

Sustainable Perioperative Care Scorecard

A How-To Guide

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What is the Sustainable Perioperative Care Scorecard

- The Scorecard is an assessment tool, designed to help perioperative care teams to understand and visualize their progress towards environmental sustainability
- It offers an important starting point to identify and capitalize on change opportunities to improve perioperative care
- Your Scorecard results will highlight areas where your site can improve, including “Potential Quick Wins”
 - These are areas where you can significantly advance the sustainability of your center with very little investment of time or resources



What is the Sustainable Perioperative Care Scorecard

- The CASCADES Sustainable Perioperative Care Scorecard helps perioperative teams:
 - Identify [sustainability opportunities](#) and access related [implementation resources](#)
 - Establish a baseline and track progress on sustainability goals
 - Share these metrics with the broader community to track collective progress
 - Fill in elements of the [Canadian Coalition for Green Health Care's Green Hospital Scorecard](#)
 - Populate the [Scorecard Dashboard](#) to showcase all the great work sites are doing across Canada

Who Completes the Scorecard?

- You can!
- Anyone (individuals or teams) with knowledge of their hospital site's operations, or access to others with this knowledge, can complete the scorecard
- It typically takes less than an hour to complete the scorecard, depending on how familiar you are with the sustainability efforts at your site

ORGANIZATION: _____ DATE: _____

CASCADES SUSTAINABLE PERIOPERATIVE CARE SCORECARD

The CASCADES Sustainable Perioperative Care Scorecard helps perioperative teams:

- Identify sustainability opportunities and access related implementation resources
- Establish a baseline and track progress on sustainability goals
- Share these metrics with the broader community to track collective progress

See additional resources to support the implementation of the Scorecard:

- Frequently Asked Questions
- A How-To Guide
- A Brief Introduction
- Project Charters
- Best Practices in Surgery Guidelines

Share your feedback and areas of focus by completing this [survey](#). To showcase all the great work sites are doing across Canada to improve the sustainability and environmental impact of perioperative care, some of your survey responses will be used to populate the Scorecard [dashboard](#). CASCADES is also seeking opportunities for networking and mentorship from sites utilizing the Scorecard. Contact us at CASCADES@utoronto.ca to learn more.

This version of the tool has been adapted from an earlier scorecard in collaboration with the Best Practice in Surgery, University of Toronto (see below for further details).

Feedback Survey

SUSTAINABLE PERIOPERATIVE CARE





Background information and implementation resources related to most of the sustainability opportunities presented below can be found in the CASCADES Sustainable Perioperative Care [Playbook](#) (linked throughout). To access the full playbook, go to: <https://cascadescanada.ca/>.





















Status Options: ■ NOT WORKING ON ■ WORKING ON (NOT YET PARTIALLY ACHIEVED/ACHIEVED) ■ PARTIALLY ACHIEVED ■ ACHIEVED

OPPORTUNITIES	STATUS	GOALS
SUSTAINABILITY LEADERSHIP		→ See The Strategy for Change in the CASCADES SPC Playbook
Implement leadership structure to support perioperative environmental sustainability	■ ■ ■ ■	<ul style="list-style-type: none"> • Formalized Environmental Sustainability Perioperative Committee in place with broad representation that reports at perioperative meetings and has an executive sponsor, AND • Committee structure allows for protected time for clinical staff to participate in regular meetings and implementations • A green team of volunteers who engage in activities to improve sustainability of the OR has been established
LOW-VALUE CARE		→ See Avoiding Unnecessary Care in the CASCADES SPC Playbook
Reduce low-value pre- and post-op visits and testing Playbook: Tests & Visits	■ ■ ■ ■	<ul style="list-style-type: none"> • Low-value pre- and post-op testing is eliminated, AND • Lower-carbon test options are considered when testing is necessary, AND • Virtual visits are offered when appropriate • Decision-tool to aid in consensus around necessity of specific tests in place
Reduce unnecessary blood product wastage Playbook: Wise Blood Use	■ ■ ■ ■	<ul style="list-style-type: none"> • Transfusions only done when clinically indicated, AND • Blood products are ordered in accordance with use (avoid excessive overordering; monitor expiration dates) • Delivered education around wise blood use, AND • Stock of blood products audited to determine proper ordering frequency/volume
ANESTHETIC GASES		→ See Minimize Direct Emissions in the CASCADES SPC Playbook
Eliminate desflurane for surgical procedures requiring general anesthesia Playbook: Desflurane	■ ■ ■ ■	<ul style="list-style-type: none"> • Desflurane removed from formulary, OR • Desflurane eliminated from use • Provided education on environmentally friendly gases, AND • Implementation of one of the following strategies to reduce desflurane use: <ul style="list-style-type: none"> ◦ Carbon intensity warning stickers placed on desflurane vaporizers, or ◦ Sevoflurane is the default gas on the vaporizer, or ◦ Desflurane vaporizers removed from anesthetic machine, or ◦ Desflurane not available in ORs, but can still be accessed from automated medication dispensing system (i.e., Omnicell, Pyxis MedStation)

