

**AIM Statement:** Reduce the frequency of hazardous waste bin replacement in the Parkwood Outpatient Clinic from once monthly to once every 8 weeks by August 31, 2025.

## PROBLEM DEFINITION

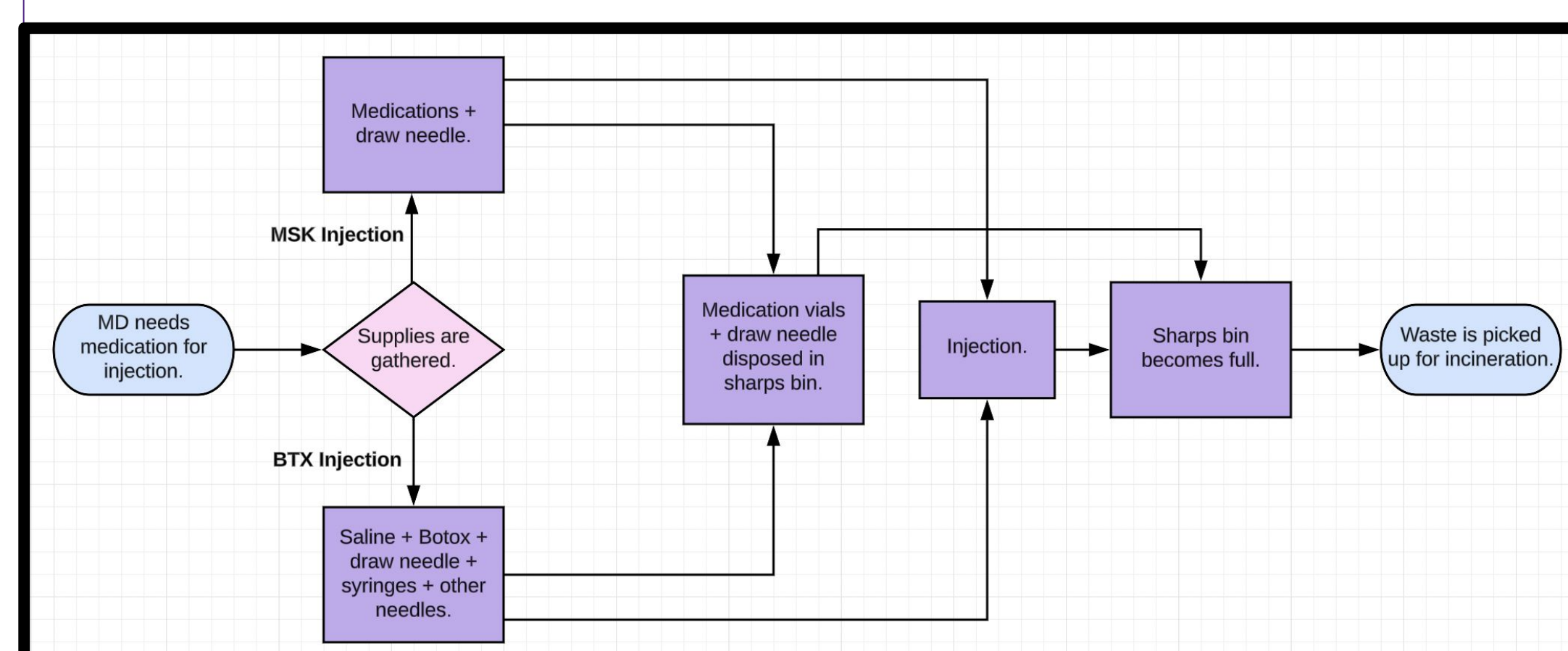
Canada's healthcare system is among the worst in the world for greenhouse gas (GHG) production. Incinerated waste is a major source of healthcare GHG emissions. At Parkwood Institute's outpatient physiatry clinic (OPC), non-hazardous waste is routinely disposed of in hazardous waste bins, which, when full, are incinerated, directly contributing to GHG production.

