

ENVIRONMENTAL STEWARDSHIP IN PEDIATRIC REHABILITATION

A Guide to a More
Sustainable Practice



VERSION 1.0 | JULY 2026

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CLIMATE CHANGE AND REHABILITATION

This Guidebook is our call to action for sustainability in pediatric physical medicine and rehabilitation (PM&R). The climate crisis is a health crisis – fossil fuels are the single biggest contributor to air pollution and greenhouse gas (GHG) emissions globally (1). Health care contributes 5% of the GHG emissions in Canada, which is higher than the airline industry (2). Climate change and extreme weather events cause loss, displacement, and trauma that disproportionately affects marginalized communities (1).

As an interdisciplinary field involving PM&R physicians, nurses, physiotherapists (PTs), occupational therapists (OTs), speech-language pathologists (SLPs), and other clinical professionals, pediatric rehabilitation has specific characteristics that make it a significant contributor to climate change in the health care context. Specific challenges within the field include durable medical equipment (DME, i.e. wheelchairs, mobility devices, and prosthetics) waste, overprescription of analgesics, and excessive use of Personal Protective Equipment (PPE) (3).

How You Can Be a Leader

1

Establish a “Green Steering Committee” to guide the implementation of sustainable plans and changes (4).

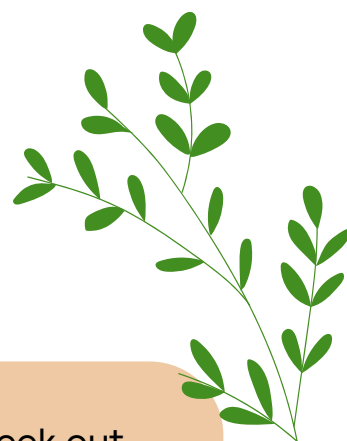
2

Educate colleagues / community through our personal examples.



3

Seek out sustainability and education-related certifications through PEACH and PGME.



WHAT CAN I DO?

See resource list
at the end of the
guidebook!



Tests and Interventions



Refer to [Choosing Wisely Recommendations for Physical Medicine and Rehabilitation](#) for details ([5](#)).



Durable Medical Equipment (DME)

- ✓ Don't order urine cultures or treat bacteriuria in persons with neurogenic bladder unless there are signs or symptoms of urinary tract infection.
- ✓ Don't start opioid analgesics for management of chronic noncancer pain without thorough trials of non-opioid medications and non-pharmacologic treatments.
 - Consider non-pharmacological interventions such as exercise and physiotherapy.
- ✓ Don't order diagnostic imaging for low back pain without red flag signs or symptoms.
- ✓ Don't order repeat interventional pain injections without evaluating the individual's response to previous injections.
- ✓ Medications should be reviewed for deprescribing at least annually ([6](#)).

- ✓ Don't dispose of adaptive equipment (adaptive bikes), mobility devices (wheelchairs, walkers), orthoses, or prostheses that can be reused or recycled ([5,7](#)).
 - Increases access to equipment for patients who might struggle to afford or obtain them.
 - Can donate to schools so kids can play adaptive sports and learn about living with disabilities.
- ✓ Consider local loan and reuse programs for adaptive equipment ([8,9,10](#)).
- ✓ Adopt "return & refurbish" pathways for short-term items (e.g., post-fracture crutches, adapted strollers) ([11](#)).
- ✓ Opt for repairable/modular devices and battery-rechargeable options when possible.
- ✓ Provide information to patients on how to sustainably dispose of equipment they no longer need.
 - Users should return prostheses and orthoses to service providers instead of disposing of them themselves ([12](#)).

Devices like wheelchairs contain wiring and batteries, making them particularly dangerous to the environment ([7](#))!



WHAT CAN I DO?



The Workplace

- ✓ Turn off computer workstations in clinic and administrative spaces when not in use.
- ✓ Avoid using single-use plastic food and drink containers.
- ✓ Bring your own water bottle or coffee mug to work and try to minimize single-use items, and encourage others to do the same.
 - Look into resident association programs for funding to support supplying resident lounges with reusable mugs and cups.



Transportation

- ✓ Employ and encourage the use of eco-friendly modes of transportation for healthcare professionals, patients, families, and care partners (13).



Appointments

- ✓ Assess the trade-offs when meeting virtually or in-person with an effort to choose virtual as often as possible, especially for follow-ups or family member/care partner coaching appointments.
- ✓ Cluster multidisciplinary visits (PT/OT/SLP/orthotics clinic) on the same day to cut travel.



