults with no significant risk factors.

85
Societies

600
Recommendations

13
Regions

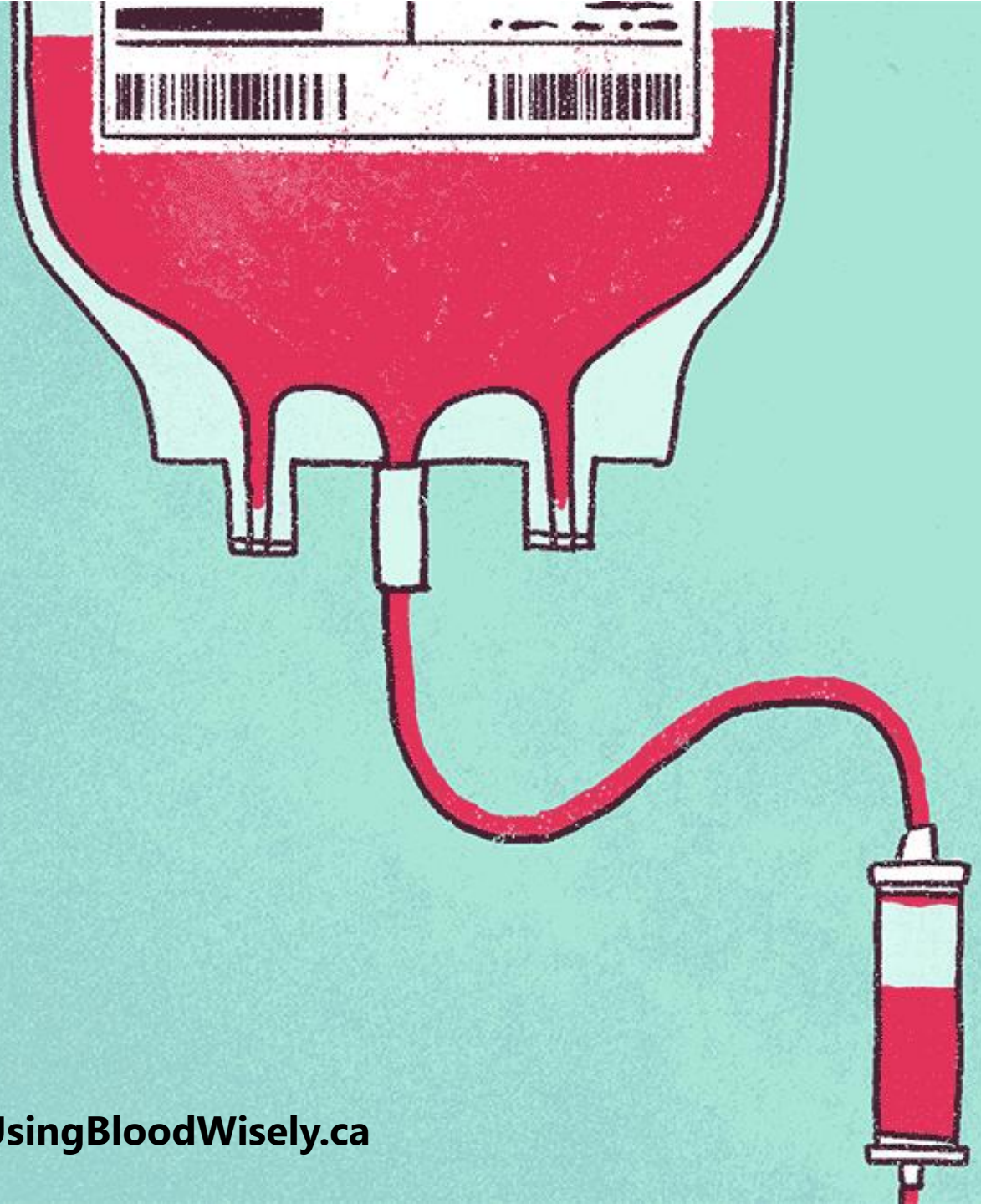
13
Medical Schools

3
National Programs

Updates

Posters


Sorry, but no amount of antibiotics will get rid of your cold.
The best way to treat most colds, coughs or sore throats is with plenty of fluids and rest. Talk to your health care provider.
Choosing Wisely Canada



Make every drop count.

