

# Sustainable Health System Community of Practice

## Report on Term One

Prepared by the Centre for Sustainable Health Systems

July 2022



## Message from the Executive Co-Sponsors

*This report marks the end of a successful first term for the Sustainable Health System Community of Practice. As this term ends, we are proud to reflect on and share the progress that we have made. We have had the privilege of expanding sustainability efforts through collaboration across the Toronto Academic Health Science Network and the Council of Health Sciences at the University of Toronto, engaging leadership, staff, clinicians, researchers, trainees, and many other members of the healthcare community. As we look toward a renewed three-year term and refreshed workplan, we have a strong foundation to build upon. We know we will achieve much more by continuing to work together.*



**Adalsteinn Brown**

*Dean, Dalla Lana School of Public Health,  
University of Toronto*



**Ronald Cohn**

*President & Chief Executive Officer,  
The Hospital for Sick Children*

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## ABOUT THIS REPORT

This report includes a description of the work of the Community of Practice during its first term and highlights key accomplishments. Throughout the report, we have linked to the various reports, tools, and other resources that have resulted from the efforts of the Community of Practice, and we encourage the sharing of these tools to facilitate widespread change within our health systems. The Community of Practice has been renewed for another three-year term, which will allow for the important work described in this report to be furthered, along with new and emerging areas of focus.

## THE SUSTAINABLE HEALTH SYSTEM COMMUNITY OF PRACTICE

Climate change is recognized as the biggest global health threat of the 21st century and reduction in greenhouse gas emissions is central to global efforts to address climate change. Health care is one of the leading sources of greenhouse gas emissions in Canada and around the world.

### A SUSTAINABLE HEALTH SYSTEM PROVIDES HIGH-QUALITY, ACCESSIBLE AND EQUITABLE CARE WHILE CONSIDERING AND MITIGATING THE IMPACT OF THAT CARE ON THE CLIMATE AND OUR FUTURE.

In recognition of the urgent need to work together to address this important health and social issue, the leadership of the [Toronto Academic Health Science Network](#) and the [Council of Health Sciences of the University of Toronto](#) came together to form the Sustainable Health System Community of Practice in September 2020.

The Community of Practice functions to provide evidence, ideas, leadership, and advocacy to reduce and minimize greenhouse gas emissions through action, research, and education. The Terms of Reference for the Community of Practice are available to [view in the appendix here](#).

The Community of Practice is led by two executive co-sponsors: a CEO from one of the 14 Toronto Academic Health Science Network hospitals, and a Dean from one of the seven health faculties that form the Council of Health Sciences at the University of Toronto. Dr. Adalsteinn (Steini) Brown, Dean of the Dalla Lana School of Public Health, has served as executive co-sponsor throughout the life of the Community of Practice. Dr. Joshua Tepper, then the President and Chief Executive Officer of North York General Hospital, helped launch the Community of Practice. Dr. Andy Smith, the President and Chief Executive Officer of Sunnybrook Health Sciences Centre, assumed the role in fall 2020 and co-led the initiative for a year. Dr. Ronald Cohn, President and CEO of The Hospital for Sick Children, has served as executive co-chair since the fall of 2021. In addition to the executive co-sponsors, the senior leadership table includes 16 representatives across the Toronto academic health science community. The full list of members is available to view on [page 11 of the report](#).

The Community of Practice has increased awareness and engagement in high quality, low carbon sustainable care locally, nationally, and internationally. It is coordinated by the Centre for Sustainable Health Systems.

In the two years of its first term, the Community of Practice aimed to:

- ▶ Identify, spread, leverage, and evaluate existing good practice strategies to reduce greenhouse gas emissions
- ▶ Deliver and evaluate educational initiatives for sustainable health care and health systems for staff, faculty, and trainees
- ▶ Organize and support events that bring together partners from across the Toronto Academic Health Science Network and the University to clarify issues, review options and new research, and identify priority items for collaborative action
- ▶ Work towards broad uptake of the results of Community of Practice's efforts, provincially, nationally, and internationally

To learn more about the Community of Practice, please visit the Centre [website](#).

## TERM ONE ACCOMPLISHMENTS

### FALL 2021 'TAKE THE PULSE' SURVEY

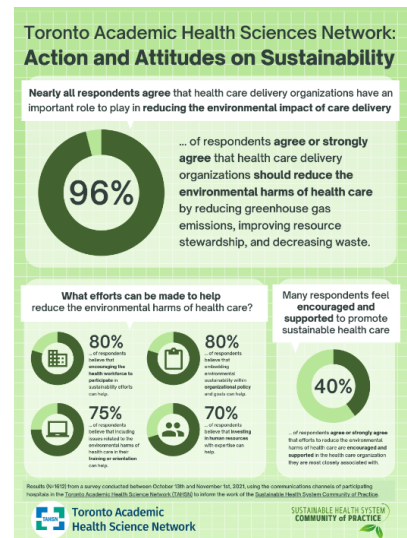
To engage the wider Toronto area health sciences community, the Centre for Sustainable Health Systems designed a survey on health system sustainability for circulation within the Toronto Academic Health Science Network hospitals. The survey generated both community-wide and organization-specific information that could be used to identify opportunities and evaluate impact.

