Community of Practice: Choosing Wisely in Paediatrics

Moderator:

Dr. Olivia Ostrow
Staff Physician and Patient Safety Lead
Paediatric Emergency Medicine, The Hospital for Sick Children
Associate Director, SickKids Choosing Wisely Program

Choosing Wisely Canada
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Welcome (and welcome back)!

The Choosing Wisely in Paediatrics Community of Practice (CoP) mandate is to foster knowledge sharing and collaborative learning to promote high-quality, value-added care by focusing on the overutilization of certain tests and therapies.

Since launching in 2019:

- Reach is national with **~250 members**
- **9 webinars and 21 presentations have been held to date**
- Presentation topics from both **paediatric acute-care centres** and **community hospitals**

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Community of Practice – Participating Sites from Coast to Coast…and more!

BC Children's Hospital

IWK

Montreal Children's Hospital, St. Justine's

Stollery Children's Hospital, Alberta Children's Hospital

Jim Pattison Children's Hospital

SickKids, CHEO, OSMH, Markham-Stouffville Hospital, Halton Healthcare, NYGH, Michael Garron Hospital, William Osler, LHSC, Community Paediatricians, Unity Health

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Webinar Topics to Date

Bronchiolitis	UTIs	*Antibiotics Wisely*	Choosing Wisely Canada and roles for paediatrics
Opioids	Respiratory infections	Iron deficiency	Pneumonia & CXRs
Engaging trainees in stewardship	Febrile neutropenia	*Blood Wisely*	HHFNC
Urine collection methods	Peripheral IVs (saline vs TKO)	Family partnerships in Choosing Wisely	Allergy De-labelling

Moving the needle...Implementation

National Choosing Wisely Bronchiolitis Toolkit:

- Working group: Pan-Canadian group of paediatricians, PEM, family medicine & family partners
- Part I-Outpatient and ED-focused (to be released this Fall)
- Part II-Inpatient
- Include local measurement strategy

Children's Healthcare Canada

- **Established the Choosing Wisely in Paediatrics Health Hub**
  - Leveraged existing CHC online network
  - Goal – to connect individuals with "like" peers across Canada to share information and exchange resources
  - Currently houses materials and recordings from past webinars and relevant publications

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Future Webinars

October 2023 - TBC

Suggested topics are welcome!

If you are interested in presenting, have resources you wish to share, or would like to be added to the mailing list, please complete the webinar feedback survey or email lauren.whitney@sickkids.ca

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Agenda

3:00 – 3:05 PM	**Welcome and Introductions**
3:05 – 3:45 PM	***Choosing Wisely for the Planet*** **Samantha A. House**, DO, MPH Section Chief, Pediatric Hospital Medicine & Medical Director Quality and Safety, Dartmouth Health Assistant Professor of Pediatrics & Associate Professor of The Dartmouth Institute, Geisel School of Medicine, Dartmouth ***Resource Stewardship and Planetary Health*** **Katie Gardner,** MSc, MD, FRCPC Staff Physician, Paediatric Emergency Medicine & Director of Quality and Patient Safety, Division of Emergency Medicine, IWK Health Centre Assistant Professor, Dalhousie University
3:45 – 4:00 PM	**Q&A**

Choosing Wisely for the Patient, and the Planet

Choosing Wisely Canada Strategic Pillars

3

Advocacy & Patient Engagement

Influence societal and systematic dimensions of overuse through public awareness and policy change.

BMJ Quality & Safety

Viewpoint

Choosing Wisely and the climate crisis: a role for clinicians

Karen B Born [1], Wendy Levinson [2], Emma Vaux [3]

Correspondence to Dr Karen B Born, Institute of Health Policy, Management and Evaluation, University of Toronto, Toronto, ON M5T3M6, Canada; karen.born@utoronto.ca