Is your hospital using blood wisely?
Take the challenge.

Using Blood Wisely.

An initiative of:
Choosing Wisely Canada
Canadian Blood Services

UsingBloodWisely.ca

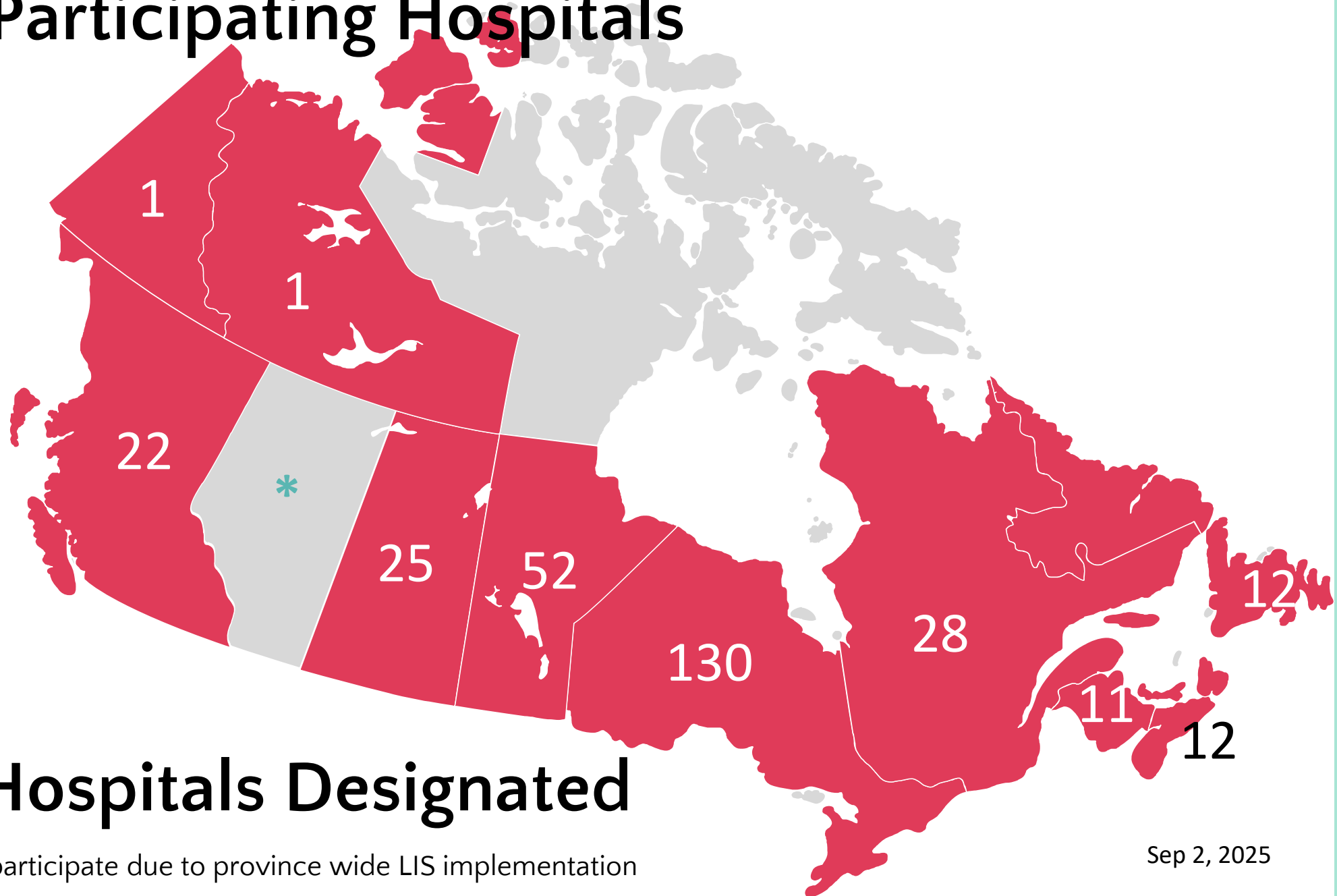
Hospital Designation

- ❑ At least **65%** of red blood cell transfusion episodes are single unit, and

- ❑ At least **80%** of inpatient red blood cell transfusions have a pre-transfusion Hb 80 g/L or less