Partnerships

- ✓ Build **partnerships** with groups that share our goals and support efforts to increase sustainable practices in our community.
 - The Royal College supports initiatives like [CASCADES Canada](#), which aims to enhance capacity for sustainable healthcare through [ECHO networks](#), and participates in national dialogues with partners like [CAPE \(Canadian Association of Physicians for the Environment\)](#).
 - The [Canadian Association of Nurses for the Environment \(CANE-ACIIE\)](#) represents nurses dedicated to improving planetary health.
 - The [Canadian Coalition for Green Health Care](#) brings together health organizations across Canada to advance sustainable, low-carbon, and climate-resilient health systems.



WHAT CAN I DO?



Education & Climate Literacy

- ✓ Explore the Association of Faculties of Medicine of Canada (AFMC) sustainability **programs, courses, and certifications.**
 - **Online Learning:** [The Introduction to Sustainable Health Systems](#) is a course available to all professionals to understand the intersection of climate change and health systems.
 - **Clinical Toolkits:** [The Canadian Coalition for Green Health Care](#) offers practical checklists for greening clinical practices, such as reducing waste and optimizing medication use.
 - **Educational Content:** [Royal College continuing professional development \(CPD\) modules](#) offer accredited modules focused on sustainable care.
 - **Strategic Advocacy:** [The Royal College](#) is engaged in incorporating planetary health into medical education standards.
- ✓ Conduct training on which medical items, devices, and equipment are reusable or recyclable and institutional policies and practices for reuse and recycling.
- ✓ Conduct thorough training with staff and learners on when and how to use PPE correctly, and the impact of PPE waste on the planet.
- ✓ Increase department members' understanding of the impacts of climate change and the work that needs to be done - start the conversation now!
 - Discuss with clinical staff and learners how they are incorporating sustainability into their treatment choices and daily practices.
 - Encourage exploration of the [Planetary Health Check](#).
 - Refer to the resource list at the end of this guidebook.



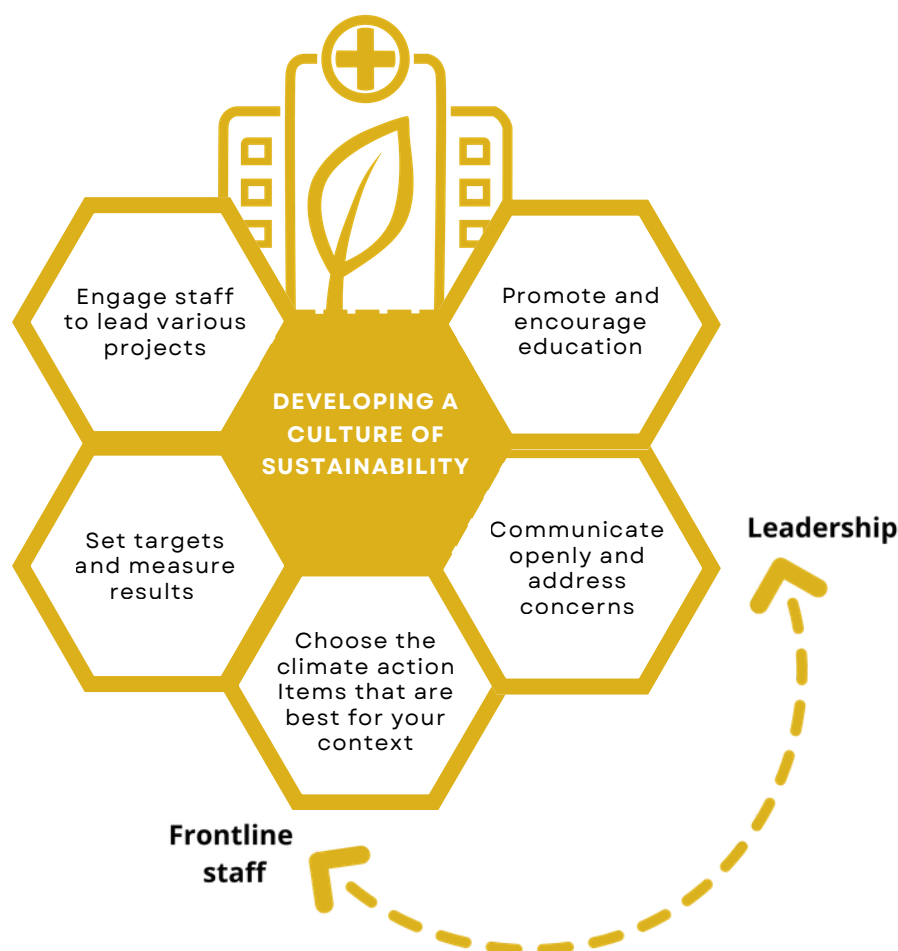
NEXT STEPS

HOW CAN WE DEVELOP A CULTURE OF SUSTAINABILITY?