The survey was designed to establish respondent perception of:

- ▶ The importance of sustainable health care
- ▶ Organizational support for sustainability efforts
- ▶ Approaches to encourage sustainability

Survey results indicated a strong agreement that health care delivery organizations have a role in reducing the environmental harms of health care. A summary of the survey results can be [viewed in the appendix](#) and the full report can be viewed and downloaded from the [Community of Practice's website here](#).

At the request of four hospitals, organization-specific survey reports were generated to help hospitals understand the sustainability views and needs of their workforce.



## WORKING GROUPS

The Community of Practice has achieved most of its impact through the efforts of Working Groups, which leverage the expertise and interests of the broader community. During the first term, five working groups were active. We have identified all Working Group leaders and members on [page 13 of the report](#).

- ▶ Sustainable Inhalers
- ▶ Sustainable Operating Rooms
- ▶ Sustainable Virtual Care
- ▶ Organizational Readiness for Sustainability
- ▶ Equity in Climate Action

A **signature achievement** for the Community of Practice was the formation of **CASCADES** – “Creating a Sustainable Canadian Health System in a Climate Crisis” – a national capacity-building initiative for climate action and awareness in health care, funded for \$6 million dollars over five years by Environment and Climate Change Canada. Led by the University of Toronto, with university and NGO partners, CASCADES leverages and extends the work of the Community of Practice locally and nationally. CASCADES has assumed responsibility for the delivery of continuing professional development courses, resources and events.

To learn more, visit the [CASCADES website](#).

 **CASCADES**

SUSTAINABLE INHALERS WORKING GROUP

## Sustainable Inhalers Playbook

With support from CASCADES to engage patient partners and garner feedback from the CASCADES Sustainable Inhalers National Advisory Committee, the materials from the Sustainable Inhalers Working Group were refined and adapted into a Playbook, which can be [accessed on the CASCADES website here](#).

The resources generated from the webinars included provider awareness tools, patient communication tools, and prescribing tools to aid in implementation.



Additional resources from CASCADES:

- ▶ [Sustainable Inhalers Primer](#)
- ▶ [Sustainable Inhalers Infographics & Posters](#)

An important portion of health care’s climate footprint is due to prescribing and procuring drugs, which is why metered dose inhalers (MDIs) were a focus of the Centre’s activities. People with respiratory conditions are at particular risk of worsening illness with climate change,<sup>1,2</sup> yet MDIs, which are used to manage chronic respiratory conditions such as asthma and chronic obstructive pulmonary disease, contribute significantly more to greenhouse gas emissions than dry powder inhalers (DPIs).<sup>3</sup> The Community of Practice has worked to facilitate provider awareness about this issue and to foster understanding of how inhalers can be sustainably prescribed.

### WEBINARS

Led by Dr. Kimberly Wintemute, the Sustainable Inhalers Working Group designed a peer-to-peer educational intervention and generated resources to support practice change. In June 2021, [the first educational webinar](#), available to view on the [CASCADES YouTube channel](#), was delivered in partnership with the UofT Department of Family and Community Medicine, the Leslie Dan Faculty of Pharmacy, and the Bloomberg Faculty of Nursing. Repeat sessions were offered in September, November, and December 2021.

**Climate Impact of Inhalers:**  
An Educational Webinar

Thursday, June 17th, 2021  
12-1 pm EST ([register here](#)) or 7-8 pm EST ([register here](#))

100 MDI inhalers are equivalent to a 290 km car journey

- Learn about the climate impact of inhalers
- Identify opportunities to mitigate that impact
- Gain access to tools and resources to support your efforts

Sustainable Inhalers Webinar Poster

### SUSTAINABLE INHALERS STATUS & NEEDS ASSESSMENT

To better understand whether local academic primary care teams were positioned to use these resources, the Working Group conducted discussions with expert stakeholders across the 14 Family Health Teams affiliated with the Toronto Academic Health Science Network. The results were used to generate a score card and an overview of key change opportunities and challenges; these materials can be [viewed in the appendix](#).

SUSTAINABLE OPERATING ROOMS WORKING GROUP

## Sustainable Anesthesia Playbook

The Community of Practice has focused on various aspects of OR sustainability: anesthesia, OR waste, and energy consumption.

CASCADES has developed a Playbook that provides depth insight into one area of opportunity for OR sustainability: regional anesthesia for breast surgery; the Playbook can be [accessed on the CASCADES website here](#).