ACCREDITATION CANADA

294 Participating Hospitals



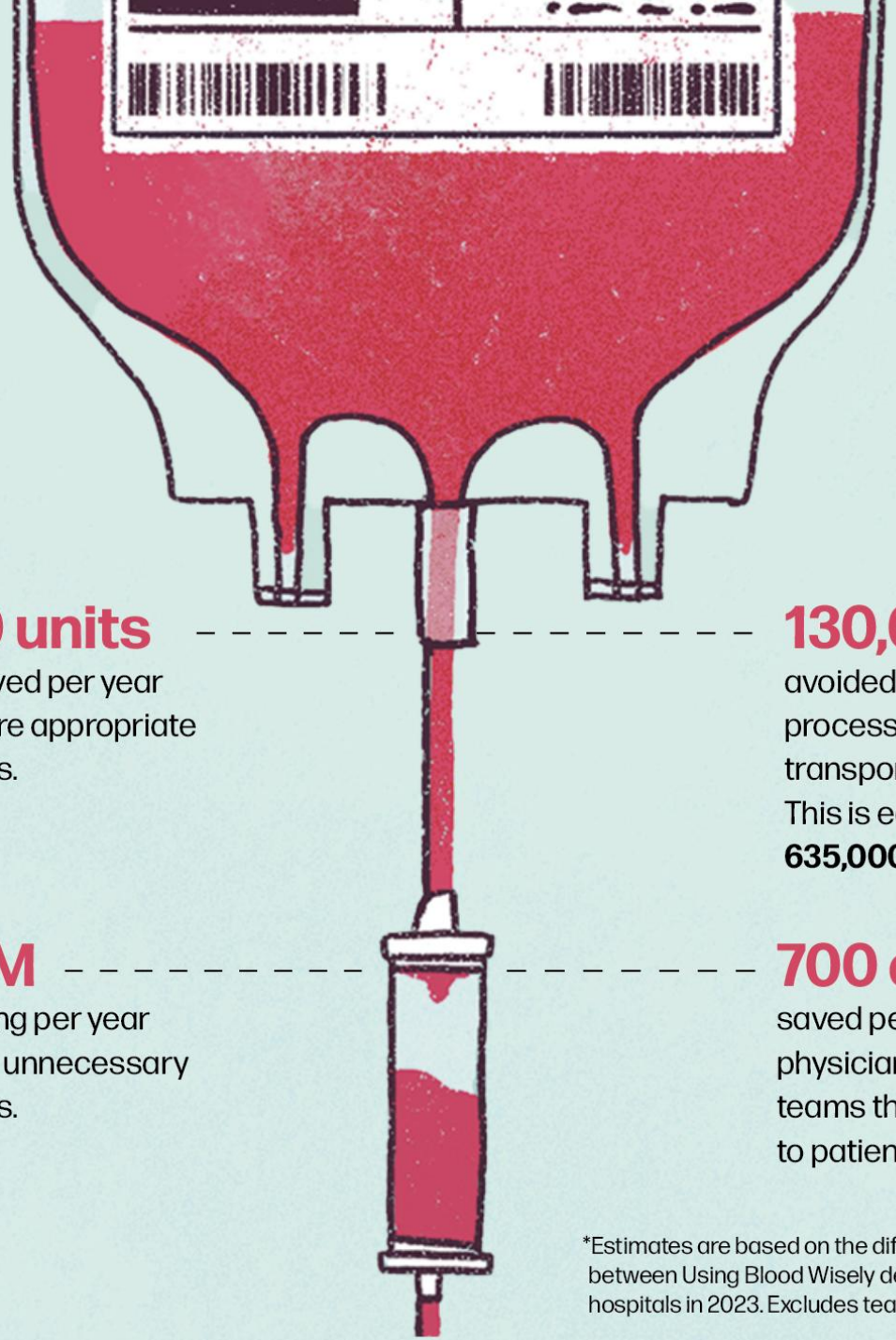
183 Hospitals Designated

*AB not able to participate due to province wide LIS implementation