How Do I Use the Scorecard?

- Areas of opportunity are categorized into leadership, low-value care, anesthetic gases, reusables, and waste
- Each area has specific goals to work towards (e.g., "Routine use of reusable sterile surgical gowns")

-  **Red = Not working on**
-  **Red outlined in Yellow = working on but not yet partially achieved**
-  **Yellow = Partially achieved**
-  **Green = Achieved**

Status Options:		 NOT WORKING ON  WORKING ON (NOT YET PARTIALLY ACHIEVED/ACHIEVED)  PARTIALLY ACHIEVED  ACHIEVED			
OPPORTUNITIES	STATUS	GOALS			
SUSTAINABILITY LEADERSHIP		→ See The Strategy for Change in the CASCADES SPC Playbook			
Implement leadership structure to support perioperative environmental sustainability	   	<ul style="list-style-type: none"> Formalized Environmental Sustainability Perioperative Committee in place with broad representation that reports at perioperative meetings and has an executive sponsor, AND Committee structure allows for protected time for clinical staff to participate in regular meetings and implementations A green team of volunteers who engage in activities to improve sustainability of the OR has been established 			
LOW-VALUE CARE		→ See Avoiding Unnecessary Care in the CASCADES SPC Playbook			
Reduce low-value pre- and post-op visits and testing	   	<ul style="list-style-type: none"> Low-value pre- and post-op testing is eliminated, AND Lower-carbon test options are considered when testing is necessary, AND Virtual visits are offered when appropriate Decision-tool to aid in consensus around necessity of specific tests in place 			
Reduce unnecessary blood product wastage	   	<ul style="list-style-type: none"> Transfusions only done when clinically indicated, AND Blood products are ordered in accordance with use (avoid excessive overordering; monitor expiration dates) Delivered education around wise blood use, AND Stock of blood products audited to determine proper ordering frequency/volume 			
ANESTHETIC GASES		→ See Minimize Direct Emissions in the CASCADES SPC Playbook			
Eliminate desflurane for surgical procedures requiring general anesthesia	   	<ul style="list-style-type: none"> Desflurane removed from formulary, OR Desflurane eliminated from use Provided education on environmentally friendly gases, AND Implementation of one of the following strategies to reduce desflurane use: <ul style="list-style-type: none"> Carbon intensity warning stickers placed on desflurane vaporizers, or Sevoflurane is the default gas on the vaporizer, or Desflurane vaporizers removed from anesthetic machine, or Desflurane not available in ORs, but can still be accessed from automated medication dispensing system (i.e., Omnicell, Pyxis MedStation) 			

Sustainability Leadership

- Implement leadership structure to support perioperative environmental sustainability

Achieved	Partially Achieved
<ul style="list-style-type: none">• Formalized Environmental Sustainability Perioperative Committee in place with broad representation that reports at perioperative meetings and has an executive sponsor, AND• Committee structure allows for protected time for clinical staff to participate in regular meetings and implementations	<ul style="list-style-type: none">• A green team of volunteers who engage in activities to improve sustainability of the OR has been established

