



Climate, Health & Sustainable Care Inaugural Symposium



@climate-health 
climate.health@utoronto.ca 

Sustainable & Climate Conscious Clinical Care

Grace Kuang, Charmi Shah, Pierrette Price-
Arsenault

Moderator: Karen Born



**Climate, Health &
Sustainable Care**
Inaugural Symposium

How can we prevent heat-related illness in people with Severe & Persistent Mental Illness?

Drs. Daniel Rosenbaum
Samantha Green, Michaela Beder, Sarah Levitt, Talveer Mandur, Palika Kohli, and Grace Kuang



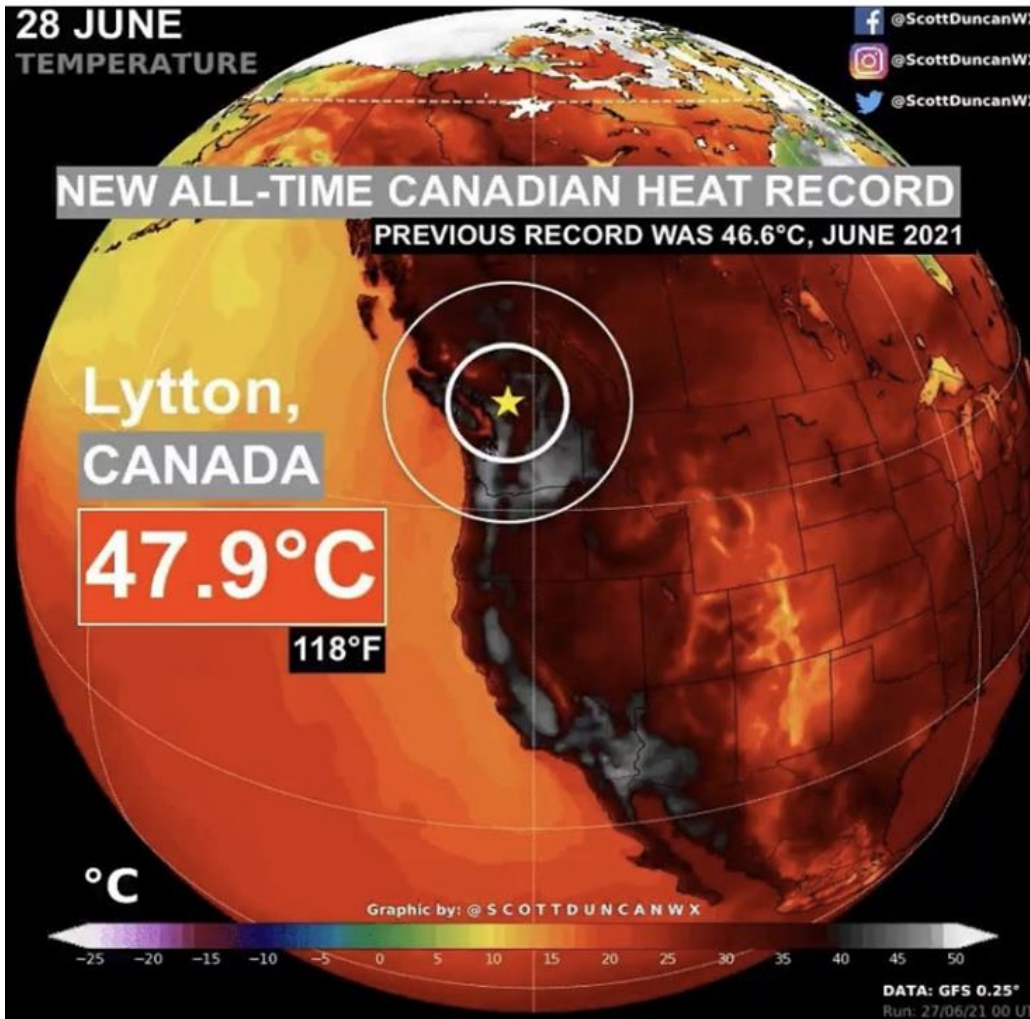
Disclosures

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- Speakers Bureau/Honoraria: None
- Consulting Fees: None
- Patents: None
- Other: None

Learning Objectives

1. Gain a high-level understanding of the signs & symptoms of heat-related illness, which patients are most at risk, and methods to intervene at the micro, meso, and macro policy levels
2. Describe the barriers and facilitators to developing and implementing a novel pilot intervention to reduce heat-related morbidity and mortality amongst people living with SPMI in Toronto
3. Outline the evaluation methods and preliminary results of our education-based quality improvement project