## ROOT CAUSE ANALYSIS

### Three Key Root Causes

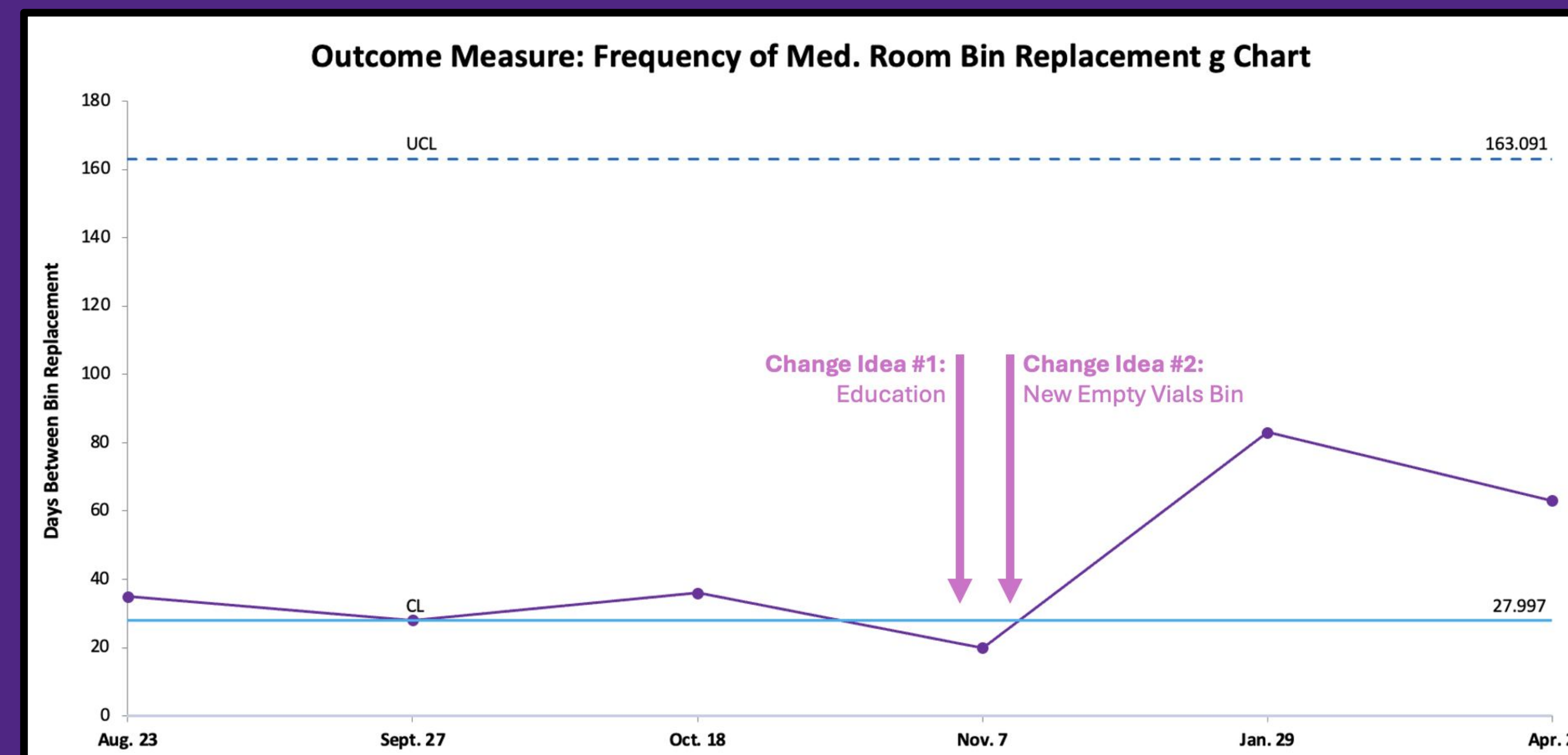
1. Lack of awareness of the environmental impact of inappropriate disposal.
2. Lack of alternative options for disposal of non-hazardous medication vial waste.
3. Habit of those disposing of empty medication vials.