Dartmouth Health Children's

Dartmouth GEISEL SCHOOL OF MEDICINE

Choosing Wisely For Our Climate

Pediatric Resource Stewardship Community of Practice Webinar

Samantha A. House

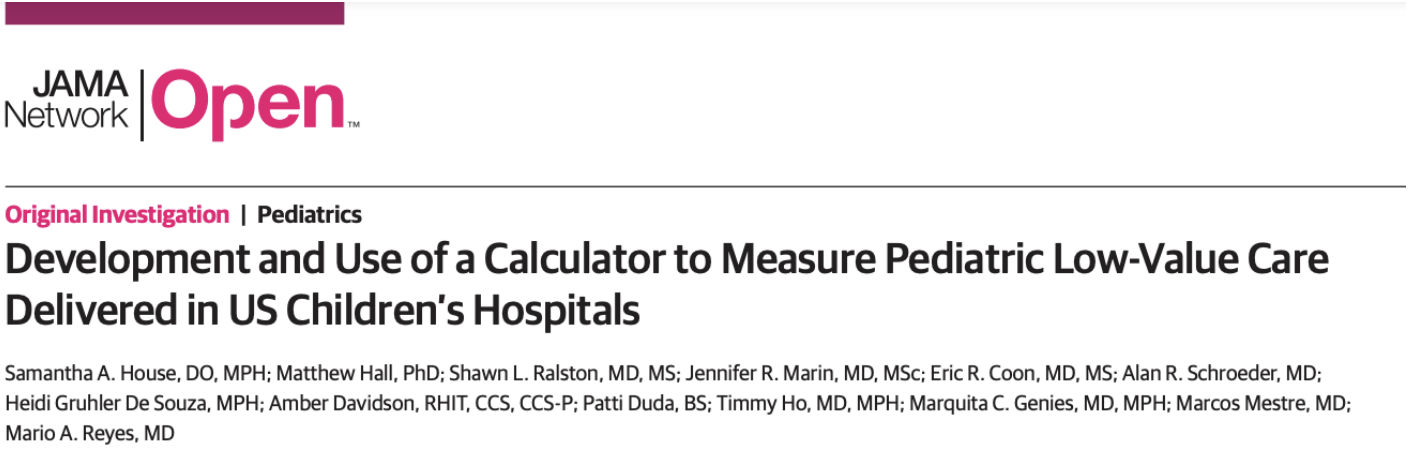
Section Chief, Pediatric Hospital Medicine

Dartmouth Health Children's

June 19, 2023

About Me…

About Me…



JAMA Network | Open™

Original Investigation | Pediatrics

Development and Use of a Calculator to Measure Pediatric Low-Value Care Delivered in US Children's Hospitals

Samantha A. House, DO, MPH; Matthew Hall, PhD; Shawn L. Ralston, MD, MS; Jennifer R. Marin, MD, MSc; Eric R. Coon, MD, MS; Alan R. Schroeder, MD; Heidi Gruhler De Souza, MPH; Amber Davidson, RHIT, CCS, CCS-P; Patti Duda, BS; Timmy Ho, MD, MPH; Marquita C. Genies, MD, MPH; Marcos Mestre, MD; Mario A. Reyes, MD