Additional resources from CASCADES:

- ▶ [Operating Room Primer](#)
- ▶ [Operating Room Infographic](#)
- ▶ [Anesthetic Gases Primer](#)
- ▶ [Anesthetic Gases Infographics & Posters](#)

Though vital to healthcare, operating rooms (ORs) are among the most resource intensive and polluting components of healthcare, responsible for up to a third of total hospital waste.<sup>4</sup> Given the environmental footprint of ORs, it is an opportune site for sustainability interventions.

### GUIDANCE DOCUMENT

An evidence-based guidance document was created to help hospitals improve the environmental sustainability of OR. The guidance document was developed collaboratively by Best Practice in Surgery and the Centre for Sustainable Health Systems. It synthesizes literature and evidence from clinical and implementation science to provide recommendations on reducing the environmental impact of ORs.

- ▶ The *Greening ORs: A guidance document for improving the environmental sustainability of operating rooms* is available on the [Best Practice in Surgery website](#).

### SUSTAINABLE OR SCORECARD

To support practice change, the Sustainable Operating Room Working Group, led by Dr. Robin McLeod, used the guidance document to define key areas for action and iteratively developed a score card based upon this guidance. The score card presented the results of a benchmarking exercise, which reviews 4 areas of environmental impact: anesthetic gases, reusables, waste management, and energy management. The scorecard was designed, revised, and completed through discussions with expert stakeholders across the Toronto Academic Health Science Network.

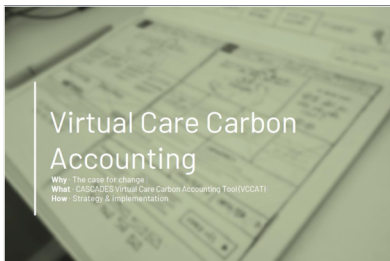
- ▶ The score card is available to [view in the appendix](#).
- ▶ A fillable version of the scorecard, which can be used to track and measure progress of implementation, is available to view and download on the [Community of Practice's website here](#).

SUSTAINABLE VIRTUAL CARE WORKING GROUP

## Sustainable Virtual Care Playbook

In collaboration with CASCADES, this working group has developed the Virtual Care Carbon Accounting Playbook. This playbook features the CASCADES Virtual Care Carbon Accounting Tool (VCCAT), which has been designed to help health care sites better understand the carbon emissions and costs associated with patient travel.

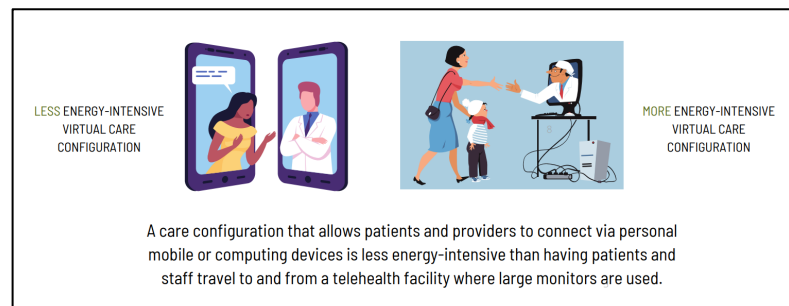
The Virtual Care Carbon Accounting Playbook can be [accessed on the CASCADES website here](#).



Additional resources from CASCADES:

- ▶ [Virtual Care Infographic](#)
- ▶ [Virtual Care Whitepaper](#)

In-person care delivery systems require that patients, staff, and caregivers travel to meet at care facilities. That travel, combined with the building, heating, and lighting of those facilities, comprises a significant portion of health system GHG emissions. Moving from in-person to virtual care delivery is therefore a potential way to reduce the environmental impacts of some types of care delivery – in the short term, via a reduction in travel-related emissions, and in the longer term, via a decreased need to build and maintain clinical and office space.



Excerpt from Virtual Care Infographic

The Virtual Care Working Group, led by Peter Goldthorpe and Oliver Tsai, worked to leverage the expertise and data generated by many Toronto Academic Health Science Network hospitals given the expansion of virtual care during the COVID-19 pandemic. The aim was to develop a convenient tool to support consistent estimation of carbon savings from the travel averted by the use of virtual care. The Working Group also aimed to contribute to the conversation about the wider environmental impacts of virtual care from information and communication infrastructure and the energy needs associated with the growing reliance on digital health data. As well, the Working Group highlighted the importance of insuring that virtual care is used appropriately, and in accordance with patient wishes and clinical judgment.

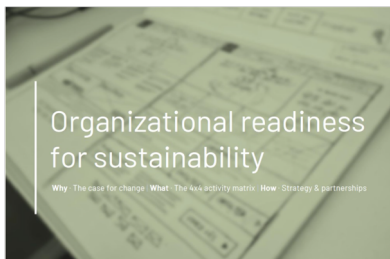


ORGANIZATIONAL READINESS WORKING GROUP

# Organizational Readiness Playbook

The Organizational Readiness Playbook was developed in collaboration with CASCADES to provide ideas, examples, and resources for health systems to complete a high-level readiness assessment of their health care setting and identify opportunities to increase the visibility and impact of sustainability efforts.

