

# Where's My LMA?

## The Problem

- Anesthesia care providers require essential supplies at the point of care. This includes high usage items (e.g. used every case), medium usage items (used every day or every week), and low usage items.
- Items are stored in multiple locations throughout the room, including Bluebell cart, ventilator drawers, or ad hoc on the table top when they are brought in by the staff at the start of the day.
- Anecdotal evidence of poor supplies and of differences between East Campus and West Campus. Survey sent to department suggested about ¼ cases had insufficient supplies.

## Aim/Goal

Aim: High & medium use items should be immediately available; Low use items should be brought to room in reasonable time.

Goal: Redesign the anesthesia supply system to improve the availability of essential supplies.

## The Team

- Philip Hess, MD, BIDMC, Dept of Anesthesia
- Stephanie Jones, MD, BIDMC, Dept of Anesthesia
- John Pawlowski, MD, PhD, BIDMC, Dept of Anesthesia
- Sponsor: Dr. Brett Simon, MD, PhD, Chairman, Dept of Anesthesia
- Robert S Gibbons, PhD, MIT Sloan School of Management
- Joe Merlone, MD, resident, BIDMC, Dept of Anesthesia
- Anesthesia technicians, BIDMC

## The Interventions

- Current performance data was gathered using:
  - Technician interviews
  - Staff survey
  - Spaghetti diagram of resupply process
  - Inventory documentation of the Bluebell cart
  - Performance evaluation through observation
  - Performance evaluation through objective counting metrics
- The above measures were used to redesign the Bluebell storage cart, incorporating industrial efficiency standards.

## The Results/Progress to Date

- A significant amount of routine equipment is not available at the point of care. Almost 40% of the time essential equipment was missing from the standard storage cart.
- Huge par levels make missing items 'invisible' due to clutter.



The clutter we eliminated



## Lessons Learned

Excess supplies in the storage areas is a bad thing. The clutter prevents accurate and timely restocking of used items, in favor of building up unused items. Furthermore, staff and support have become so accustomed to this failing that the work-arounds (extra calls, hoarding) have become seen as the baseline expectation. Resistance to change, is powerful, even when it is acknowledged that the current state is failing.

## Next Steps/What Should Happen Next

- The new storage Bluebell has been refined, and has been inserted to the East campus. It is now found in 30 operating rooms, and has decreased tech effort at restocking.
- Redesign of the West Campus supply chain is required prior to changing cart supplies.
- Design specialty carts for remote areas.