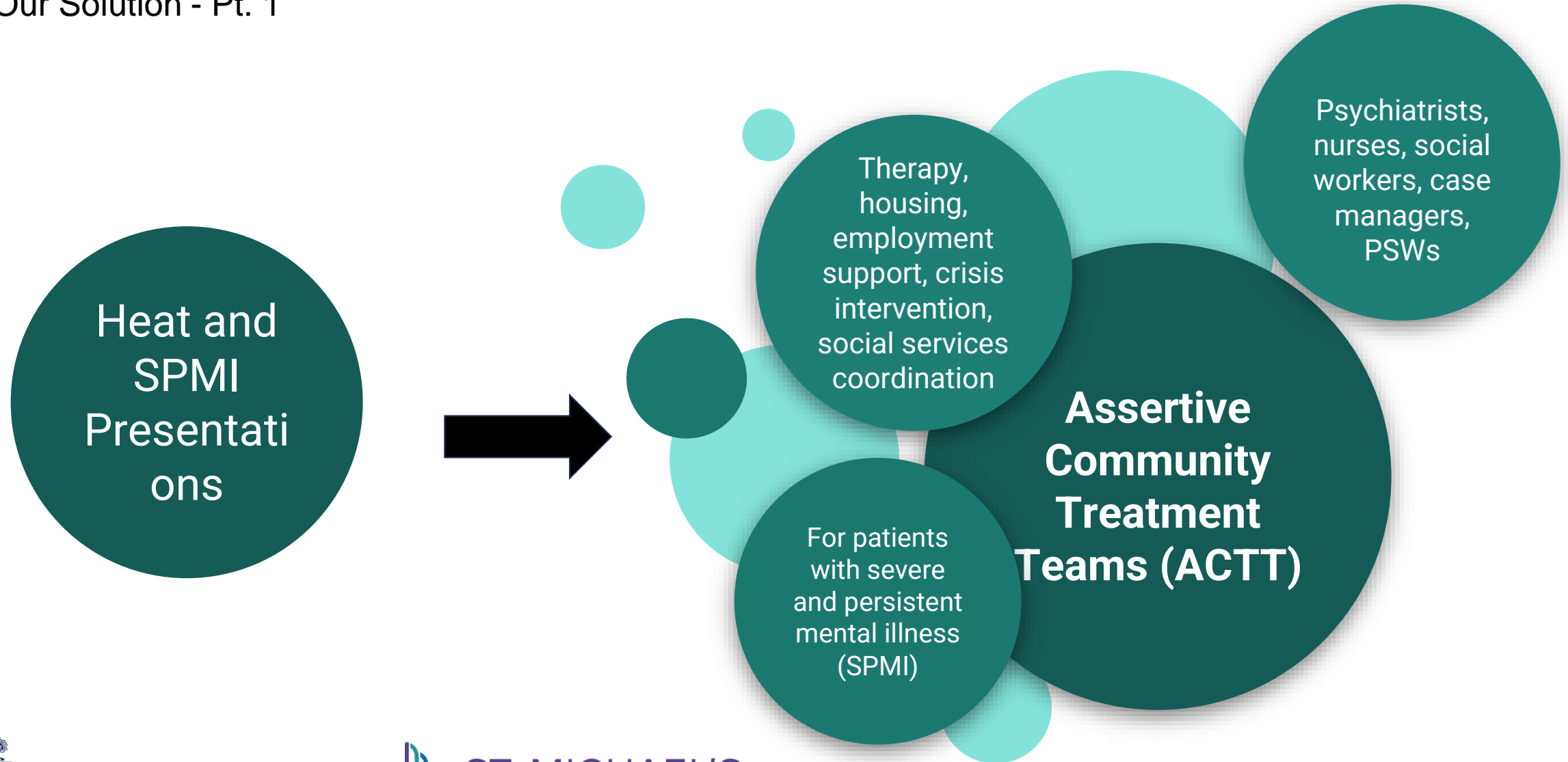


The Issue

- SPMI = Severe and Persistent Mental Illness
- During the 2021 BC Heat Dome event, individuals experiencing schizophrenia faced the highest increased risk of mortality (OR 3.07)



Our Solution - Pt. 1





Heat Presentation Tracker - 2024



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Sheets home

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A20:J20 | fx CMHA - West

	A	B	C	D	E	F	
1	Agency/Team	City/Region	Contact	Emails for Surveys	Heat Team Member contact	Date of request	D
2	Cornwall Hospital	Cornwall	Julie Dumoulin	julie.dumoulin@cornwallhospital.ca		May 22	M
3	The Royal for the Community	Ottawa	Paula Walsh-Bergin	paula.walsh-bergin@theroyal.ca		May 22	M
4	Reconnect	Toronto	Saglal Mohamoud	smohamoud@reconnect.on.ca		May 21	M
5	The Royal for the Community	Ottawa	Paula Walsh-Bergin	Paula.Walsh-Bergin@theroyal.ca	Dan	May 30	J
6	SMH Grand Rounds	Toronto	None	None			J
7	Wellesley ODSP/OW office	Toronto	Jordan Nott	jordan.nott@ontario.ca	Samantha	May 29	J
8	Pinecrest-Queensway	Ottawa	Carla Larose	c.larose@pqchc.com, pqactt@pqchc.com	Samantha	June 5	J
9	Reconnect	Toronto	Colleen Lelievre	colelievre@reconnect.on.ca, smohamoud@reconnect.on.ca	Talveer	May 31	J
10	ICHA Lunch	Toronto			Dan		J
11	ACTT - CMHA Kenora	Kenora	Mary Carter	astoyakovich@cmhak.on.ca	Samantha	May 23	J
12	SunPACT, Toronto (Sunnybrook)	North Toronto	Catarina Lemos	Shing.Cho@sunnybrook.ca	Grace	June 12	J
13	St. Mikes AFHT (Social Prescribing)	Toronto	Nassim Vahidi	nassim.vahidi-williams@unityhealth.on.ca	N/A	June 25	J
14	UHN ACTT (IMPACT)	Toronto	Patricia Melville	sheree-Anne.badere@uhn.ca; arth	Michaela/Dan	June 17	J
15	Central Neighbourhood House - West	Toronto	Safia Hirsi	Safia.Hirsi@tngcs.org	Samantha/Grace	June 20	J
16	NYGH ACTT	North York	Michael Barberio	Michael.Barberio@nygh.on.ca	Grace	June 28	J
17	CMHA - EMACTT	Toronto	Kate Galloway	katie.memoria@gmail.com	Grace	June 17	J
18	CMHA - NDACT	Toronto	Kate Galloway	katie.memoria@gmail.com	Grace	June 17	J
19	FOCUS (St. Mike's ACTT)	Toronto	Natalie Wong	Natalie.Wong2@unityhealth.on.ca	Michaela	June 22	J
20	CMHA - West	Toronto	Sharon Blom	sblom@cmhato.org	Grace	July 22	A
21	F/ACT Conference	Utopia, Ontario	N/A	N/A	Michaela	N/A	S

Our Solution - Pt. 2

Letter Template for AC/fan funding from ODSP or OW



LETTERHEAD

DATE

Re: NAME

DOB:

To whom it may concern,

We are writing to support X's request for an air conditioner [or fan]. This letter has been written with X's consent. X is a client of the X program at X hospital/program. This program serves people who are living with severe mental illness in the community. On our team, X receives care from a psychiatrist and social worker.

Due to the client's required medications, X is at risk for inability to regulate body temperature and requires an air conditioner. We are requesting that X receives the necessary funds in order to purchase an air conditioner, costing approximately \$400 for purchase and installation.

Having an air conditioner will allow X to keep their unit cool during the hot summer months and help preserve their health and stability.

Sincerely,

Our Solution - Pt. 2

Resource List to Presentation Participants



Extreme heat:

NCCEH Extreme Heat Event (5 pages, how to conduct a health check during a heat event, rapid assessment checklist for health workers):

https://ncceh.ca/sites/default/files/NCCEH%20Extreme%20Heat%20Event%20-%20Health%20Checklist%20WEB_0.pdf

BC resource Extreme heat preparedness guide (16 pages, client/patient-facing):

https://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/emergency-preparedness-response-recovery/embc/preparedbc/preparedbc-guides/preparedbc_extreme_heat_guide.pdf

Toronto “staying healthy in hot weather” page:

<https://www.toronto.ca/community-people/health-wellness-care/health-programs-advice/hot-weather/>

Americares climate hand-outs for providers & patients:

<https://www.americares.org/what-we-do/community-health/climate-resilient-health-clinics/>

Climate Psychiatry Alliance resources (single page):

<https://www.climatepsychiatry.org/heat-wave-resources>

PEARLS: Preparing patients with serious mental illness for extreme HEAT:

<https://cdn.mdedge.com/files/s3fs-public/CP02109027.pdf>

For workers: <https://www.ohcow.on.ca/heat-stress-toolkit/>

Very detailed heat stress calculator for workers:

<https://www.ohcow.on.ca/resources/apps-tools-calculators/heat-stress-calculator/>

Wildfires & smoke:

UCSF wildfire/smoke-related resources:

<https://climatehealth.ucsf.edu/wildfires-health-education-hub#>

Our Solution - Pt. 3


How to Survive Extreme Heat

The infographic is a circle divided into six segments, each with an illustration and a tip:

- Top-left:** Illustration of a woman holding a white cloth to her forehead. Text: "Do outdoor activities before 11am or after 6pm".
- Top-right:** Illustration of a woman on a phone with a "WARNING" sign. Text: "Check local weather apps for heat warnings".
- Middle-right:** Illustration of a woman drinking water. Text: "Drink lots of water".
- Middle-left:** Illustration of a woman at a shopping mall. Text: "Go to a cooler place".
- Bottom-right:** Illustration of a person taking a shower. Text: "Take cool showers".
- Bottom-left:** Illustration of a person wearing a hat and sunglasses. Text: "Wear sunscreen and a hat".
- Bottom-center:** Illustration of a person holding their head in pain. Text: "Know the symptoms of heat stroke".
- Bottom-center-right:** Illustration of a first aid kit. Text: "Take meds as prescribed".