Sep 2, 2025

Using Blood Wisely.

Making Every Drop Count.



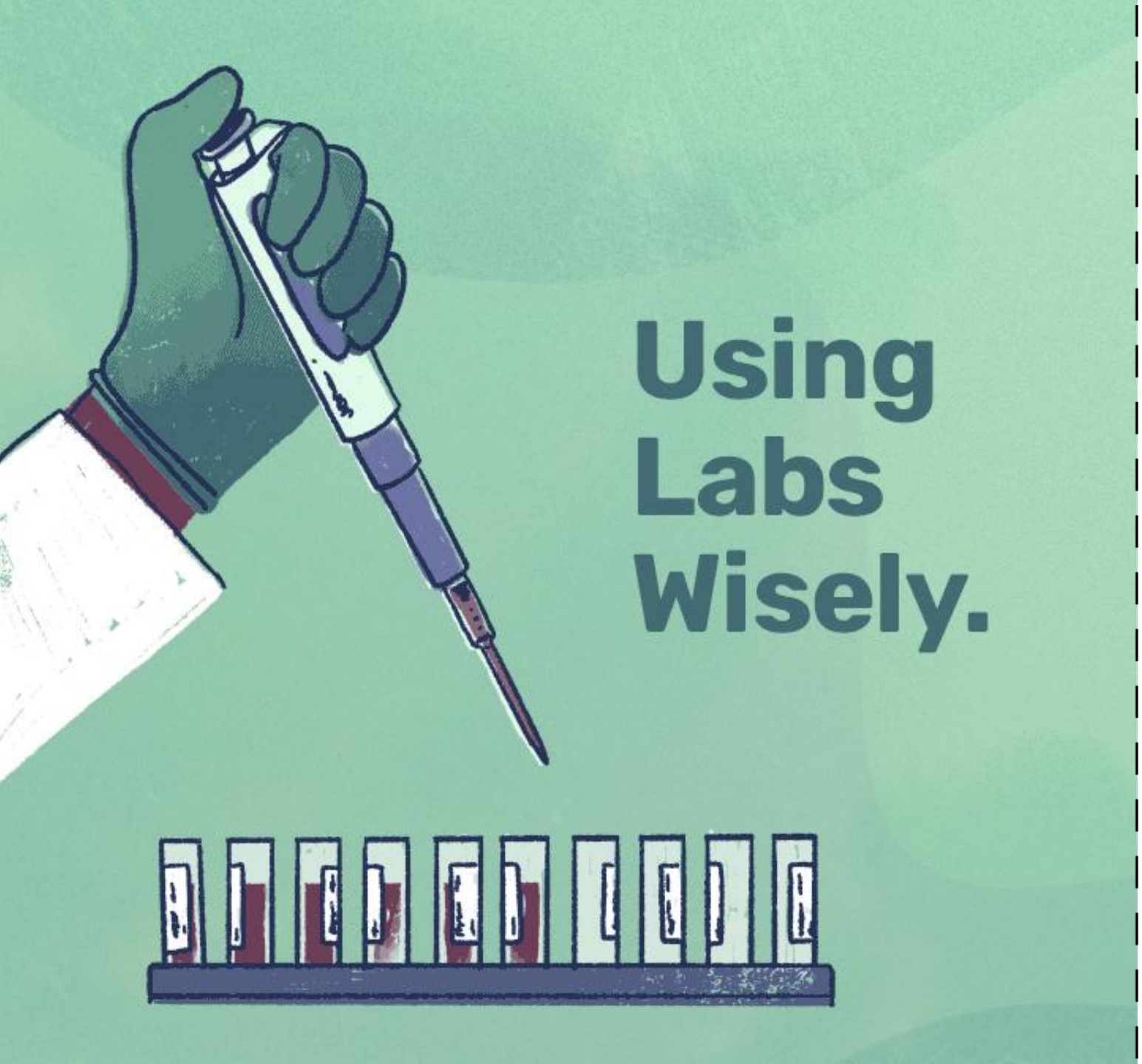
17,000 units
of blood saved per year through more appropriate transfusions.