The Organization Readiness for Sustainability Playbook is available to view on the [CASCADES website here.](#)



For successful and impactful sustainability interventions within health care, organizations need to understand Why, What and How they can mobilize and guide action. The organizational readiness playbook compiles resources to answer these questions, so that organizations can move forward strategically.

### ORGANIZATIONAL READINESS PLAYBOOK AND ACTIVITY MATRIX

Toronto Academic Health Science Network hospitals are already leading many sustainability activities and are ready to deepen and expand their activities and impact. Informed by discussions with expert informants from across the Toronto Academic Health Science Network, the Working Group, led by Dr. Fiona Miller, generated ideas, and compiled resources to assist in these efforts.

The Organizational Readiness Playbook identifies four Domains of Concern and four Areas of Activity that hospitals can pursue to address climate change and sustainability. The Activity Matrix can be used to identify and prioritize opportunities for action.

| Area of Activity           | Domain of Concern         |                                 |                          |                          |
|----------------------------|---------------------------|---------------------------------|--------------------------|--------------------------|
|                            | Climate Change            |                                 | Sustainability           |                          |
|                            | Greenhouse gas reductions | Climate adaptation & resilience | Natural environment      | Social sustainability    |
| Service design & delivery  | <input type="checkbox"/>  | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> |
| Procurement & supply chain | <input type="checkbox"/>  | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> |
| Facilities & estates       | <input type="checkbox"/>  | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> |
| Food & nutrition           | <input type="checkbox"/>  | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> |

Activity Matrix from the Organizational Readiness Playbook

### HIGHLIGHTS REPORT

A Highlights Report was developed and shared internally among the Toronto Academic Health Science Network to showcase the wide range of sustainability initiatives underway. This snapshot was organized according to the Why, What, and How framework of the Playbook. It shows clearly that member hospitals are highly engaged. It also indicates a continued need to share knowledge and experience, and to provide support to those taking leadership to address sustainability in their institutions.

## BUILDING NEW KNOWLEDGE

One of the aims of the Sustainable Health System Community of Practice is to continually improve upon its efforts by building new knowledge through collaboration and research. The Community of Practice has worked to develop new knowledge in two critical areas: how to embed equity within climate action in health systems, and how initiatives like this can enable transformative change.

## EQUITY IN CLIMATE ACTION WORKING GROUP

Ample evidence has shone light on the ways in which systemic racism shapes the structural determinants of health for Black and racialized people and contributes to and intensifies socio-economic marginalization.

In 2019, the City of Toronto officially launched its [Climate Resilience Strategy](#), highlighting the importance of applying an equity approach to climate change interventions, which responds to the disproportionate ways that equity seeking groups will be impacted by climate change and other unexpected societal shocks. An equity and climate resilience focus for the Community of Practice aligns with the City of Toronto's Climate Resilience Policy.

The Sustainable Health System Community of Practice has agreed to prioritize the development of an equity framework to ground and shape the group's overarching work. Led by Dr. Imara Rolston, the Working Group has led the development of a framework and provided an equity and climate resilience focus to the Community of Practice's current work on climate mitigation. To start this work, the Equity in Climate Action Working Group has developed a report on health equity as it relates to sustainable health systems, which will be available to view and download on the [Community of Practice's website](#) soon.

## SUSTAINABILITY TRANSITIONS

Funded by the Social Sciences and Humanities Research Council, and with approval from the University of Toronto's Research Ethics Board, Dr. Fiona Miller and colleagues aim to study the Community of Practice as a transformational change effort, conceptualizing the Community of Practice's efforts as components of a sustainability transition experiment through which new social and technological configurations may emerge.

In addition to enabling the evaluation of the Community of Practice as a system change strategy, the study supports focused evaluations of the efforts of each Working Group, to support the publication of Working Group results.

## GOING FORWARD

The Sustainable Health System Community of Practice has been renewed for a second term of three years, which will allow the important work accomplished so far to be leveraged and expanded. The Centre for Sustainable Health Systems will continue to serve as secretariat for these efforts, leveraging CASCADES for critical infrastructure and support, including continuing professional development courses, capacity-building events, and support for local innovation.