ST. MICHAEL'S UNITY HEALTH TORONTO

Warning Signs of Heat Stroke

Find a list of cooling centres in Toronto here 

The illustrations show a progression of heat stroke symptoms:

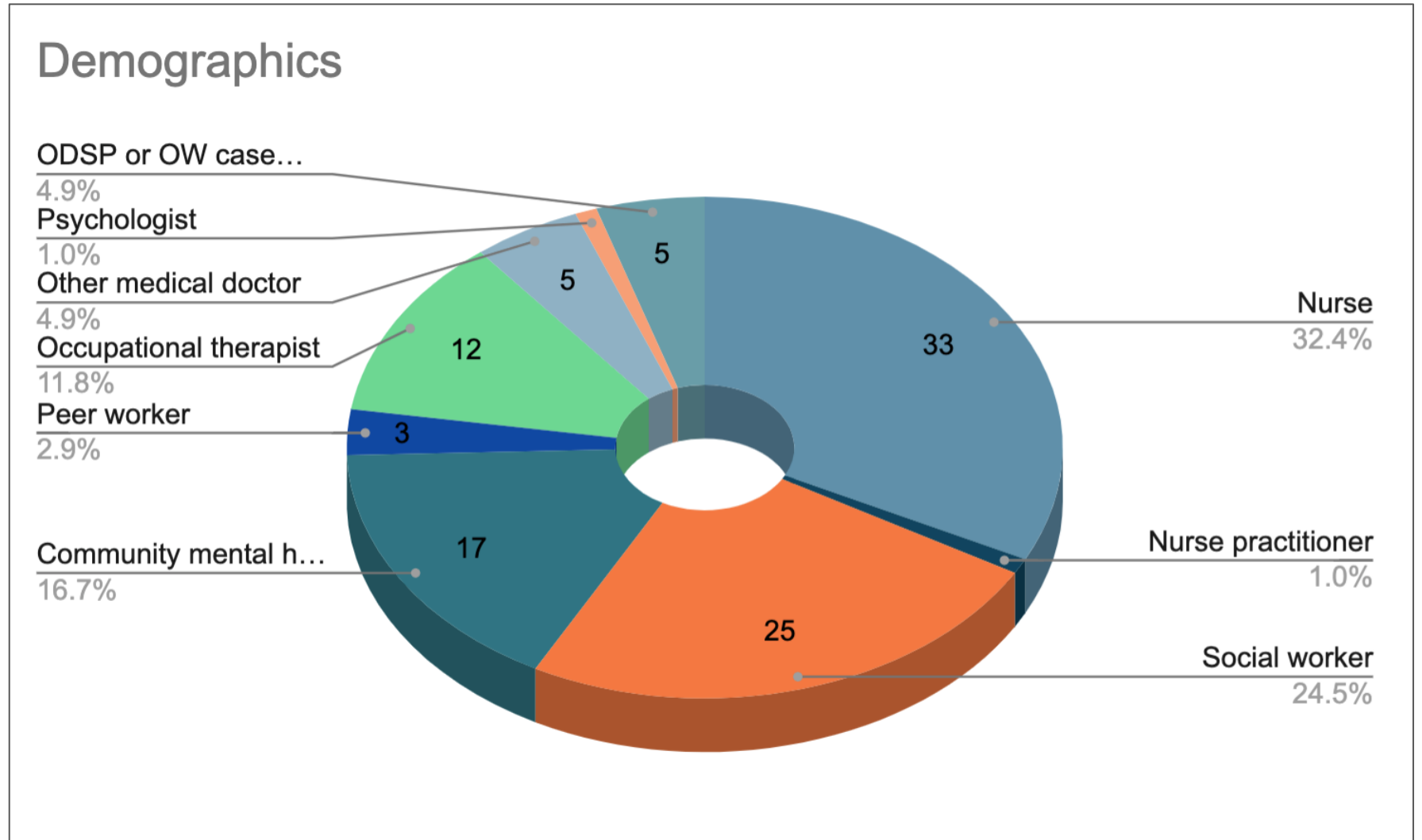
- Early signs:** A man holding his head, with a red lightning bolt icon below. Text: "increased sweating, muscle cramps".
- Heat Exhaustion:** A woman with a dizziness icon above her head. Text: "heavy sweating, thirst, fatigue, decreased urine, headache, nausea or vomiting, cold, clammy skin, dizziness or fainting".
- Heat Stroke:** A man lying on the ground with a dizziness icon above his head. Text: "throbbing headache, fast strong pulse, hot flushed dry skin (skin may be damp), confusion and loss of consciousness".

