

# PROJECT CHARTER

## Bring your own reusable bag (BYORB)

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Executive Sponsor:

This project was undertaken with the financial support of the Government of Canada.  
Ce projet a été réalisé avec l'appui financier du gouvernement du Canada.

Canada



**Ontario  
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A modifiable PPT version of this project charter can be [downloaded](#) to be applied to your own healthcare setting. To access all downloadable project charters featured in this playbook, click [here](#).

Please contact [CASCADES@utoronto.ca](mailto:CASCADES@utoronto.ca) if you have any questions.

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# Goal & Scope

## 1 What do you want to achieve?

Reduce the number of plastic patient belonging bags used in **X** [Surgical Unit] by increasing the percentage of scheduled patients that bring reusable bags for their belongings by **X%** in the next **X** months.

*\*Example: NYGH set a goal of 25% over two months.*

## 2 Define the limits of what you want to be included in the project and consider the environmental impacts you are targeting for change.

**Project Scope:** All scheduled patients for **x** [Surgical Unit]

**Emission scope:** Scope 3; these emissions arise from activities or products that are related to health sector activities, but not owned or controlled by the organization, such as pharmaceuticals and other medical products and devices



# Problem/Opportunity Statement

## 3 Briefly state the problem you want to solve or the opportunity you want to realize.

Within the health sector, plastics account for approximately 30% of waste (1). Operating rooms are a significant source of plastic waste, with the bulk of plastic waste generated during the pre- and post-operative phases of surgery (2). One source of pre-operative plastic waste that is relatively simple to address is patient belonging bags.

On average, thousands of these bags are given out to patients on a monthly basis\*; they are used to store patient belongings, such as clothing and shoes, during surgery. These bags, which are thicker and larger than regular single use plastic bags, end up in landfills, where they break down very slowly into toxins that pollute the soil and water, damaging the environment and, subsequently, animal and human health (3).

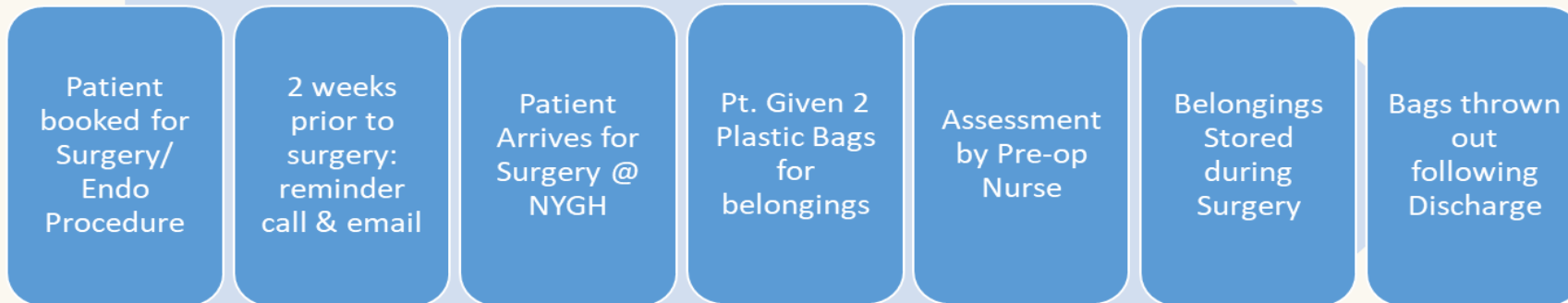
Surgical departments should transition away from handing out plastic personal belonging bags and encourage patients to bring their own reusable bag(s) from home. People have become increasingly familiar with this practice in their every day lives, and many now use reusable bags on a regular basis; Canada's ban on single-use plastic bags in December 2022 will further reinforce this behavior. Patients should therefore be receptive to requests to bring a reusable bag with them to the hospital.

*\*Example: At North York General Hospital in Toronto, ON, 3,000 plastic patient belonging bags are used on a monthly basis in the Day Surgery and Endoscopy units, with 12,000 bags used throughout the institution as a whole. 3000 plastic bags per month is equivalent to removing approximately 459 kg of CO2 emissions from the atmosphere. Each bag also comes at a cost of \$0.14 – money that the institution will recoup.*



# Current State of the System/Process

## 4 What do things look like today?



*Note: Process map devised by NYGH team; your current state may look different.*



# Root Cause Analysis

## 5 What gets in your way?

### **Clinical Workflow**

- Habit may result in patients being given more bags than they actually need (i.e. at NYGH, patients were automatically given two bags)
- No method to track bag use

### **Finances & Procurement**

- There are no reusable bags on hand to give patients instead of plastic bags

### **Infrastructure**

- Winter boots and coats require larger bags
- Patients may be reluctant to store their shoes or boots in a reusable bag as they may get soiled
- Patients may not want to leave reusable bags on the floor during surgery if it is unclean

### **Education & Awareness**

- Staff and patients unaware of:
  - The environmental and health impacts of plastic
  - The number of plastic belonging bags used in the unit/organization
  - The opportunity to ask patients to bring reusable bags