Impact of Low-Value Care

- Costs
- Harms

”New” Implications of LVC

COVID Effects

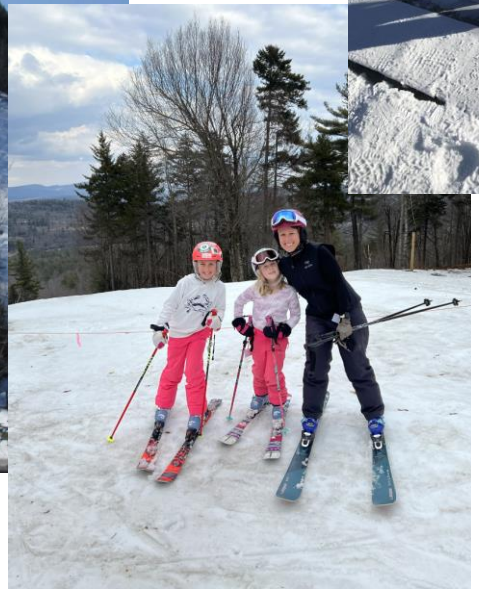
Increased Financial Strain

Resource Constraints

Health Equity

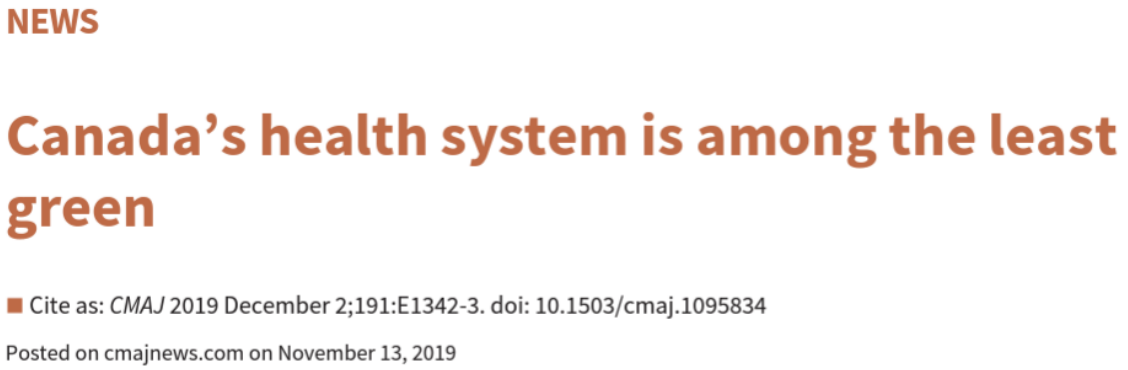
Climate

About Me…



Planetary Impact of Healthcare

- If the US healthcare system was a country, it would be ranked 13th in the world in greenhouse gas emissions.



NEWS

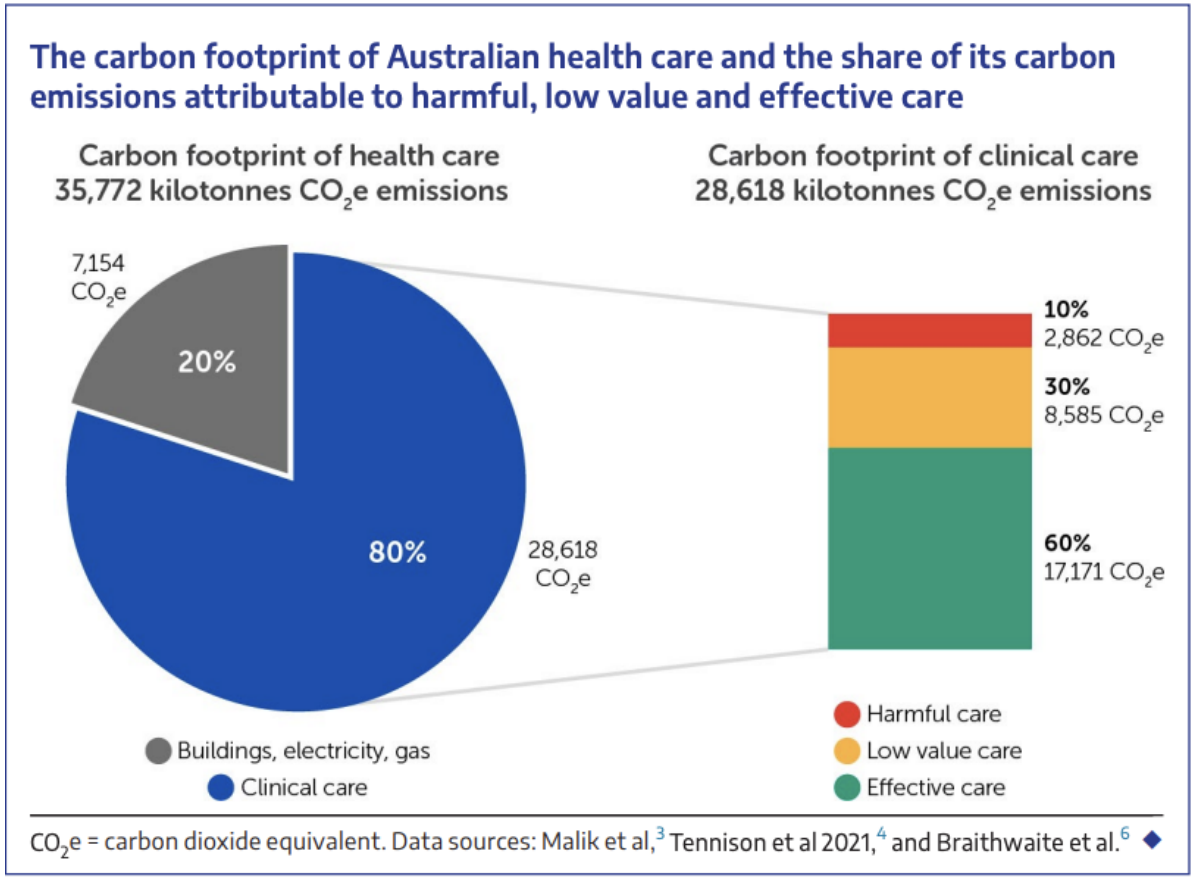
Canada's health system is among the least green