## Senior Leadership Table



**Rudy Dahdal**  
*VP, Planning, Redevelopment  
and Clinical Support,  
North York General Hospital*



**Dale Clement**  
*VP Clinical, Unity Health*



**Karli Farrow**  
*President and CEO, Trillium  
Health Partners*



**Brian Hodges**  
*EVP Education & Chief Medical  
Officer, University Health  
Network*



**Peter Goldthorpe**  
*VP Transformation,  
The Hospital for Sick  
Children*



**Linda Johnston**  
*Dean, Faculty of Nursing,  
UofT*



**Robin McLeod**  
*Vice Chair, Quality and Best  
Practices, Dept. of Surgery,  
UofT*



**Imara Rolston**  
*Assistant Professor, DLSPH;  
Policy Development Officer,  
City of Toronto*



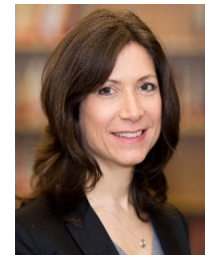
**Kaveh Shojania**  
*Vice Chair, Quality &  
Innovation; Professor, Dept.  
of Medicine, UofT*



**Christine Soong**  
*Division Head, Hospital  
Medicine, Sinai Health*



**Oliver Tsai**  
*Director of IT, Sunnybrook  
Hospital*



**Kimberly Wintemute**  
*Family Physician; Dept. of  
Family & Community Medicine,  
UofT*



**Daneille Toccalino**  
*Emerging Leaders for  
Environmentally Sustainable  
Health Systems (ELESH)*



**Lisa Dolovich**  
*Dean, Faculty of Pharmacy,  
UofT*



**Ron Saporta**  
*COO, Facilities & Services,  
UofT*



**Mike Heenan**  
*Executive VP, Clinical Support,  
Post-Acute Care and  
Redevelopment, Humber River  
Hospital*

## Secretariat



The [Centre for Sustainable Health Systems](#) strives to lead and support efforts to achieve truly sustainable health systems. Such systems are characterized by practices and policies that are environmentally, socially, and financially sustainable, allowing us to address the health and care needs of today without compromising our ability to address those needs tomorrow.

The Centre serves as secretariat to the Community of Practice, offering the following forms of support:

- ▶ Organizing meetings of the senior leadership table and working groups
- ▶ Convening events and educational opportunities
- ▶ Supporting evaluation and conducting research
- ▶ Synthesizing evidence

Centre members with secretariat duties for the Community of Practice are:



**Fiona Miller**

*Founding Director, Centre for Sustainable Health Systems; Professor, Institute of Health Policy, Management & Evaluation UofT*



**Geoff Anderson**

*Fellow, Centre for Sustainable Health Systems; Professor, Institute of Health Policy, Management & Evaluation UofT*



**Nicole Simms**

*Managing Director, Centre for Sustainable Health Systems (through summer 2021; now with CASCADES)*



**Helen Valkanas**

*Research Officer, Centre for Sustainable Health Systems*



**Naba Khan**

*Research Assistant, Centre for Sustainable Health Systems*



## Working groups

### SUSTAINABLE INHALERS

#### Working Group Lead

- ▶ **Kimberly Wintemute**, Family Physician, Department of Family and Community Medicine, Assistant Professor, University of Toronto

#### Working group members

- ▶ **Jean Wilson**, Assistant Professor, Bloomberg Faculty of Nursing; Primary Health Care Nurse Practitioner
- ▶ **Lisa Dolovich**, Dean, Leslie Dan Faculty of Pharmacy, University of Toronto
- ▶ **Fiona Miller**, Professor, Institute of Health Policy, Management and Evaluation, Dalla Lana School of Public Health; Director, CSHS

#### Panelists

- ▶ **Samantha Green**, Family Physician, Assistant Professor, and Co-Lead in Climate Change and Health, Department of Family and Community Medicine, University of Toronto
- ▶ **Brenda Chang**, Clinical Pharmacy Practitioner, St. Michael's Hospital Academic Family Health Team
- ▶ **Gabrielle Busque**, BSc, PharmD

### SUSTAINABLE VIRTUAL CARE

#### Working Group Leads

- ▶ **Peter Goldthorpe**, VP Transformation, The Hospital for Sick Children
- ▶ **Oliver Tsai**, Director of IT, Sunnybrook Hospital

#### Working Group Members

- ▶ **Payal Aggarwal**, Family Physician and Innovation Fellow, Institute for Health System Solutions and Virtual Care (WIHV), Women's College Hospital
- ▶ **Bobby Gheorghiu**, Manager of Trending and Performance, Canada Health Infoway
- ▶ **Kyle Robinson**, Director, Facilities, Operations and Sustainability, The Hospital for Sick Children
- ▶ **Nicole Simms**, Managing Director, Centre for Sustainable Health Systems; Regional Director (Central Canada), CASCADES

### EQUITY IN CLIMATE ACTION

#### Working Group Lead

- ▶ **Imara Rolston**, Assistant Professor, DLSPH; Policy Development Officer, Confronting Anti-Black Racism (CABR) Unit, City of Toronto

#### Working Group Members

- ▶ **Dale Clement**, VP Clinical, St. Joseph's Health Centre
- ▶ **Anna Cooper Reed**, Emerging Leaders for Environmentally Sustainable Health Systems (ELESH)

### SUSTAINABLE OPERATING ROOMS

#### Working Group Lead

- ▶ **Robin McLeod**, Vice Chair, Quality and Best Practices, Department of Surgery, University of Toronto

