

Sustainable Operating Room Fillable Scorecard

SUSTAINABILITY STRATEGY		SCORE			CRITERIA
Anesthetic Gases					
1	Avoid desflurane for surgical procedures requiring general anesthesia	<div></div>	<div></div>	<div></div>	<p>Achieve Green Score:</p> <ul style="list-style-type: none">Remove desflurane from formulary <p>Achieve Amber Score:</p> <ul style="list-style-type: none">Implement formal program to discourage use of desflurane, e.g:<ul style="list-style-type: none">Lock desflurane vaporizers awayKeep desflurane in pharmacyImplement continuous education on environmentally friendly gases
2	Use ≤0.5L/min fresh gas flow	<div></div>	<div></div>	<div></div>	<p>Achieve Green Score:</p> <ul style="list-style-type: none">Implement education/engagement program to encourage fresh gas flow ≤0.5L/min, ANDUse anesthetic gas machines with default ≤0.5L/min fresh gas flow <p>Achieve Amber Score:</p> <ul style="list-style-type: none">Modify existing anesthetic machines to deliver minimum fresh gas flows ≤0.5L/min
Reusables					
3	Extend use of disposable anesthesia breathing circuits	<div></div>	<div></div>	<div></div>	<p>Achieve Green Score:</p> <ul style="list-style-type: none">Extend use of breathing circuits (24 hours to one week) <p>Achieve Amber Score:</p> <ul style="list-style-type: none">Educate on environmental impacts of disposing breathing circuits after every case
4	Use reusable Laryngeal Mask Airways (LMAs)	<div></div>	<div></div>	<div></div>	<p>Achieve Green Score:</p> <ul style="list-style-type: none">Use only reusable LMAs (when patient appropriate) <p>Achieve Amber Score:</p> <ul style="list-style-type: none">Ensure availability of reusable LMAs, andEducate on environmental impacts of disposable LMAs
5	Use reusable sterile surgical gowns	<div></div>	<div></div>	<div></div>	<p>Achieve Green Score:</p> <ul style="list-style-type: none">Use only reusable gowns (disposable gowns only available for specific size needs) <p>Achieve Amber Score:</p> <ul style="list-style-type: none">Remove disposable gowns from custom packs, orDo not keep disposable gowns in sterile core
Waste Management					
6	Accurate hazardous waste segregation to minimize biohazardous waste (i.e., sharps, cytotoxic, and regular biohazardous waste)	<div></div>	<div></div>	<div></div>	<p>Achieve Green Score:</p> <ul style="list-style-type: none">Ensure AMBER activities, andConduct regular waste monitoring (waste weight audits/ visual waste audits) <p>Achieve Amber Score:</p> <ul style="list-style-type: none">Implement education/engagement program for biohazardous waste segregation and management

Sustainable Operating Room Fillable Scorecard

SUSTAINABILITY STRATEGY		SCORE			CRITERIA
7	Implement an effective OR recycling program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Achieve Green Score:</p> <ul style="list-style-type: none">• Ensure AMBER activities, and• Pursue specialty recycling opportunities (e.g., divert single-use devices for remanufacture, PVC 123 program, blue sterile wrap recycling) <p>Achieve Amber Score:</p> <ul style="list-style-type: none">• Implement OR-specific recycling program, and• Implement education/engagement program for recycling
8	Use specialized custom packs with procedure-specific supplies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Achieve Green Score:</p> <ul style="list-style-type: none">• Ensure AMBER activities, and• Implement regular monitoring to refine custom packs as needed <p>Achieve Amber Score:</p> <ul style="list-style-type: none">• Conduct review to create procedure-specific custom packs
Energy Management					
9	Reduce energy consumption from HVAC systems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Achieve Green Score:</p> <ul style="list-style-type: none">• Ensure 2-3 AMBER activities <p>Achieve Amber Score:</p> <ul style="list-style-type: none">• Implement HVAC timer/setback system, or• Implement OR-specific heating/cooling system, or• Implement heat reclamation system
10	Reduce energy use from operating room lights	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Achieve Green Score:</p> <ul style="list-style-type: none">• Implement LED for all surgical and overhead lights <p>Achieve Amber Score:</p> <ul style="list-style-type: none">• Implement LED for some surgical lights, or• Implement LED for some overhead ceiling lights, or• Implement automated lighting control systems

Notes

Sustainable Operating Room Fillable Scorecard

Additional Sustainability Strategies

1	Support OR sustainability	Develop a strategy to mobilize sustainability improvements in the OR through clinical and staff engagement, adequate organizational support, and integration with the hospital's sustainability strategy and accountability arrangements.
2	Avoid nitrous oxide	Utilize nitrous oxide for short periods during surgery (i.e. for induction purposes if necessary, but consider other alternatives for anxiolysis).
3	Use reusable linens	<ul style="list-style-type: none"> • Use exclusively reusable drapes where it is appropriate • Wear exclusively reusable scrub hats • Have a program in place that raises awareness about the usefulness of reusable linens AND encourage their use
4	Prioritize re-manufactured single-use medical devices	Identify opportunities to introduce re-manufactured single use medical devices and address procurement barriers as appropriate.
5	Rethink blue sterile wrap	Only use blue sterile wrap for instrumentation that requires its use for sterilization reasons; otherwise, hard cases should be bought, and linen should be used instead.
6	Reduce pharmaceutical drug waste	<p>There are a multitude of ways to reduce pharmaceutical drug waste. Some examples include, but are not limited to:</p> <ul style="list-style-type: none"> • Use prefilled syringes whenever appropriate for medication/patient • Constantly monitor expiry dates and label medications as 'use first' that will expire soon • Reuse multi use medications until the vial is empty instead of throwing them out at the end of every case • Create a program for pharmaceutical waste so that it doesn't end up in sharps/biohazardous/regular garbage bins
7	Reuse laryngoscopes	Use exclusively reusable laryngoscope blades (standard, Glidescope, and C-Mac).
8	Reuse policy	Review hospital policies to ensure that items in the room (but not on the sterile field or ones that come in contact with the patient) can be returned to shelves, reused, or recycled.

This scorecard was created by:

Cameron Irani (RN), Helen Valkanas (MPH), Sabrina Santos (MSc), and Adanna Odunze, on behalf of the Sustainable Operating Room Working Group

Dr. Robin McLeod, Vice Chair, Quality and Best Practices, Department of Surgery, UofT

Dr. Ali Abbass, Anesthesiologist, St. Joseph's Health Centre (SJHC), Unity Health Toronto

Dr. Laura Donahoe, Thoracic Surgeon, Toronto General Hospital; Assistant Professor, Department of Surgery, UofT

Ed Rubinstein, Director of Environmental Compliance, Risk and Sustainability, University Health Network

Fiona Miller, PhD, Professor, Institute of Health Policy, Management and Evaluation; Director, Centre for Sustainable Health Systems, UofT