These root causes were determined through discussion with key stakeholders (clinic nurses, physiatrists and residents), fishbone framework, process map, Gemba walk and spaghetti map.



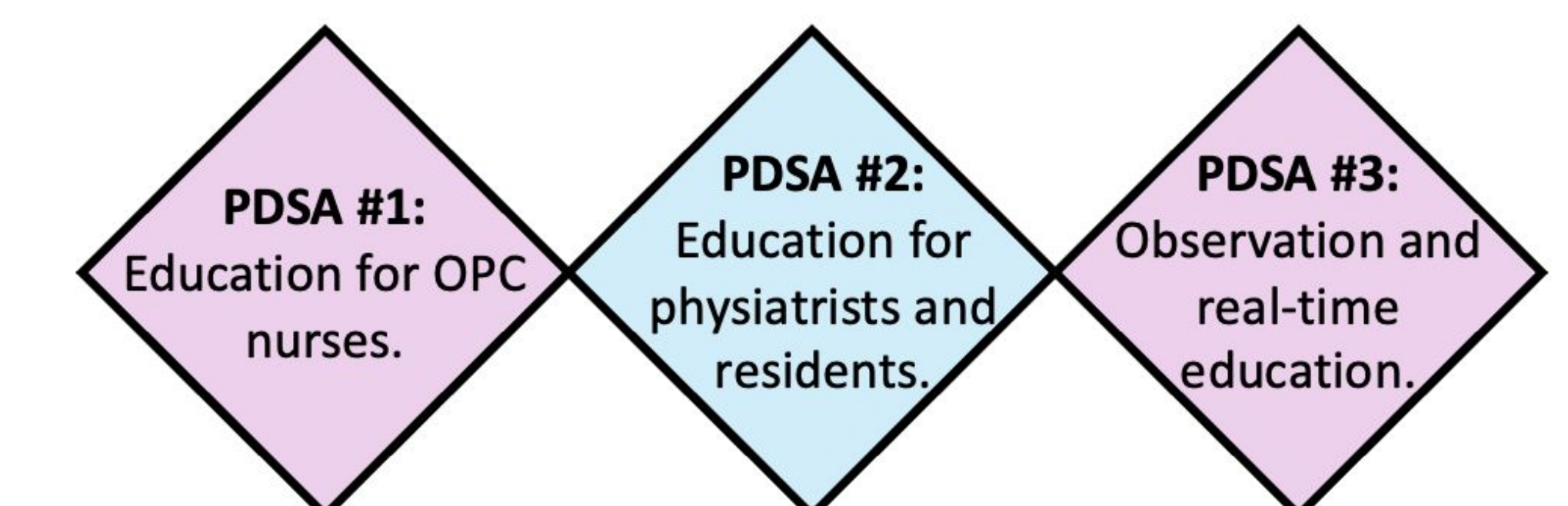
With the introduction of the empty vials bin, the frequency of hazardous waste bin replacement improved to **once every 9 weeks**.

This translates to a **60% reduction** in incinerated waste being produced from our clinic.



## IMPLEMENTATION

### Education for Key Stakeholders



### New Empty Vials Bin and Medication Room Re-Design

**PDSA #1:** An empty vials bin was strategically placed to improve flow during injection preparation.

## MEASUREMENT & RESULTS

### Process Measures

- Attendance of 79% of physiatrists and 75% of residents for education.
- Total weight of vials diverted from incineration = **13.4 kg**.

### Balancing Measures

- Sharps and/or patient information being misplaced into the empty vials bin.

## SUSTAINABILITY

- A permanent empty vials bin will be placed in the OPC Med. Room.
- Empty vials will be disposed of in a regular garbage bin.
- Process owners moving forward will be our OPC nurses and our OPC manager.