130,000 kg CO_2
avoided per year from processing, storage, transportation, and disposal. This is equivalent to driving **635,000 km** by car.

$22.8M
in cost-saving per year by reducing unnecessary transfusions.

700 days
saved per year across nursing, physician, and administrative teams that can be redirected to patient care.

*Estimates are based on the difference in red blood cell utilization between Using Blood Wisely designated vs non-designated hospitals in 2023. Excludes teaching hospitals.



LABS PROGRAM

Using Labs Wisely

A national consortium that's changing the lab utilization landscape in Canada.

www.choosingwiselycanada.org/labs

01

ADOPT CHANGE.

Implement interventions to reduce lab utilization and measure change.

02

SHARE DATA.

Submit data and receive comparative reports on your performance compared to peers in the program.

03

LEARN WITH OTHERS.

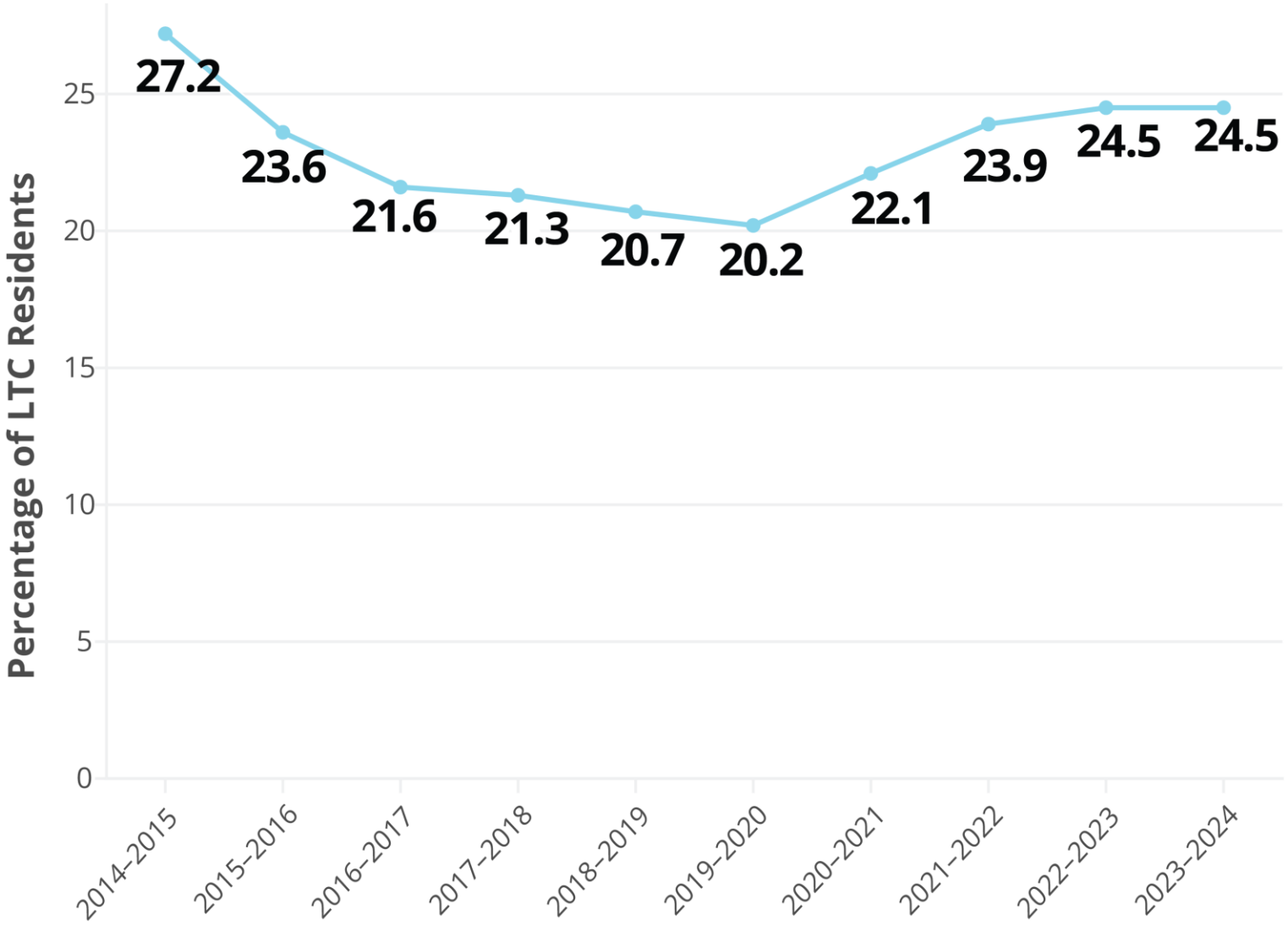
Be part of a Canada-wide network of lab experts and practitioners sharing best practices and tools.