ST. MICHAEL'S UNITY HEALTH TORONTO

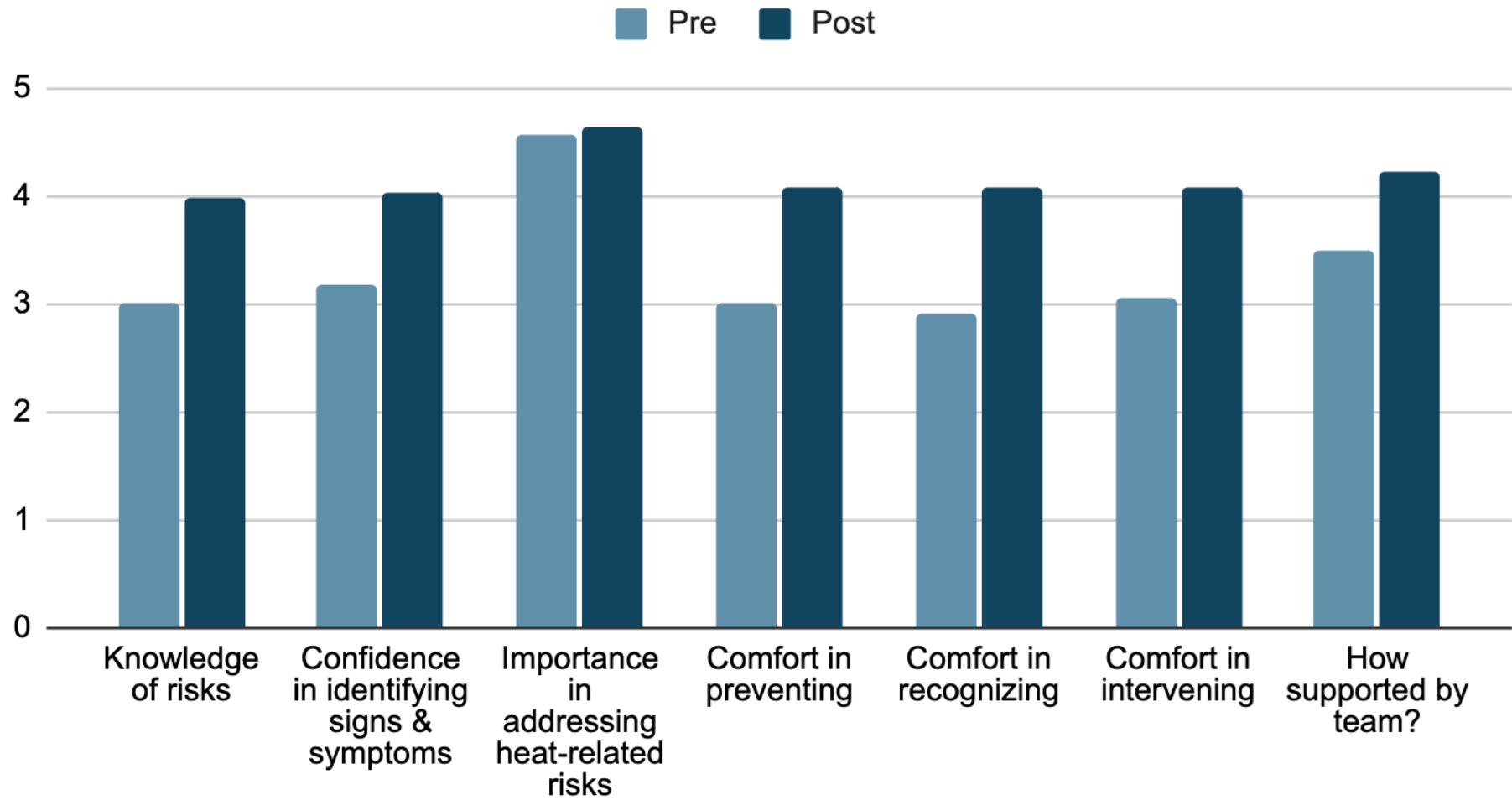
Our Solution - Pt. 3



Eval of our QI project



Likert Scales



Qualitative Responses

What resources would help you in preventing, recognizing, and intervening in heat-related illness in those with SPMI?

“Toronto "Staying Healthy In Hot Weather" page”

“A little cheat sheet that I could attach to my beds - similar to the Codes and Fire response cards we have on our badges”

“City bi-laws re heat maximums”

“Handouts with visuals, signs and symptoms as well as interventions to provide to service users/supports.”

“The slides will be super helpful- THANK YOU!!”

Are there interventions that you are already doing to prevent, recognize, or intervene in heat-related illness in those with SPMI?

“Running psychoeducational groups on heat safety”

“Safety checks on clients, sunscreen, water, bringing fans, advocating for funding with ODSP for AC”

“Encourage clients to drink more in the heat, limit physical exertion when there is intense heat, review patient safety checklist with clients, encourage to take showers to cool off and dress lightly”

6

Education as a low-value improvement intervention: often necessary but rarely sufficient

Christine Soong ¹, Kaveh G Shojania²

¹GIM, Mount Sinai Hospital, Toronto, Ontario, Canada
²Department of Medicine, University of Toronto Faculty of Medicine, Toronto, Ontario, Canada

Correspondence to

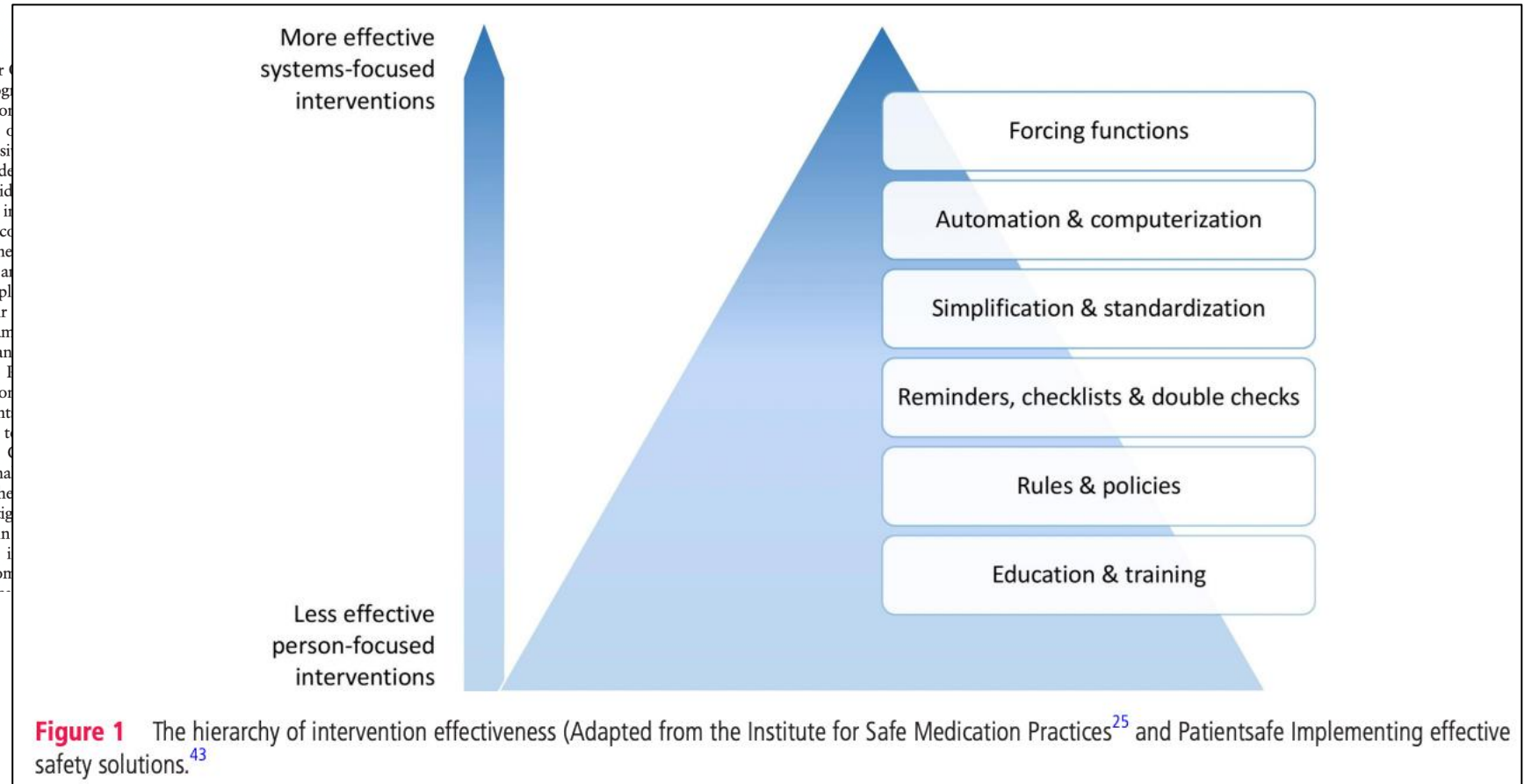
Dr Christine Soong, GIM, Mount Sinai Hospital, Toronto, ON M5G 1X5, Canada; christine.soong@utoronto.ca