Cite as: *CMAJ* 2019 December 2;191:E1342-3. doi: 10.1503/cmaj.1095834

Posted on cmajnews.com on November 13, 2019

High value health care is low carbon health care

Culling low value care will cut health care carbon emissions



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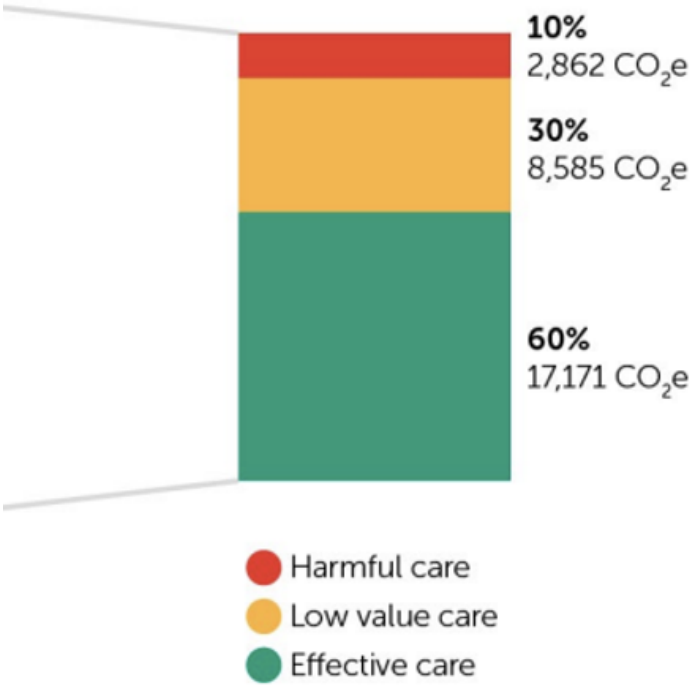
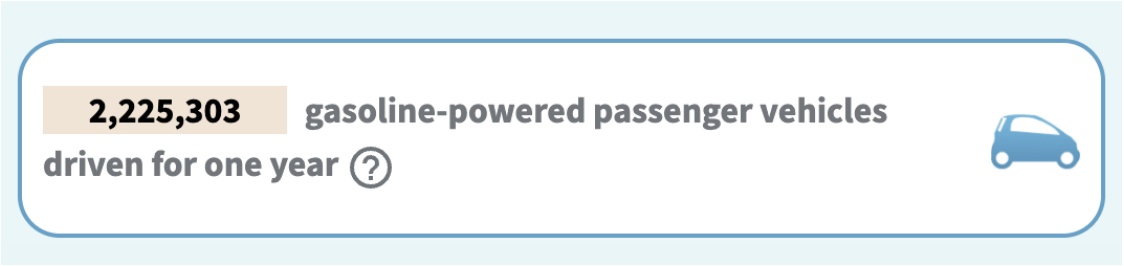
Dartmouth Geisel School of Medicine

Carbon footprint of clinical care
28,618 kilotonnes CO_2e emissions



Take-homes from Australia

- Hospitals and pharmaceuticals represent a majority of healthcare emissions
- A vast majority of emissions are indirect (scopes 2 and 3) stemming from the “goods and services” of patient care
- LVC reduction could save 10,000 kilotonnes of CO2 emissions



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How do we bring climate into the LVC discussion?

- Measure!
- Life Cycle Assessment = the systematic analysis of the potential impacts of products or services during their entire life cycle

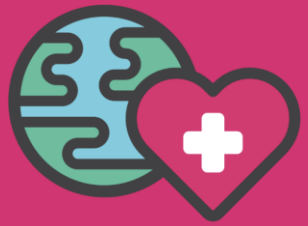
Life Cycle Assessment

How do we bring climate into the LVC discussion?

- Measure

Wiser Carbon Neutral

We aim to develop an evidence base that can assist clinicians and policy makers to safely decarbonise healthcare, while maintaining high quality patient care.



WISER HEALTHCARE

A RESEARCH COLLABORATION FOR REDUCING OVERDIAGNOSIS AND OVERTREATMENT

How do we bring climate into the LVC discussion?

- Measure

Letters

The carbon footprint of pathology testing

Scott McAlister, Alexandra L Barratt, Forbes McGain

First published: 23 October 2020 | https://doi.org/10.5694/mja2.50839 | Citations: 6

How do we bring climate into the LVC discussion?