8 Lab Tests

Eliminate*	Uncouple	Test in clinically appropriate scenarios only
Folate	AST/ALT	Urine Cultures
CK-MB	Urea/Creatinine	Vitamin B12
	PT/PTT/INR	ESR

*possibility that complete elimination not appropriate in all clinical scenarios/patient populations

Appropriate Use of Antipsychotics in Long-term Care



Data source: CIHI. Based on the indicator “Potentially Inappropriate Use of Antipsychotics in Long-Term Care.”

Ten Year Trend:

Potentially Inappropriate Use of Antipsychotics in LTC in Canada.

LTCmeds.ca

15%

as the target for LTC homes in Canada for the quality indicator ‘potentially inappropriate use of antipsychotics in long-term care.’

LTCMeds.ca

Climate-Conscious Recommendations

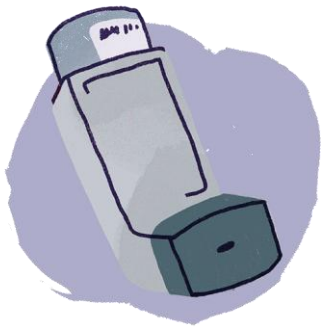
65 climate-conscious recommendations, developed by 24 clinician societies that aim to improve planetary health without compromising patient care.

www.choosingwiselycanada.org/climate

Choosing Wisely & Climate Action

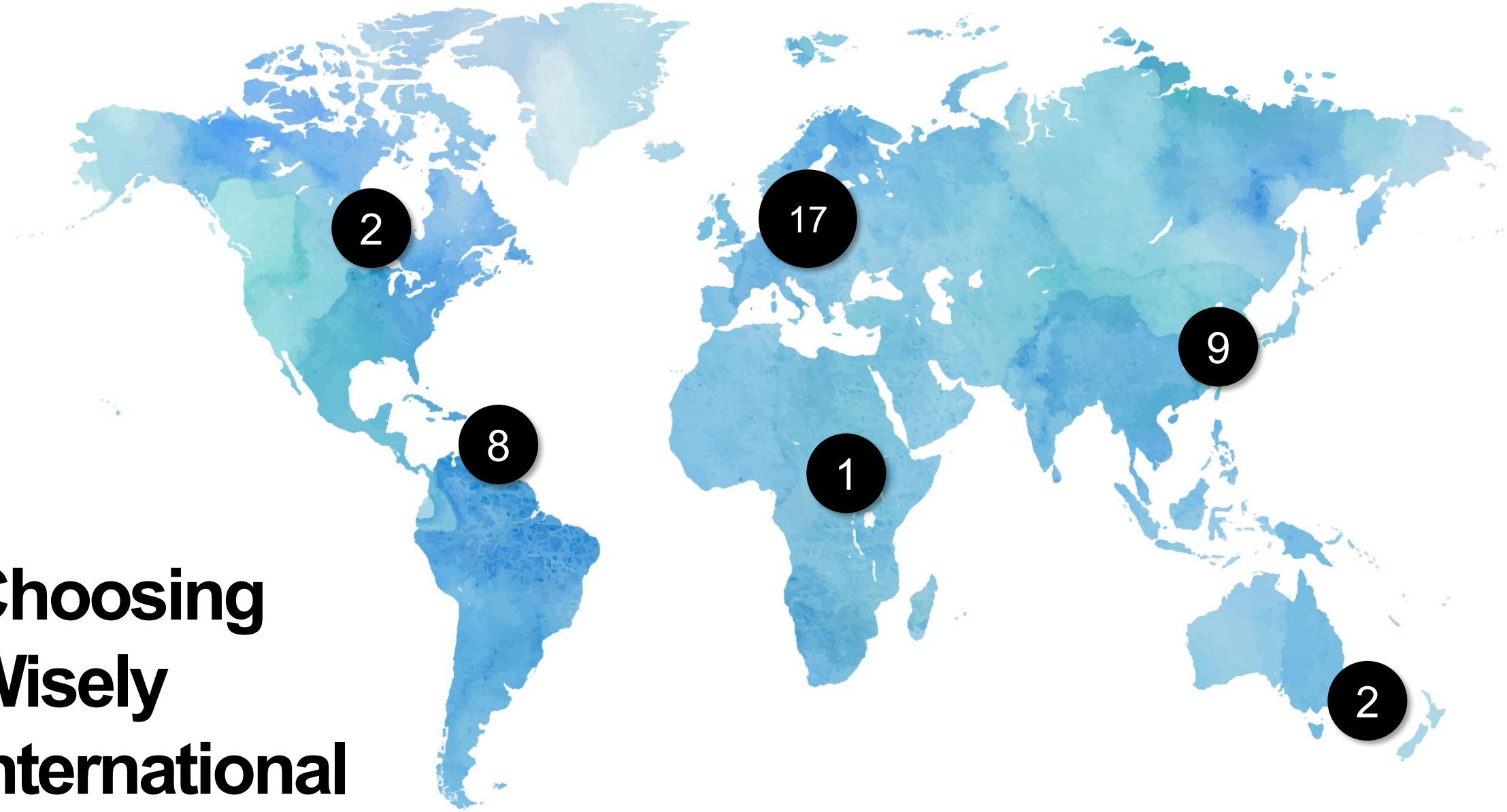
Don’t use gloves when hand hygiene is sufficient. | Canadian Critical Care Society

Don’t continue an intravenous medication when clinically appropriate to step down to oral therapy. | Canadian Society of Hospital Pharmacists



Don't prescribe greenhouse gas-intensive MDIs for asthma […] where an alternative inhaler with a lower carbon footprint […] containing medications with comparable efficacy is available, and where […] patient preference has been considered. | Canadian Thoracic Society

Choosing Wisely International



Questions?