In addition to creating a strategy and leadership roles, an organization needs to develop a culture of environmental stewardship in order to get to net zero in all aspects of their operation. This process may take years. Engagement of frontline staff and leaders through education, peer support and communication can be a call to action in the short term. Setting the tone by adopting a net-zero strategy to work towards, establishing targets, measuring results, and engaging staff to lead projects can affirm that environmental stewardship really matters. Shifting and sustaining this kind of change must be iterative (ongoing and based on continuous quality improvement principles) and bi-directional (top-down and bottom-up).

When considering the action items in this guidebook, think about:

- What does our organization need in order to address this action item?
- Who do we need to work with both inside our organization and outside to make it happen?
- What impact can we expect to have on patients, staff, our community and our bottom line?
- How can we encourage learning, creativity and innovation?



ADDITIONAL RESOURCES

LEADERSHIP

- Leadership strategy - <https://cascadescanada.ca/action-areas/strategy-and-performance/strategic-planning/>

EDUCATION

- Choosing Wisely Canada - <https://choosingwiselycanada.org/recommendation/physical-medicine-and-rehabilitation/>
- Calculating your footprint - <https://healthcareclimateaction.org/checkup>
- Environmental Physiotherapy Association - <https://environmentalphysio.com/>
- Circular economy model for PPE and medical single-use plastic waste - <https://greenhealthcare.ca/wp-content/uploads/2022/03/PPE-mSUP-Lit-review-Final-version-Mar-22-2022.pdf>

BUILDINGS AND ENERGY

- New buildings - <https://www.cagbc.org> (see 'zero-carbon')
- Energy manager, heating systems, and LED lights - <https://practicegreenhealth.org/topics/energy/energy>

DRUGS AND DEVICES

- Deprescribing strategy - <https://www.deprescribingnetwork.ca>
- Donating medical equipment
 - <https://als.ca/take-action/ways-to-give/donate-equipment-in-ontario/>
 - <https://www.hamiltondreamcenter.ca/get-involved/>
- Reuse and recycling of DME - <https://pubmed.ncbi.nlm.nih.gov/30318953/>
- WHO standards for prosthetics and orthotics - <https://www.who.int/publications/i/item/9789241512480>
- Centralized Equipment Pool (CEP) for writing and face-to-face communication aids - <https://web.cepp.org/>
- Children's Treatment Network's Equipment Loan Program - <https://www.ctnsy.ca/Program-Services/Equipment-Loan-Program.aspx>
- Re-useable Orthopaedic Devices Recycling (ROAR) Program - <https://www.sickkids.ca/en/care-services/clinical-departments/emergency-medicine/re-useable-orthopaedic-devices-recycling-roar-program/>
- Adapted Recreation Equipment Loan Program - <https://hollandbloorview.ca/services/programs-services/adapted-recreation-equipment-loan-program>

FOOD

- Plant-forward diets - <https://www.nourishleadership.ca/sustainable-menus>
- Composting - <https://greenhealthcare.ca/wp-content/uploads/2017/07/CCGHC-Organic-Waste-Case-Study-June17-2013-FINAL.pdf>

TRANSPORT

- Active Transport - <https://cape.ca/resource/active-travel-toolkit-en/>

RESILIENCY

- Health Care Facility Resiliency Toolkit - <https://greenhealthcare.ca/wp-content/uploads/2020/07/1-CCGHC-HealthCareFacilityResiliencyChecklist.pdf>

MORE KEY GREEN ORGANIZATIONS

- Pediatric Environmental Health Resources - <https://cps.ca/en/tools-ouils/environmental-resources>
- AFMC Roadmap on Planetary Health - https://www.afmc.ca/wp-content/uploads/2025/04/AFMC_Roadmap_on_Planetary_Health.pdf
- Nordic Centre for Sustainable Healthcare - <https://nordicshc.org/>

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CONTRIBUTIONS

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THIS IS A LIVING DOCUMENT WHICH WILL BE REVISED AS THIS FIELD EVOLVES. WE WELCOME YOUR COMMENTS AND SUGGESTIONS. LAST UPDATED: JULY 2026

SUPPORTED BY:



**The Canadian Coalition
for Green Health Care**
Coalition canadienne pour
un système de santé écologique



Family Medicine

Funded in part by:
Financé en partie par :



Suggested Citation:

Sharifi, H., Tang, A., VanderKaay S., Chan M., Sergeant M., Kandasamy, S., Parascandalo, F., Chan, M. K., Kaminski, J., Sypus, A., Kotadia, A., Lackie, E. R., & Waddington, K. (2026). *Environmental stewardship in pediatric rehabilitation: A guide to a more sustainable practice*. Canadian Coalition for Green Care & PEACH Health Ontario.