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Published Online First
16 December 2019

Since the launch of Choosing Wisely in the United States,¹ efforts to raise awareness about avoiding low-value care have spread internationally,² prompting numerous commentaries,³⁻⁷ descriptive studies and improvement interventions,⁸⁻¹⁰ as well as inspiring new hospital job descriptions (eg, Chief Value Officer), journal sections¹¹ and conferences devoted to the ‘Less is More’ paradigm. Low-value clinical care refers to services or interventions that provide little to no benefit to patients in specific clinical scenarios, may cause harm and/or incur unnecessary cost.^{6,12,13}

One example of a commonly encountered low-value practice is the continuation of proton pump inhibitors (PPIs) in patients without indication for ongoing use. Following completion of a defined period of therapy for appropriate indications (eg, peptic ulcer disease), continued use of PPIs provides little value, yet de-prescribing occurs infrequently. Moreover, this low-value use unnecessarily exposes patients to associated PPI-related adverse events such as pneumonia and

with other... of the prog... intervention... a mixture o... nents. Passi... tion includ... mailed evid... and other in... Active co... programme... included: an... GPs to upl... 10 of their... and dynam... dations; an... related to I... expert cor... component... incentive t... activities, C... professional... Over the... the investig... decrease in... reduction i... control com... -- identifia...



Next Steps

- Tailor our presentation for clients/patients with lived experience
- Deliver education to all those who work with SPMI i.e. housing providers, other social service workers
- Collaborate with an experienced researcher to scale up the intervention
- Include physical heat resilience toolkit in future intervention

Thank you!

Questions to samantha.green@unityhealth.to

Resources:



Cut the Carbon: Reducing Surgical Waste

Towards a sustainable healthcare system

Pierrette Price Arsenault | September 24, 2024



**Ontario
Health**

Hospital Waste









**WHAT IS
HAPPENING**

!!!

Ontario Surgical Quality Improvement Network

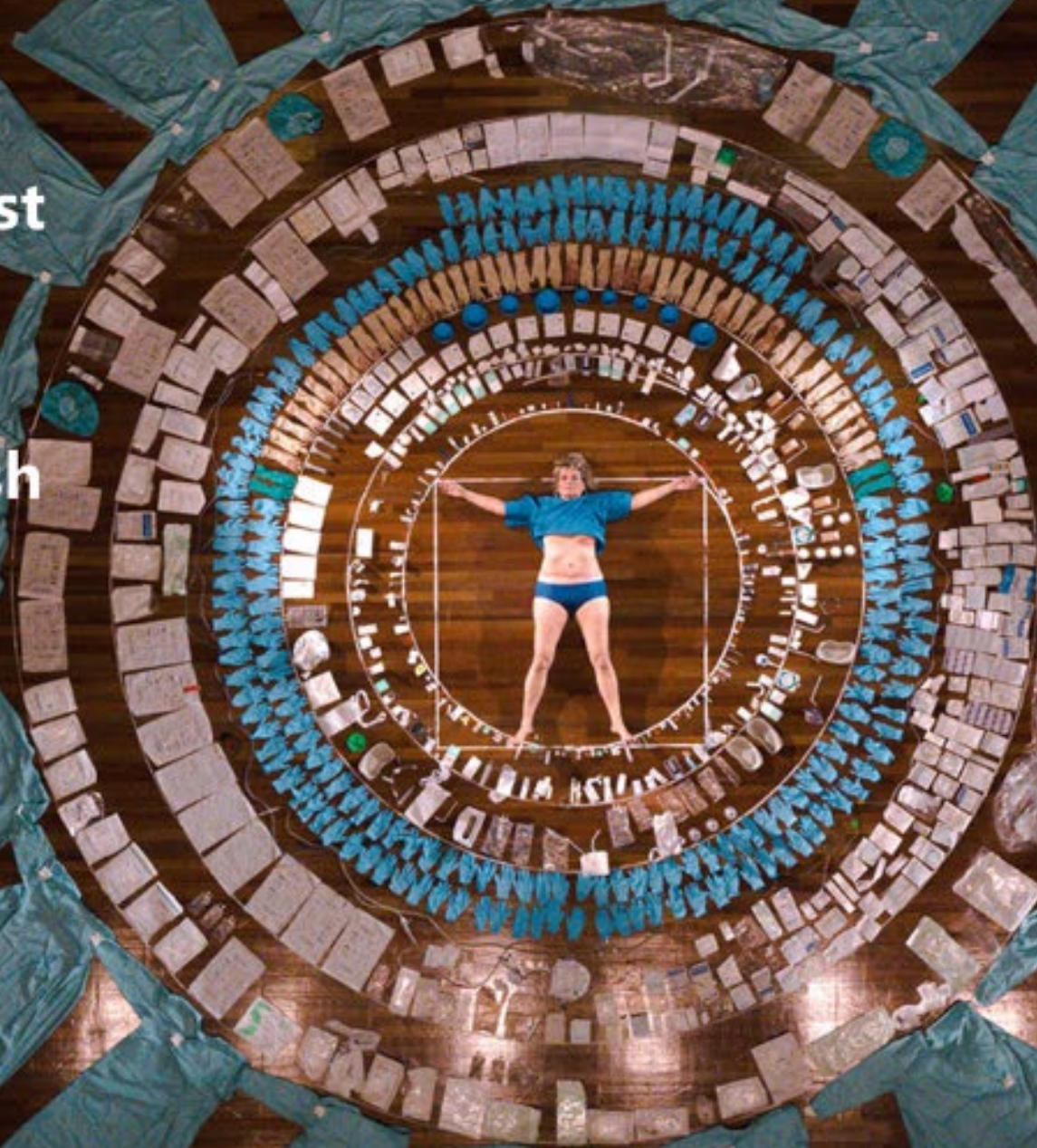


Cut the Carbon:

Reducing Surgical Waste

**Dutch spatial artist
Maria Koijsck**

**Artwork with trash
from her surgery
and anesthesia**



Maria Koijsck and Eva Glasbeek, From: Environmental Footprint of Anesthesia:
More than Inhaled Anesthetics! Anesthesiology. 2021;135(6):937-939.