#### Working Group Members

- ▶ **Ali Abbass**, Anaesthesiologist, St. Joseph's Health Centre (SJHC), Unity Health Toronto
- ▶ **Laura Donahoe**, Thoracic Surgeon, Toronto General Hospital; Assistant Professor, Department of Surgery, University of Toronto
- ▶ **Emily Pearsall**, Manager, Best Practice in Surgery, Department of Surgery, University of Toronto
- ▶ **Ed Rubenstein**, Director of Environmental Compliance, Risk and Sustainability, UHN
- ▶ **Fiona Miller**, Professor, Institute of Health Policy, Management and Evaluation, Dalla Lana School of Public Health; Director, CSHS
- ▶ **Cameron Irani**, Operating Room RN, The Hospital for Sick Children; Master's in Nursing, University of Toronto
- ▶ **Helen Valkanas**, Research Officer, Centre for Sustainable Health Systems

### ORGANIZATIONAL READINESS

#### Working Group Lead

- ▶ **Fiona Miller**, Professor, Institute of Health Policy, Management and Evaluation, Dalla Lana School of Public Health; Director, CSHS

#### Working Group Members

- ▶ **Peter Goldthorpe**, Vice-President, Transformation, The Hospital for Sick Children
- ▶ **Penny Karafile**, Director, Support Service and Business Development, Scarborough Health Network
- ▶ **Katelyn Poyntz**, Director, Project Engineering & Energy, Unity Health Toronto, Unity Health
- ▶ **Kimberly Wintemute**, Department of Family & Community Medicine, University of Toronto

- ▶ **Kaveh Shojanian**, Vice Chair, Quality & Innovation; Professor, Department of Medicine; University of Toronto
- ▶ **Oliver Tsai**, Director of IT, Sunnybrook Hospital
- ▶ **Fiona Miller**, Professor, Institute of Health Policy, Management and Evaluation, Dalla Lana School of Public Health; Director, Centre for Sustainable Health Systems

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# APPENDICES

## TERMS OF REFERENCE

### BACKGROUND

Climate change is recognized as the biggest global health threat of the 21st century and reduction in greenhouse gas emissions is central to global efforts to address climate change. Healthcare is one of the leading sources of greenhouse gas emissions in Canada and around the world. Across TAHSN and the Health Science Faculties at the University of Toronto many of our staff, faculty and trainees are playing important roles in efforts to reduce greenhouse gas emissions, but there are opportunities for us to do more collectively. A sustainable health system provides high quality, accessible and equitable care while taking into account and mitigating the impact of that care on the climate and our future. Collectively embracing sustainability as part of our commitment means that we work together to provide evidence, ideas, leadership and advocacy to reduce and minimize greenhouse gas emissions through action, research and education, first at a local level, with the ambition to play a leadership role nationally and internationally.

The leadership of Toronto Academic Health Science Network (TAHSN) and the Council of Health Sciences (CHS), which represents the University of Toronto health sciences sector, sees an urgent need to work together, along with other partners, to address this important health and social issue. This Community of Practice will be led by Executive Sponsors from the Toronto Academic Health Science Network CEO Committee and the CHS of the University of Toronto.

### PURPOSE/MANDATE

The purpose of the Sustainable Health System Community of Practice is to:

- ▶ Develop a strategy of SMART (**S**pecific, **M**easurable, **A**chievable, **R**ealistic, and **T**imely) goals to address the challenge of climate change and the development and implementation of sustainable care systems. Work with the Toronto Academic Health Science Network and the Council of Health Sciences to support and release this strategy and goals.
- ▶ Organize and support at least one annual event that brings together partners from across the Toronto Academic Health Science Network and the University to clarify issues, review options and new research, and identify priority items for collaborative action
- ▶ Identify, spread, leverage and evaluate existing good practice strategies to reduce greenhouse gas emissions generated in the delivery of health care and the operation of health systems
- ▶ Deliver and evaluate at least two annual educational efforts around sustainable healthcare and health systems for staff, faculty and trainees
- ▶ Work towards broad uptake of the results of our efforts, provincially, nationally and internationally
- ▶ Apply to at least two funding opportunities annually to support implementation of collaborative action

#### **Reporting Relationship**

- ▶ The Community of Practice is accountable to the Toronto Academic Health Science Network CEO Committee and the Council of Health Sciences.

#### **Meetings**

- ▶ The Community of Practice will start with a two-year term with an opportunity to extend the term based on annual reviews of progress and the discretion of the Toronto Academic Health Science Network CEO and the Council of Health Sciences.

#### **Decision Making**

- ▶ The Community of Practice shall make decisions by consensus.