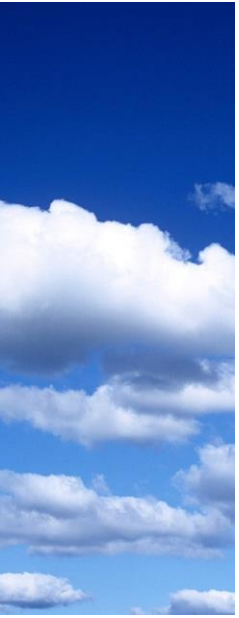
- Consider environmental impact as an outcome of low-value services
- Collaborate

PHIS Low-Value Care Calculator

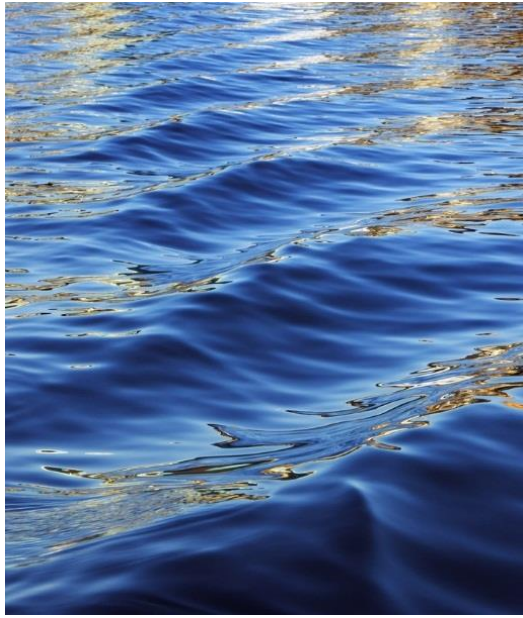
- Research and performance improvement tool
- 30 included services (labs, imaging, procedures, medications)
- Work thus far has revealed:
  - Overall prevalence and costs of services
  - Temporal trends
  - Inequities
  - Hospital level variation

PHIS Low-Value Care Calculator

- Next steps = CLIMATE



Sustainable asthma care in pediatrics



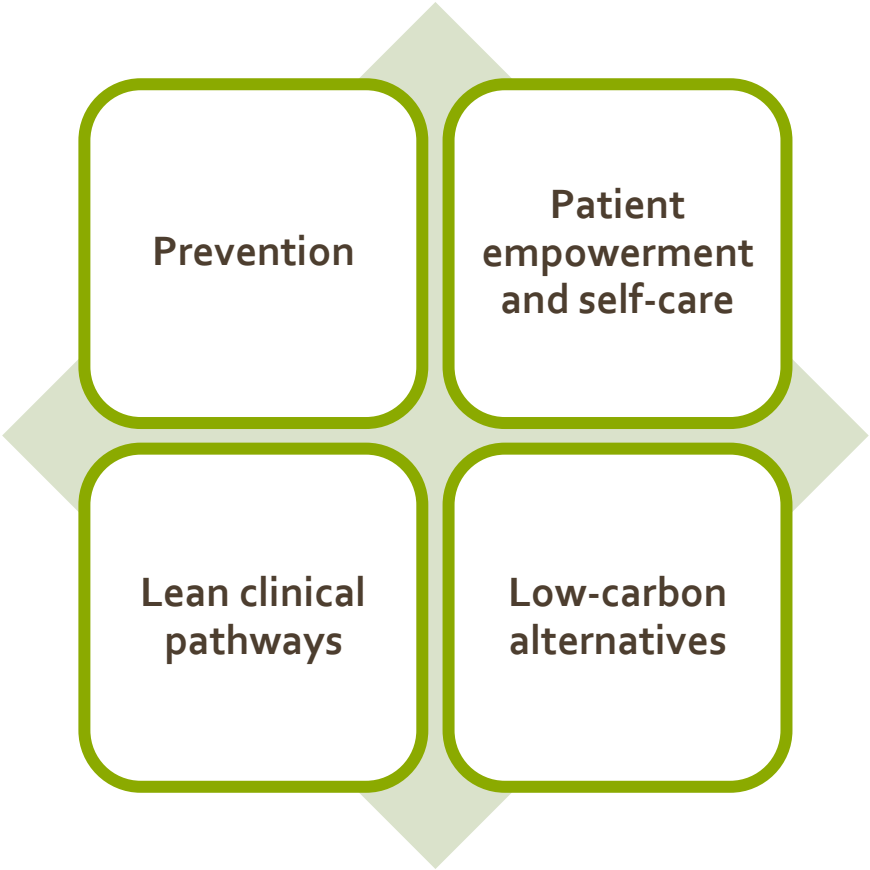
Have you modified your asthma prescribing practices based on environmental impact?