The Case for a Greener OR

Health care accounts for
4.6% of global
greenhouse gas
emissions



Operating rooms
generate up to
one-third of total
hospital waste



The Case for a Greener OR

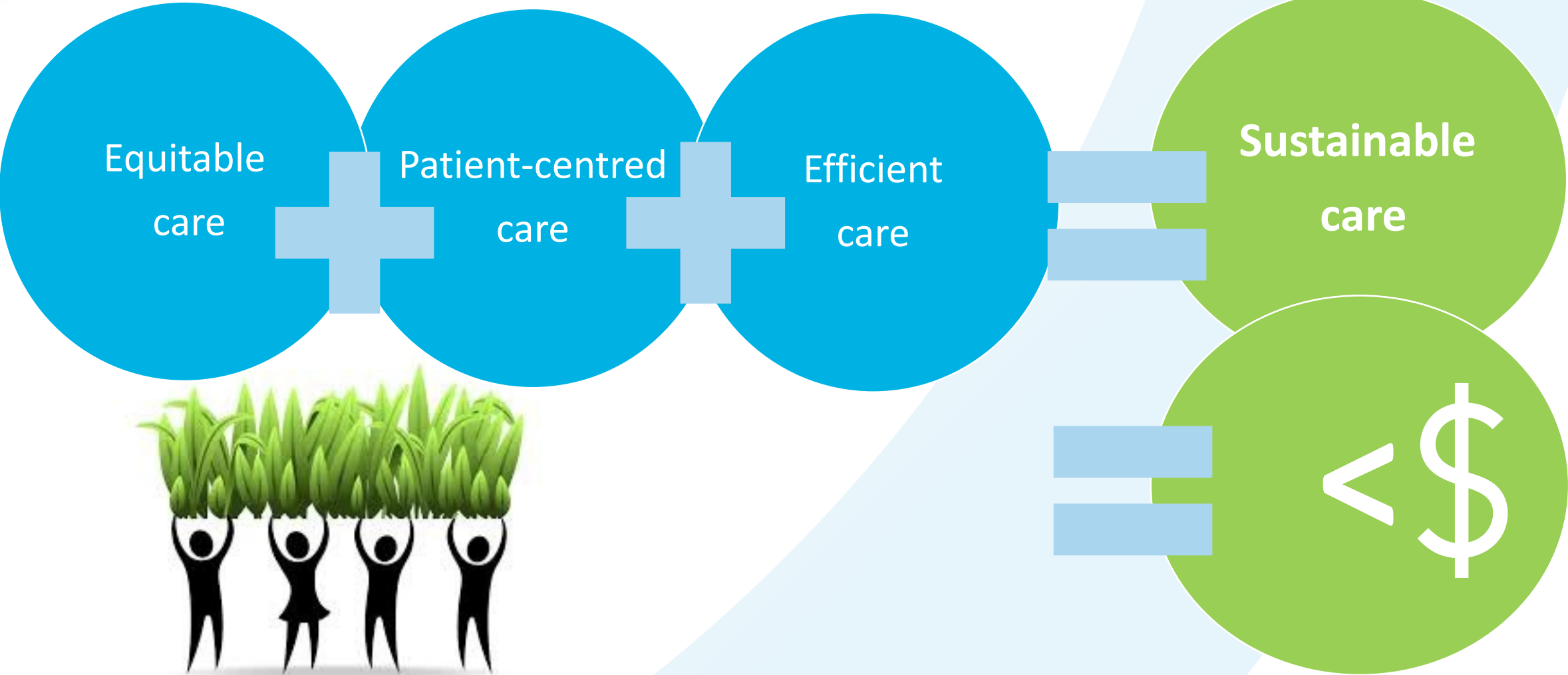
Sevoflurane
has an atmospheric
lifetime of 2 years

Desflurane has an
atmospheric lifetime of
14 years

Nitrous oxide
has an atmospheric
lifetime of *114* years!