Low-Value Care

- Reduce low-value pre- and post-op visits and testing

Achieved	Partially Achieved
<ul style="list-style-type: none">• Low-value pre- and post-op testing is eliminated, AND• Lower-carbon test options are considered when testing is necessary, AND• Virtual visits are offered when appropriate	<ul style="list-style-type: none">• Decision-tool to aid in consensus around necessity of specific tests in place



Low-Value Care

- Reduce unnecessary blood product wastage

Achieved	Partially Achieved
<ul style="list-style-type: none">• Transfusions only done when clinically indicated, AND• Blood products are ordered in accordance with use (avoid excessive overordering; monitor expiration dates)	<ul style="list-style-type: none">• Delivered education around wise blood use, AND• Stock of blood products audited to determine proper ordering frequency/volume

Anesthetic Gases



- Eliminate desflurane for surgical procedures requiring general anesthesia

Achieved	Partially Achieved
<ul style="list-style-type: none">• Desflurane removed from formulary, or• Desflurane eliminated from use	<ul style="list-style-type: none">• Provided education on environmentally friendly gases, AND• Implementation of one of the following strategies to reduce desflurane use:<ul style="list-style-type: none">• Carbon intensity warning stickers placed on desflurane vaporizers, or• Sevoflurane is the default gas on the vaporizer, or• Desflurane vaporizers removed from anesthetic machine, or• Desflurane not available in operating rooms, but can still be accessed from automated medication dispensing system (i.e., Omnicell, Pyxis MedStation)

Anesthetic Gases

- Use 0.5 L/min fresh gas flow



Achieved	Partially Achieved
<ul style="list-style-type: none">• Routine use of automated control of end-tidal inhalation anesthetic concentration programs with minimal fresh gas flows of 0.5 L/min (end-tidal control TM on GE or Target Controlled Anesthesia on Dräger)	<ul style="list-style-type: none">• Provided education to encourage minimal fresh gas flows 0.5 L/min

Anesthetic Gases

- Minimize environmental impact of nitrous oxide (N₂O)

Achieved	Partially Achieved
<ul style="list-style-type: none">• N₂O no longer used as a carrier gas, AND• No longer using bulk N₂O tank or centralized piped nitrous as a supply source (switch to cylinders at point of use)	<ul style="list-style-type: none">• Provided education/training on minimizing clinical use of N₂O, AND• Working group established to engage relevant partners, including clinical users, pharmacy, biomedical engineering, and facilities

Reusables

- Use reusable medical devices and equipment

Achieved	Partially Achieved
<ul style="list-style-type: none">• Reusables used instead of single-use products for 3-4 of the following items:<ul style="list-style-type: none">• Circuit face masks• LMAs• Breathing circuits (or extended use circuits in lieu of reusables, for ≥ 24 hrs)• Laryngoscope blades (standard, Glidescope, C-Mac)• Sharps containers	<ul style="list-style-type: none">• Reusables used instead of single-use products for 1-2 of the above items

Reusables

- Use reusable sterile surgical gowns

Achieved	Partially Achieved
<ul style="list-style-type: none">• Routine use of reusable sterile surgical gowns	<ul style="list-style-type: none">• In the process of transitioning to sterile surgical reusable gowns, including the following steps: removing disposable gowns from the sterile core, developing support from operating room management/leadership and clinical staff, and/or implementing trials of reusable gowns, AND• Routine use of reusable drapes and scrub hats, where appropriate, in the operating room



Reusables

- Encourage patients to bring their own reusable belongings bags



Achieved	Partially Achieved
<ul style="list-style-type: none">• Plastic patient belongings bags are given to no more than 30% of patients	<ul style="list-style-type: none">• Patients are encouraged to bring their own reusable garment bags (through appointment communications, surgery pamphlets, and/or posters)

Reusables

- Use rigid containers or reusable linens in place of blue polypropylene wrap to protect sterilized trays

Achieved	Partially Achieved
<ul style="list-style-type: none">• Rigid containers and reusable linens are used to protect at least 75% of sterilized trays, AND• Blue wrap is used only for equipment that is too irregular in shape or size to be inserted into a hard case and is unsuitable to be wrapped in reusable linens	<ul style="list-style-type: none">• Rigid containers and linens are used to wrap at least 50% of trays