What is your experience with dry powder inhalers in children?

MDIs

- Hydrofluorocarbons
  - Use phase
  - Disposal

Principles of Sustainable Practice



Farmer, F. *The Sustainable Physician.* Clinical Medicine 2010, Vol 10, No 2: 110-11

Diagnosis, appropriate treatment

- Early diagnosis
  - avoid treatment delay
  - reduce morbidity
  - maximize lung function
  - **Environmental benefit: less medication used over lifetime**
- Clinical Diagnosis (1-5 years)
  - Documented airflow obstruction
  - Documented reversibility
  - No evidence of alternative
- Written self-management plan
- Appropriate use of ICS

Prevention

Lean clinical pathways

Acute asthma management

- Clinical order sets
  - Standardized care
  - Based on PRAM, avoid overuse in ED (steroid, atrovent)
- Nursing care directives
  - Reduce door to steroid time
  - Reduced length of stay
  - Reduced frequency of salbutamol
- Eliminating low value care
  - X-rays
  - Antibiotics

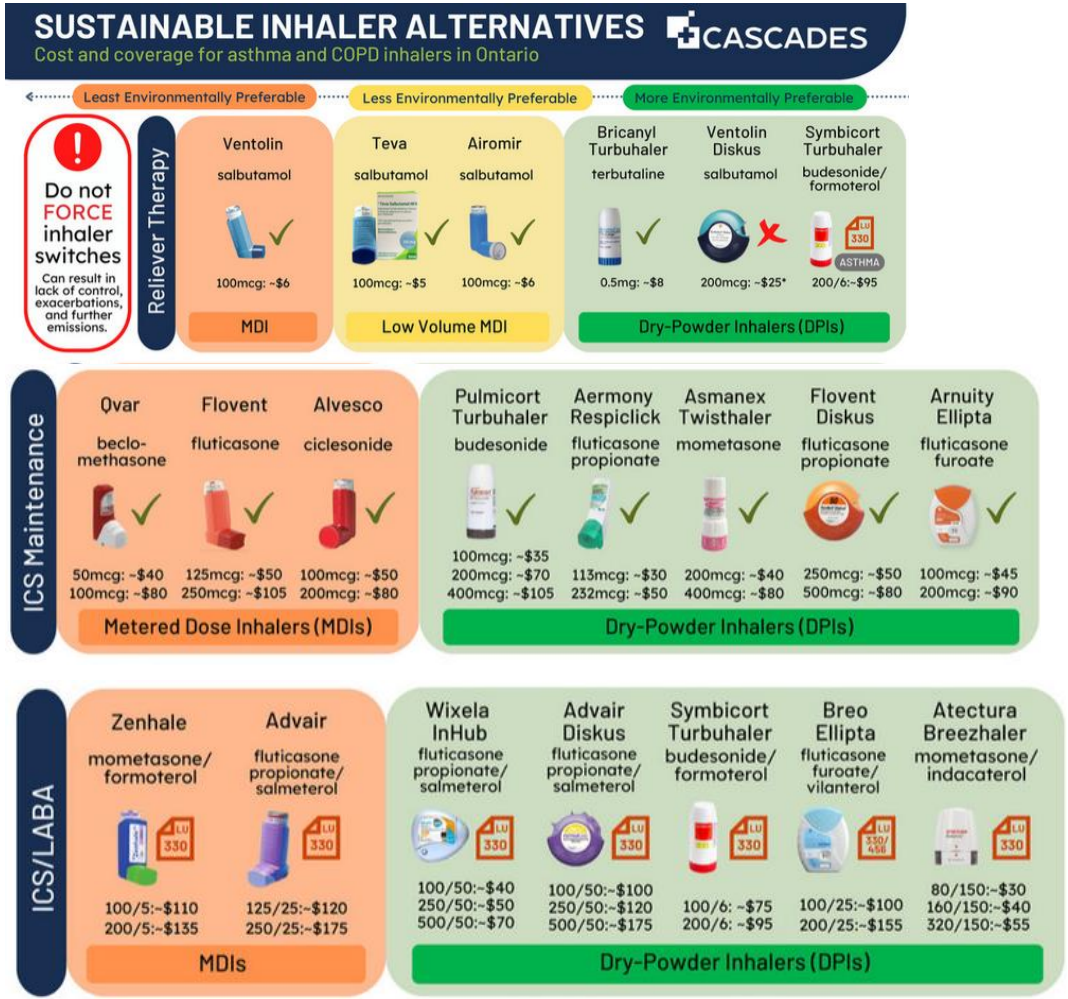
Acute asthma management

- Dry powder inhalers
- Inhaled corticosteroid choice
- Ipratropium bromide neb vs MDI