**Membership**

- ▶ Executive Sponsors Co-Chairs – Toronto Academic Health Science Network CEO and Health Science Department Dean
- ▶ Toronto Academic Health Science Network and the Council of Health Sciences to identify and appoint at least three but not more than five members each who are experts or leaders
- ▶ Representative from Toronto Public Health, to support a system-level focus related to integrated services and city planning
- ▶ Community members (outside of TAHSN and CHS) appointed where appropriate
- ▶ Ex officio representation from the University of Toronto Centre for Sustainable Health Systems, which is to provide support to this initiative and serve as secretariat.

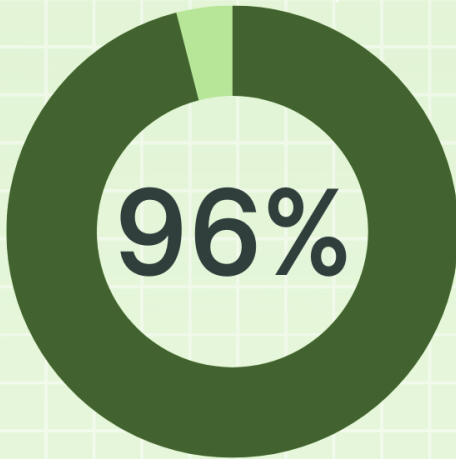
**Proposed skills/roles:**

- ▶ C-Suite executives from the Toronto Academic Health Science Network and senior leaders from the Council of Health Sciences who can influence and lead policy change in practice areas related to GHC emissions priorities and sustainable healthcare, including through shifts in the delivery of care, the organization of services, or the management of procurement and capital investment.
- ▶ Representatives from the Toronto Academic Health Science Network, the Council of Health Sciences and others with expertise in practice areas related to GHC emissions priorities or expertise in research or education related to GHC emission measurement or mitigation and sustainable health systems.
- ▶ Additional expertise and technical skills to be consulted, as needed.



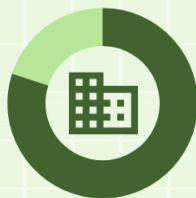
# Toronto Academic Health Sciences Network: Action and Attitudes on Sustainability

**Nearly all respondents agree** that health care delivery organizations have an important role to play in **reducing the environmental impact of care delivery**

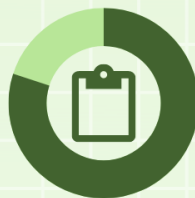


... of respondents **agree or strongly agree** that health care delivery organizations **should reduce the environmental harms of health care** by reducing greenhouse gas emissions, improving resource stewardship, and decreasing waste.

**What efforts can be made to help reduce the environmental harms of health care?**



**80%**  
... of respondents believe that **encouraging the health workforce to participate** in sustainability efforts can help.



**80%**  
... of respondents believe that **embedding environmental sustainability within organizational policy and goals** can help.

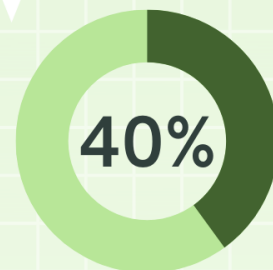


**75%**  
... of respondents believe that **including issues related to the environmental harms of health care in their training or orientation** can help.



**70%**  
... of respondents believe that **investing in human resources with expertise** can help.

Many respondents feel **encouraged and supported** to promote sustainable health care



... of respondents **agree or strongly agree** that efforts to reduce the environmental harms of health care are **encouraged and supported** in the health care organization they are most closely associated with.

Results (N=1612) from a survey conducted between October 13th and November 1st, 2021, using the communications channels of participating hospitals in the [Toronto Academic Health Science Network \(TAHSN\)](#) to inform the work of the [Sustainable Health System Community of Practice](#).

## Sustainable Inhalers across TAHSN-affiliated FHTs

### Background

The Inhalers Working Group of the Sustainable Health System Community of Practice sought to understand interest in sustainable inhaler practices across the 14 Family Health Teams (FHTs) affiliated with the Toronto Academic Health Science Network (TAHSN). As of June 7th, 2022, we had received input from 13 informants at 12 of the 14 FHTs to generate the current report.<sup>[1]</sup>

### Status

| Action Level                         | Number of FHTs |
|--------------------------------------|----------------|
| Initiative Implemented               | 2              |
| Partially Implemented or In Progress | 6              |
| Not Implemented or Status Unknown    | 6              |

[1] We collected information through 8 interviews and 5 email exchanges across 12 FHTs. Of the 14 academic FHTs, 6 are affiliated with 3 TAHSN hospitals (Unity Health, Sinai Health, Trillium Health Partners); 3 TAHSN hospitals are not affiliated with any FHTs (Baycrest, SickKids, Holland Bloorview).

### Needs Assessment

#### Overview

As of June 7th, 2022, six FHTs do not appear to have implemented or initiated sustainable inhaler work. Of those FHTs engaged, most were still planning for full implementation and most of the resident-led QI projects were set to end in early summer 2022. One FHT that had not implemented this work saw it as important but had put QI work on hold due to the pandemic; they intended to re-start the work in June 2022.