Waste

- Lean trays and/or custom packs to include only frequently used items

Achieved	Partially Achieved
<ul style="list-style-type: none">• Developed a process for yearly review/audit of trays and/or packs, AND• Developed process to make changes to trays and/or packs based on review, AND• Each surgical division has at least one lean surgical tray and/or custom pack for at least one high-volume surgical procedure	<ul style="list-style-type: none">• Developed a process for yearly review/audit of trays and/or packs, AND• Developed process to make changes to trays and/or packs based on review



Waste



- Segregate biomedical, plastic and pharmaceutical waste accurately

Achieved	Partially Achieved
<ul style="list-style-type: none">• Posted clear signage on accurate waste segregation, OR• Conducted education/training on proper waste segregation (pharmaceutical, biomedical and sharps), AND• Regular waste audits (minimum once per year)	<ul style="list-style-type: none">• Posted clear signage on accurate waste segregation, OR• Conducted education/training on proper waste segregation (pharmaceutical, biomedical and sharps)



Waste

- Pursue re-manufacturing of single- use devices (where reusables are not available)

Achieved	Partially Achieved
<ul style="list-style-type: none">• Where reusable devices are not available and single-use devices are in use, these are collected for remanufacturing, AND• Remanufactured devices are purchased back when reusable devices are not available	<ul style="list-style-type: none">• Where reusable devices are not available and single-use devices are in use, these are collected for remanufacturing

Energy

- Reduce energy consumption from HVAC systems

Achieved	Partially Achieved
<ul style="list-style-type: none">• CSA air changes per hour (ACH), temperature, humidity and pressure recommendations are respected without being exceeded. Occupied ACH are at 20 total air changes per hour with 6 outdoor ACH. HVAC setbacks are employed in all ORs when they are unoccupied, with 6 total air changes per hour or less if temperature, humidity and pressure recommendations are respected, AND• Occupied ACH has been tested within last 5 years and does not exceed the required CSA ACH requirements for ORs and recovery areas by over 15%, and respect without exceeding CSA fresh air changes per hour requirement	<ul style="list-style-type: none">• In process of assessing feasibility of HVAC setbacks or in process of negotiating upgrades to allow for HVAC setbacks, AND• In process of evaluating for HVAC setbacks to be employed in OR blocks that operate on a set schedule

Energy

- Implementation of a 'Good Night Policy'

Achieved	Partially Achieved
<ul style="list-style-type: none">• Oxygen, lights, computers and equipment are turned off at the end of the day; this policy is enforced as part of regular duties of OR staff (i.e., AA's ensure anesthesia machines are turned off and all oxygen sources turned off at end of day), OR• Lights have occupancy sensors and only mandatory fire routes remain lit during unoccupied periods	<ul style="list-style-type: none">• Educate staff on a "Good Night Policy" with signage and suggestions to decrease energy, AND• Encourage staff to manually turn off lights in ORs when not operational



Colour Ratings

- Colours represent a site's activities with respect to each of the sustainability actions
- You may know what steps your site has taken with respect to some of the metrics. If you are unsure, you can find this information by speaking with your hospital's:
 - Operations Department
 - Department of Surgery
 - Department of Anesthesia
 - Existing sustainability champions (in any department)



Make a Positive Change

After completing the Scorecard, you can act on your findings by:

- Completing this [survey](#) and contributing to the national [dashboard](#)
- Choosing an area where your hospital can perform better, utilizing the CASCADES [Playbook](#) and [Project Charters](#)
- Joining [CASCADES' Community of Practice](#)
- Sharing your Scorecard with your hospital's leadership team
- Completing this Scorecard again in one year's time to track your site's progress - and repeating the steps above!
- For a quantitative score of your site's performance, consider completing a more detailed version of this Scorecard for your site (see [Evaluation Tool](#))

Le tableau de bord des soins périopératoires durables

Sustainable Perioperative Care Scorecard Dashboard

Sites participants
Participating Sites

7

Provinces/Territoires
Province/Territories

4

Total de salles d'opération
Total Operating Rooms

149

Where has the scorecard been used?