Low-carbon alternatives

Dry powder inhalers

- Age
  - Readiness assessment
- Technique
  - Teaching
  - Follow-up
- Specialist buy-in
- Cost



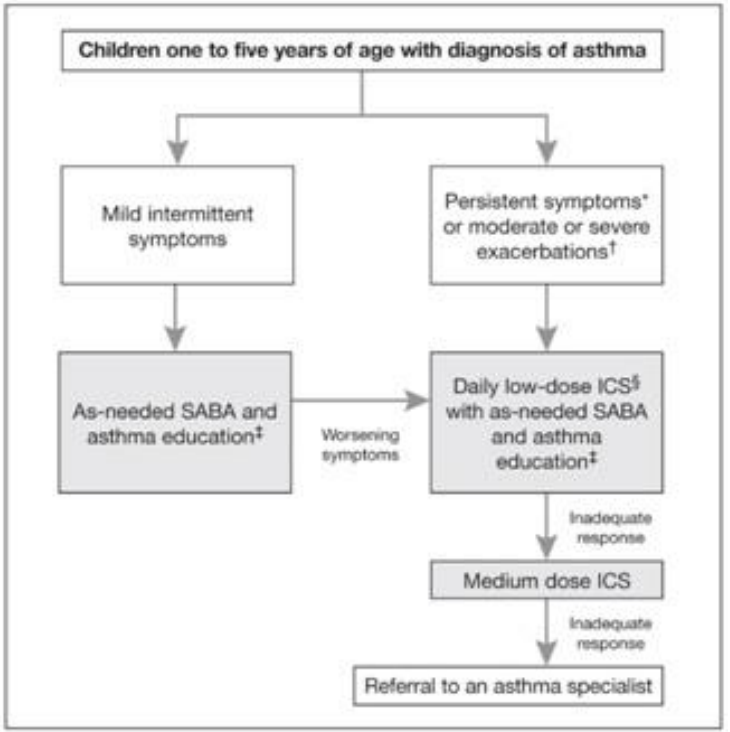
Adapted from: Sustainable inhaler alternatives: cost and coverage for asthma and COPD inhalers in Canada. CASCADES - Sustainable Inhaler Alternatives - Page 1 (publitas.com)

Inhaled corticosteroid choice

- "Children one to five years of age with recurrent (≥2) episodes of asthma-like symptoms, **no wheezing** on presentation, **frequent symptoms** or any **moderate or severe exacerbation** warrant a three-month therapeutic trial with a medium daily dose of ICS (with as-needed SABA). "

- Follow-up every 3-4 months to assess control*

- Downward titrating when good control



Inhaled corticosteroid choice

Drug	*Device type*	*Dose/inh*	*Low dose (mcg/day)*	*Medium dose (mcg/day)*	*High dose (mcg/day)*	*Cost per device*	*Cost per month (medium dose)*	*Product carbon footprint (gCO2e)*	*Yearly carbon footprint (moderate dose)*
Fluticasone propionate (Flovent)	MDI (120 doses)		**100**	**200-250**	**> 400**	-	-	18,960	
		50 mcg	1 puff BID	2 puffs BID	-	$28.42	$28.42		230,680 (923 km)
		125 mcg	-	1 puff BID	2 puffs BID	$23.41	$11.71		115,340 (461 km)
		250 mcg	-	-	1 puff BID	$45.02	-		
	Diskus (60 doses)	100 mcg	-	1 puff BID	2 puffs BID	$28.42	$28.42	840	10,220 (40 km)
		250 mcg	-	-	2 puffs BID	$49.02	-		
Ciclesonide (Alvesco)	MDI (120 doses)		**100**	**200-400**	**>400**			12,210	
		100 mcg	1 puff OD	2 puffs OD	-	$47.86	$47.86		74,277 (297 km)
		200 mcg	-	1 puff OD	2 puffs OD	$79.19	$39.59		37,138 (148 km)
Beclamethasone (QVAR)	MDI (200 doses)		**100**	**200**	**>200**			20,350	
		50 mcg	1 puff BID	2 puffs BID	-	$37.12	$22.27		148,555 (594 km)
		100 mcg	-	1 puff BID	2 puffs BID	$74.02	$22.21		74,277 (297 km)

IWK Health Centre

Asthma Action Plan Discharge Instructions
Emergency Department

PHYSICIAN: Complete and initial beside selected orders.