# Design the Improvement & Define Change Ideas

## 6 What are your ideas to achieve your goals, address your root causes and close the gap from your problem statement?

### Clinical Workflow

- Secretary to include BYORB reminder in:
  - Pre-op call (**Resource: Phone script**)
  - Pre-op email (**Resource: Email script**)
- Include note on BYORB in Day Surgery pamphlet (**Resource: Day Surgery Information**)
- Include questions on reusable bags on pre-procedure checklist to track compliance (**Resource: Pre-Procedure Checklist**)
- Assess success via:
  - Survey to assess patient compliance (**Resource: Patient Survey**)
  - Survey to establish impact to workflow (**Resource: Workflow Survey**)
  - Reports generated from EMR (**Resource: EMR Documentation**)

### Finances & Procurement

- Create a business case to show potential monetary savings associated with a BYORB project.
  - *Note: At NYGH, one plastic belonging bag costs \$0.14; multiplied by the 3,000 bags used in the Day Surgery and Endoscopy Units monthly, there would be a savings of \$420 per month and \$5,040 per year if every patient used reusable bags. At the institutional level, where 12,000 plastic belonging bags are used per month, there would be a savings of \$1,680 per month and \$20,160 per year if every patient used reusable bags.*



# Design the Improvement & Define Change Ideas

6 What are your ideas to achieve your goals, address your root causes and close the gap from your problem statement?

## Infrastructure

- Consider using a cart to store reusable bags during surgery if floor is unclean

## Education and awareness

- Post posters re. carbon footprint of bags in change rooms ([Resource: Infographic](#))
- Include infographic below email signature to socialize idea ([Resource: Infographic](#))
- Show videos of the NYGH team discussing their BYORB initiative with the team ([Resource: Project Overview & Team Presentation Videos](#))



# Measure & Test Impact

## 7 How will you measure the progress of your change ideas?

### **Outcome Measures:** (Run charts to be created for both to track changes)

- Percent of Day Surgery, Surgery & Endoscopy patients that brought garment bags to procedure/week (Resource: Pre-procedure checklist)
- Number of plastic Personal Belongings Bags used by Surgery & Endo/ Month (**Resource: Pre-procedure checklist/EMR Documentation**)

### **Process Measures:**

- Percent of times related pre-procedure checklist questions filled out/accurately filled out
- Avg. number of plastic bags given to patients that brought own bag (**Resource: Pre-procedure checklist/EMR**)
- Most important intervention (**Resource: Patient Survey**)

### **Balancing Measures:**

- Ease of bringing reusable bag for patient (**Resource: Patient Survey**)
- Ease of documenting bag type for staff (**Resource: Workflow Survey**)



# Measure & Test Impact

## 7 How will you estimate the environmental impact of your changes?

**Activity/Outcome Metric**

**Number of plastic belonging bags used per month**

Source(s):

- Procurement data
- Self-audit

Considerations:

- Monthly counts are recommended to observe progress, but data can be processed for any given time frame.



**Related Environmental Metric**

**0.153 kg CO<sub>2</sub>e (Emissions from 1 heavy duty plastic bag)**

Source:

- [Kimmel RM. et al. \(2014\)](#)

Considerations:

- This data does not come from a Canadian source, and may therefore have limited applicability to the Canadian context.
- The metric is for a generic heavy duty plastic bag as there are no available figures for patient belonging bags in particular; as such, the calculation will yield ESTIMATES only.
- The emissions associated with reusable bags are not factored into this calculation since the institution is not purchasing these items; rather, patients are bringing in reusable bags they presumably already have and use for other purposes. It is therefore not possible to calculate emissions as these would be based on the number of times each reusable bag can be used.



**Environmental impact**

*Ex. At NYGH, the baseline environmental impact from patient belonging bags used in Endo and Day Surgery over a one month period was 459 kg CO<sub>2</sub>e (3000 bags x 0.153 kg CO<sub>2</sub>e/bag)*

Considerations:

- There should be a REDUCTION in this number over time.
- Use the [Natural Resources Canada Greenhouse Gas Equivalencies Calculator](#) to translate your results to stakeholders.



# Embed & Spread

## 8 What steps have been taken to ensure lasting change? How could it be spread to other contexts?

### **Micro (What can you do?)**

- Socialize the idea with staff to generate buy-in
- Make it fun! Document your learnings to be shared with others (e.g., lessons learned that could be improved, what you learned from your failures, how you course corrected, etc.).

### **Meso (What can you do within your organization?)**

- Share PDSA results with other departments to encourage similar efforts through presentations and website/newsletter features

### **Macro (What can your organization do?)**

- Share your results with ONSQIN and CASCADES so they can be disseminated widely to inspire change at other sites



# References

- (1) Rizan C, Mortimer F, Stancliffe R, Bhutta MF. Plastics in healthcare: time for a re-evaluation. *Journal of the Royal Society of Medicine*. 2020 Feb;113(2):49-53.
- (2) Ramos T, Christensen TB, Oturai N, Syberg K. Reducing plastic in the operating theatre: Towards a more circular economy for medical products and packaging. *Journal of cleaner production*. 2023;383:135379.
- (3) Alabi OA, Ologbonjaye KI, Awosolu O, Alalade OE. Public and environmental health effects of plastic wastes disposal: a review. *J Toxicol Risk Assess*. 2019 Apr 5;5(021):1-3.