#### Factors affecting sustainable inhalers work

##### Awareness-raising role of the Community of Practice

The awareness of sustainable inhalers was almost always a result of a presentation by a colleague on the topic e.g., *through rounds*. There appeared to be a lack of physician familiarity with different inhaler options prior to these presentations.

##### Role of organizational factors

Pandemic related challenges limited the uptake of sustainable inhalers work: staff shortages, reallocation of existing staff, vaccination efforts, pause on QI work, and FHT's organizational capacity (e.g., *lack of designated clerical support staff*) that limited continuation of relevant work. A perceived lack of ownership of problem; some providers felt the advocacy work should be done at an organizational level, or pharmaceutical level.

Most FHTs have multiple sites and heterogeneity across sites limited FHT-wide implementation of sustainable inhalers work. Communication among sites, and communication between staff and leadership at different sites limited consistency of efforts and project continuity. EMR systems were not always consistent across different sites, requiring some duplication of effort. Only one FHT had environmental sustainability embedded in their strategic plan; they had developed a green committee because of this work. Some FHTs have their own strategic plan; some follow the strategic plan of the department of family medicine in the TAHSN hospital with which they are affiliated.

##### Importance of the prioritization of QI work across FHTs

Sustainable inhaler initiatives were categorized as QI work; however, FHTs can be under-resourced for QI work, e.g., high QI staff turnover. Although Quality Improvement Plans (QIPs) create a mandate for QI work across all FHTs, only some FHTs are planning to embed this work as part of their QIP. QI work on sustainability was typically clinician- or resident-led, rather than organization-led. Some FHTs offered sustainability as an option for a QI project to residents, however organization-wide change and continuity was often limited by resident schedules, or by variable clinician interest.

##### Limited overall engagement with environmental sustainability

Apart from sustainable inhaler prescribing, other environmentally sustainable initiatives, mostly informal, have focused on plastic and paper waste reduction. Factors that support environmental sustainability initiatives include lead physician/preceptor interest in the topic, support from colleagues, and a workplace culture that values environmental sustainability. Challenges arise from a lack of standardization for sustainable care: Measurement of outcomes was not always clear or established; EMR system prompts and aids were not always established; lack of patient knowledge on topic.

# Sustainable Operating Rooms




## TAHSN Sustainable Operating Room Score Card Summary

### Background

This document presents the results of a benchmarking exercise across TAHSN, using a novel scorecard that reviews 4 areas of environmental impact: anesthetic gases, reusables, waste management, and energy management. Informed by a literature review and guideline development process, the scorecard was designed, revised, and completed through discussions with expert stakeholders across TAHSN. As of July 5th, we had received input from 55 (of n=65) informants from all of the TAHSN ORs (n=13).

### Status

| Green Operating Room Initiatives                                     | Number of ORs |   |    |
|--|---------------|---|----|
| <b>ANESTHETIC GASES</b>  |               |   |    |
| <b>Avoid desflurane</b>  | 5             | 3 | 5  |
| <b>Use <math>\leq 0.5</math>L/min fresh gas flow</b>                 | 8             | 4 | 1  |
| <b>RESUABLES</b>   |               |   |    |
| <b>Extend use of disposable anesthesia breathing circuits</b>        | 6             | 1 | 6  |
| <b>Use reusable laryngeal mask airways (LMAs)</b>                    | 3             | 4 | 6  |
| <b>Use reusable linens - Sterile surgical gowns</b>                  | 2             | 1 | 10 |
| <b>WASTE MANAGEMENT</b>  |               |   |    |
| <b>Ensure accurate hazardous waste segregation</b>                   | 5             | 0 | 8  |
| <b>Implement effective waste reduction/recycling program</b>         | 5             | 1 | 7  |
| <b>Use specialized custom packs with procedure-specific supplies</b> | 8             | 2 | 3  |
| <b>ENERGY MANAGEMENT</b>   |               |   |    |
| <b>Reduce energy consumption from HVAC systems</b>                   | 7             | 3 | 3  |
| <b>Reduce energy use from operating room lights</b>                  | 3             | 9 | 1  |

 Achieves the sustainability strategy
  In the process of achieving/partially achieves the sustainability strategy
  Does not achieve the sustainability strategy or we are unsure/do not have enough data from the hospital

### Summary of Recommendations

For anesthetic gases, removing desflurane from the hospitals formulary and using  $\leq 0.5$ L/min fresh gas flow is the change that the scorecard wants to encourage. For reusables, we recommend hospitals focus on the reuse of breathing circuits, laryngeal mask airways, and linens. For waste management, minimizing and accurately segregating the biohazardous waste stream (i.e., sharps, cytotoxic, and regular biohazardous), creating custom packs with less equipment and improved recycling programs for blue sterile wrap, polyvinyl chloride (PVC) plastic, and single-use items that can be remanufactured to serve more patients.