WEIGHT _____ **kg**

GREEN ZONE

Asthma under control

Breathing is good.
Run & play normally.
Cough or wheeze less than 4 times a week.

CONTROLLER Medicine:

℞ ___ fluticasone (Flovent) orange puffer, ____micrograms/inhalation, 1 inhaler, take ___ inhalations, ___ times per day, for 3 months, Refill 1

___Other _____

QUICK RELIEF Medicine:

℞ ___ salbutamol (Ventolin) blue puffer, _____ inhalations every 4 to 6 hours as needed, 1 inhaler, Refill 1 (**Pharmacist**: Label inhaler as "Take as directed as per Asthma Action Plan")

℞ ___ **SPACER DEVICE:** dispense aerochamber _____

___ Infant with mask __ Paediatric with mask__ Adult with mouthpiece

Ipratropium bromide (Atrovent)

- Evidence for improved outcomes as adjunct in severe exacerbations
  - Reduced hospital admission
  - Improved lung function
  - Reduced nausea and tremor (compared to ventolin alone)

- Nebulized or MDI
  - Efficacy (Cochrane review: nebulizers "not significantly better")
  - Workflow
  - Nursing preference

- MDI discarded after single use (12 out of 120 puffs)
  - Wasted medication, propellant discarded
  - Any way to reuse MDI between patients?

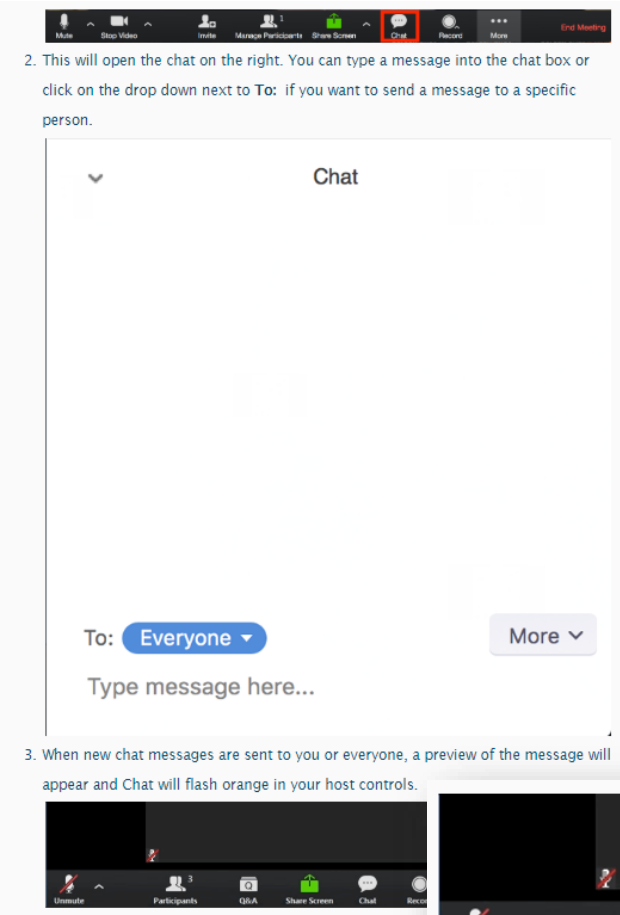
Disposal

- MDIs must be incinerated
- Education for patients and families
- Education for hospital staff

Discussion

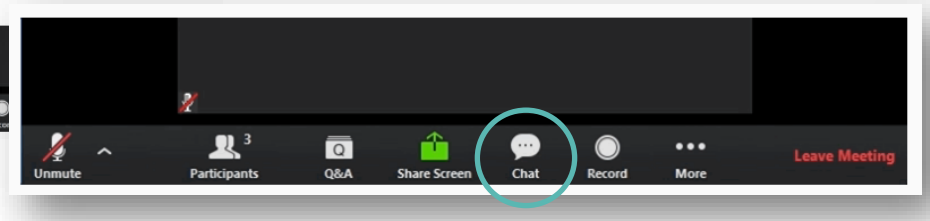
- Have you modified your asthma prescribing practices based on environmental impact?

- What is your experience with dry powder inhalers in children?



Q&A

- Please enter your questions using the **chat function**
- If you wish to contribute to the conversation, be sure to **un-mute** on the Zoom dashboard
- Note: *we will moderate the Q&A after all presentations have been completed*



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