Où le tableau de bord a-t-il été utilisé ?

Sites participants
Participating Sites

Trillium Health Partners

QEI Health Sciences Centre

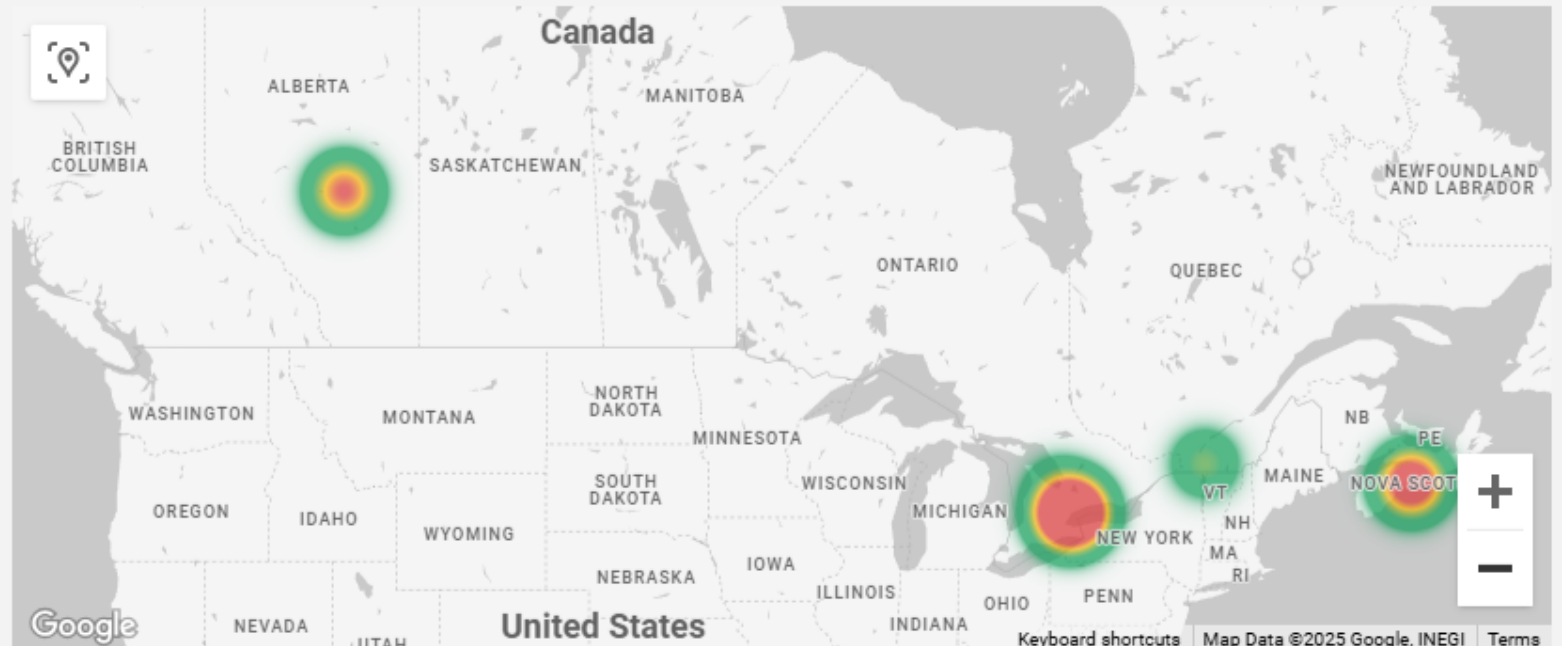
North York General Hospital

Hôpital du Haut-Richelieu

Collingwood General and Marine Hospital

1 - 6 / 6 < >

This list only contains sites that have consented to be named.
Cette liste ne contient que les sites qui ont accepté d'être nommés.



Nombre de salles d'opération participant au(x) site(s) / Number of ORs participating at site(s) 0 40

Questions or Comments?

Please connect with us at: CASCADES@utoronto.ca