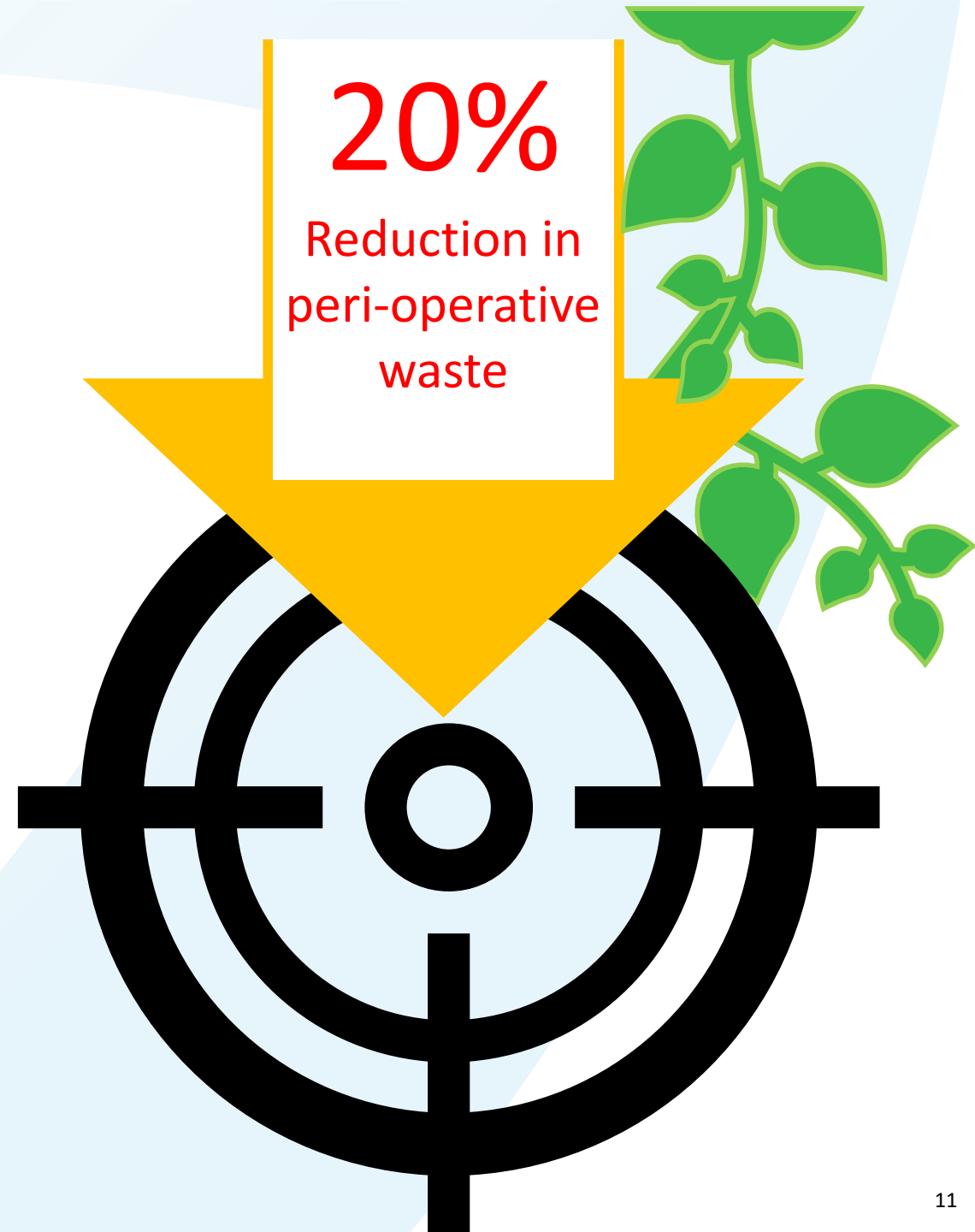
Establishing Buy-in



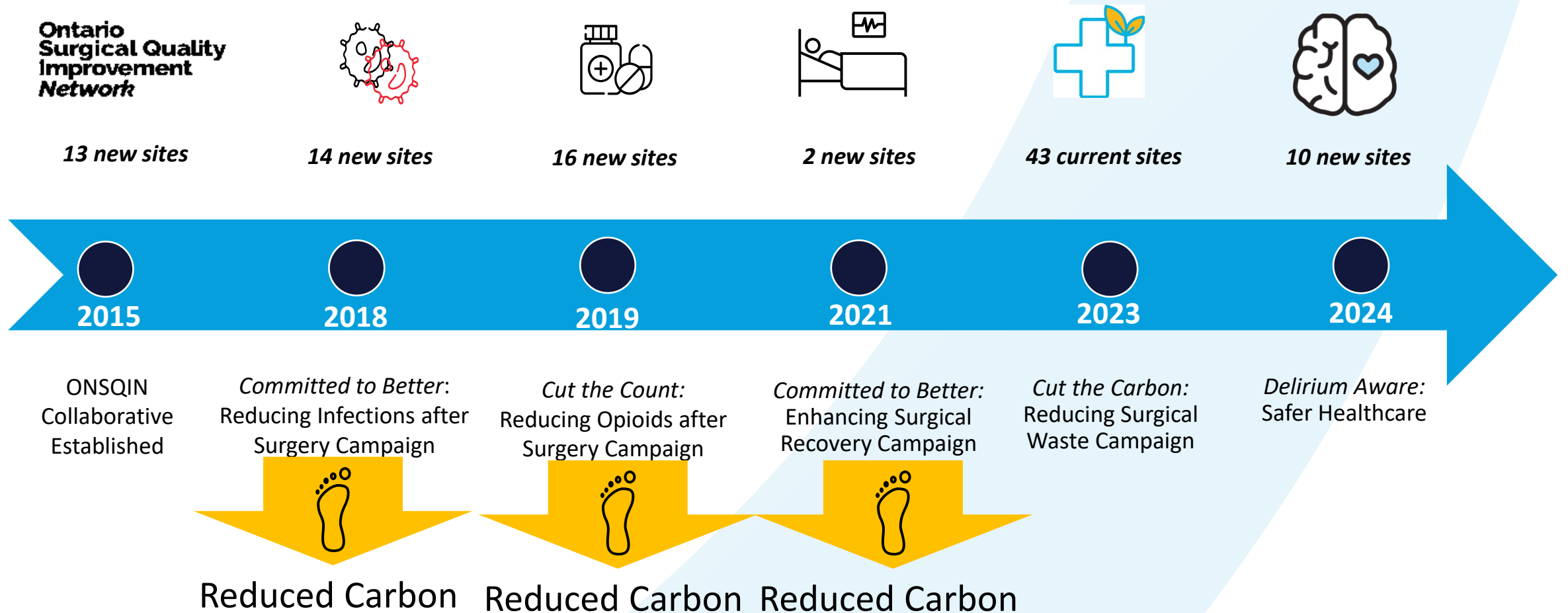
Campaign Goal

Recognizing that efficient care often means less waste, this campaign encourages the continued implementation of **equitable, patient-centered, and efficient care** but *with a green focus*.

The goal is to improve the patient's journey from pre-admission through the preoperative, intraoperative, and postoperative phases of surgical care *while reducing surgical waste*.



Leveraging Previous Campaigns



Methodology

Status Options:



NOT WORKING ON



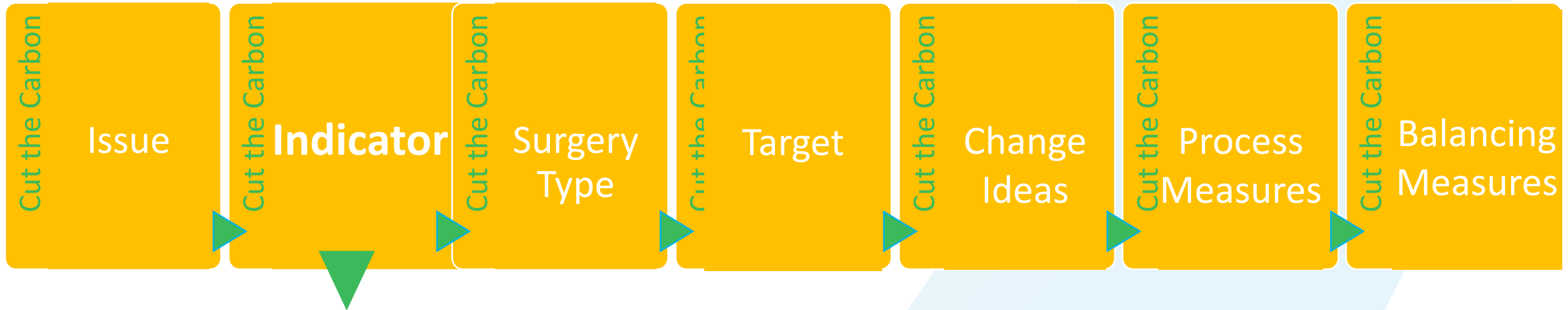
WORKING ON (NOT YET PARTIALLY ACHIEVED/ACHIEVED)



PARTIALLY ACHIEVED



ACHIEVED



Sustainability Leadership
Low Value Care
Anesthetic Gasses
Reusables
Waste

Ontario Health supports:

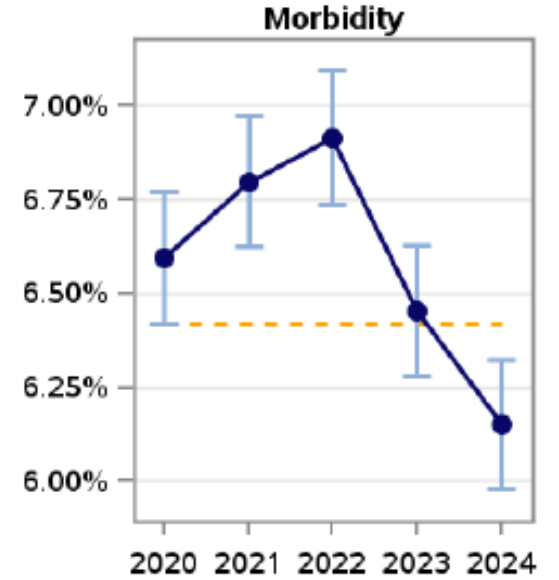
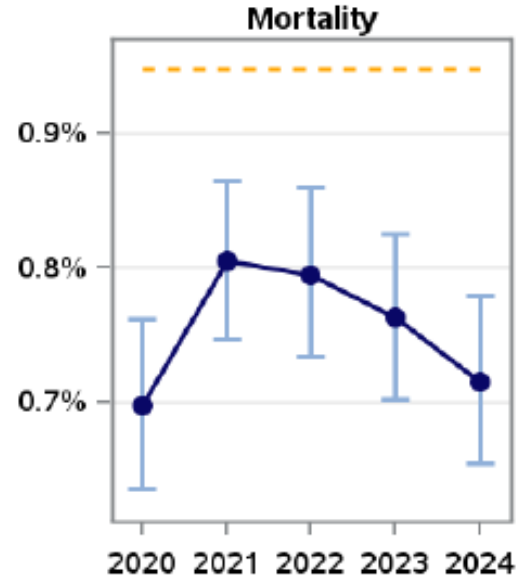
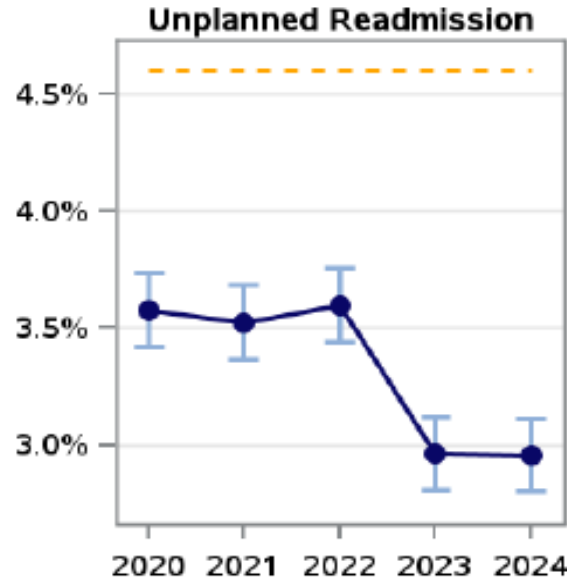
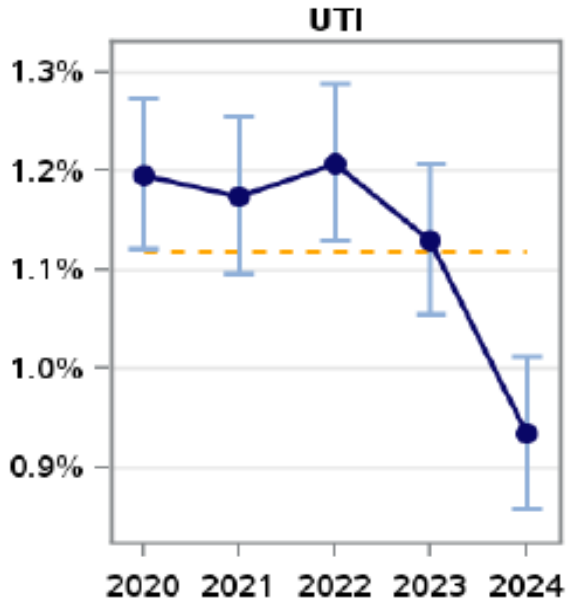
- Guidance resources
- Hosting educational webinars
- Networking/ mentorship

Ontario Surgical Quality Improvement Network



Results and Potential Impact

2023-2024 Results



30
TEAMS

included a sustainable initiative on their Surgical Quality Improvement Plan

7
TEAMS

completely removed desflurane from their hospital formulary



64%

of patients brought their own reusable bag to their surgical procedure

34%

of patients brought their own reusable water container to their surgical procedure

63%

reduction in plastic bags purchased in surgical departments

85%

of patients are receiving a nondesflurane anesthesia



32,000+

surgeries performed without a postoperative complication

2024-2025 Results so far

- 103 unique Cut the Carbon Scorecard change ideas

Baseline	Red – 39		Orange - 30		Yellow - 29	
Progress Report Update	Stayed Red	11	Stayed Orange	4	Stayed Yellow	10
	To Orange	5	To Yellow	18	To Green	17
	To Yellow	11	To Green	4		
	To Green	9				

- 71% improved the baseline Red scoring
- 73% improved the baseline Orange scoring
- 59% improved the baseline Yellow scoring

Potential Impact

Median number of days of an extended length of stay due to an adverse event such as SSI is **7.5 days = 45kg CO₂e**

45kg CO₂e x 7.5 days
= 337 kg CO₂e

Or

The equivalent of driving the approximate **distance between Toronto and Charlottetown, PEI (1387 km)**

16 hr 50 min
1,697 km



1 acute hospitalization day due to a postoperative issue is estimated to generate **45kg CO₂e.****



If all 53 hospitals in our network were able to reduce even 5 adverse events that could be the equivalent of **367,581 km** or **circling the planet 9 times*****

*<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8243999/>

**<https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator#results>

***<https://www.space.com/17638-how-big-is-earth.html>

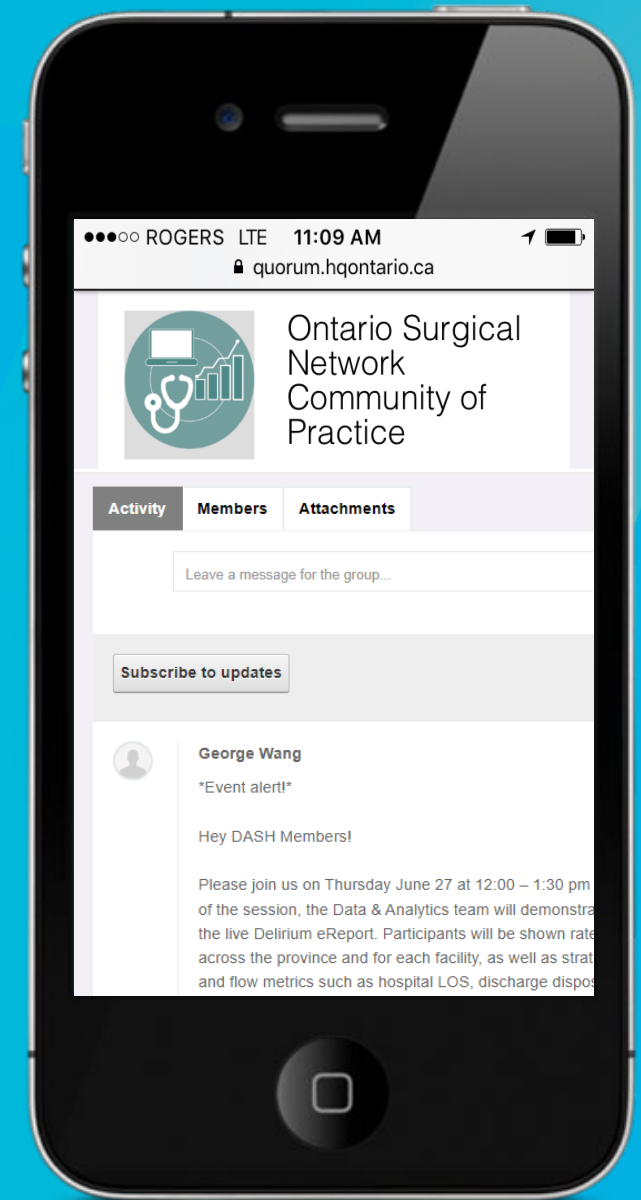
Follow the Fun



**The antidote
for *eco-anxiety*
is *eco-action*!**

Thank You.

CONTINUE the
CONVERSATION



Please provide feedback to inform future events

If you're heading out early,
Please fill out the
Symposium Evaluation Survey

