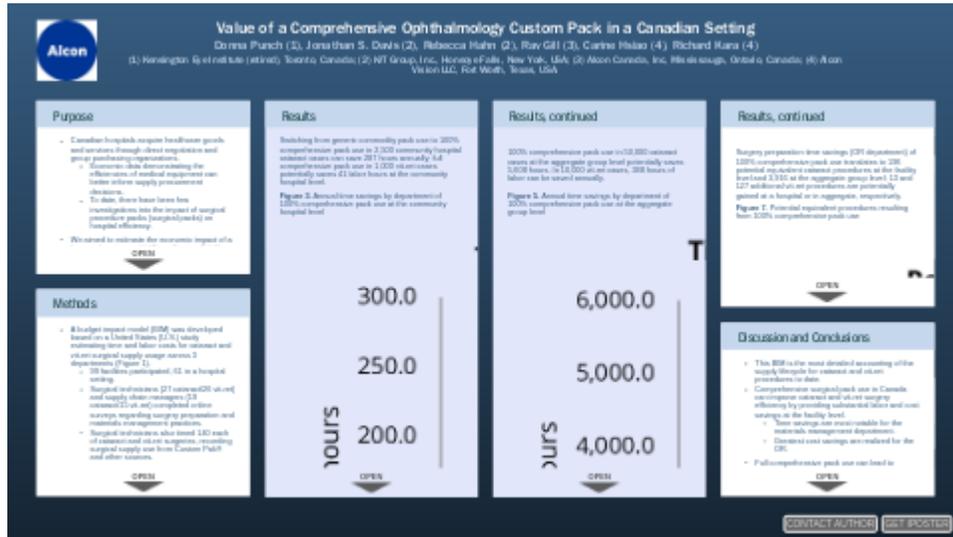


# Value of a Comprehensive Ophthalmology Custom Pack in a Canadian Setting



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PRESENTED AT:



# PURPOSE

- Canadian hospitals acquire healthcare goods and services through direct negotiation and group purchasing organizations.
  - Economic data demonstrating the efficiencies of medical equipment can better inform supply procurement decisions.
  - To date, there have been few investigations into the impact of surgical procedure packs (surgical packs) on hospital efficiency.
- We aimed to estimate the economic impact of a “comprehensive pack” (Alcon Custom Pak®) relative to “generic commodity packs” (no equipment-specific supplies) on cataract and vitreoretinal (vit-ret) surgeries.
  - Evaluated across the accounting, materials management, and operating room (OR) departments at the community hospital and aggregate group levels in Canada.
- Surgical packs – set of disposables and sterile surgical supplies housed within a single-surgery package to facilitate surgery preparation.
  - Custom surgical packs – supplies optimally arranged and customized for each surgeon.
- Custom Pak® was specifically explored due to its comprehensive surgical supply coverage.
  - Focusing on Custom Pak® allows us to determine impact across surgical supplies used in cataract and vit-ret surgeries.

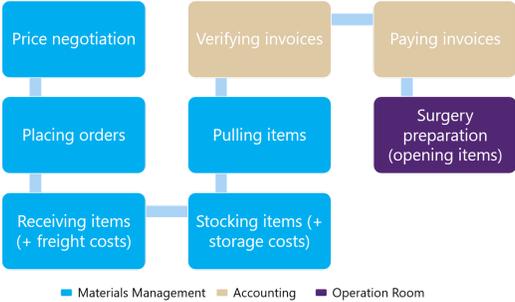
# METHODS

- A budget impact model (BIM) was developed based on a United States (U.S.) study estimating time and labor costs for cataract and vit-ret surgical supply usage across 3 departments (Figure 1).
  - 99 facilities participated, 61 in a hospital setting.
  - Surgical technicians (27 cataract/26 vit-ret) and supply chain managers (19 cataract/15 vit-ret) completed online surveys regarding surgery preparation and materials management practices.
  - Surgical technicians also timed 140 each of cataract and vit-ret surgeries, recording surgical supply use from Custom Pak® and other sources.
- BIM was adapted to include relevant procedural, facility, and labor parameters to reflect the Canadian healthcare system from:
  - Historical data from Kensington Eye Institute (Toronto, Ontario)
  - Government sources
- We explored the impact of transitioning from generic commodity packs in all procedures to 100% use of a comprehensive pack (Figure 2) in the following scenarios:

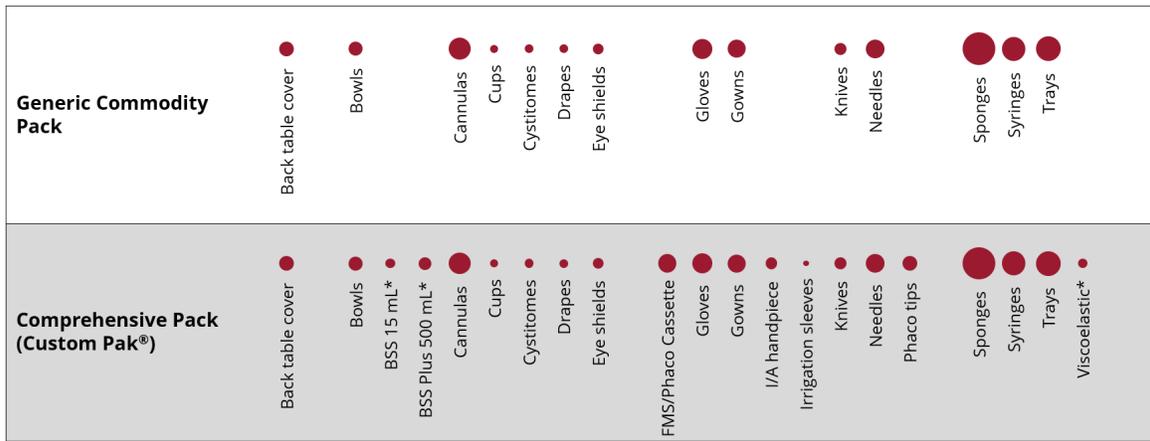
Type	Setting	Number of Cases
Cataract	Community hospital	2,500
	Aggregate group level	50,000
Vit-ret	Community hospital	1,000
	Aggregate group level	10,000

- “Potential Equivalent Procedures” that could be realized by use of a comprehensive pack: change in the duration of surgery preparation divided by the typical amount of time to prepare and complete a procedure.

**Figure 1.** Surgical supply lifecycle processes in the BIM



**Figure 2.** Contents and Time Spent for Generic Commodity Packs and Comprehensive Packs

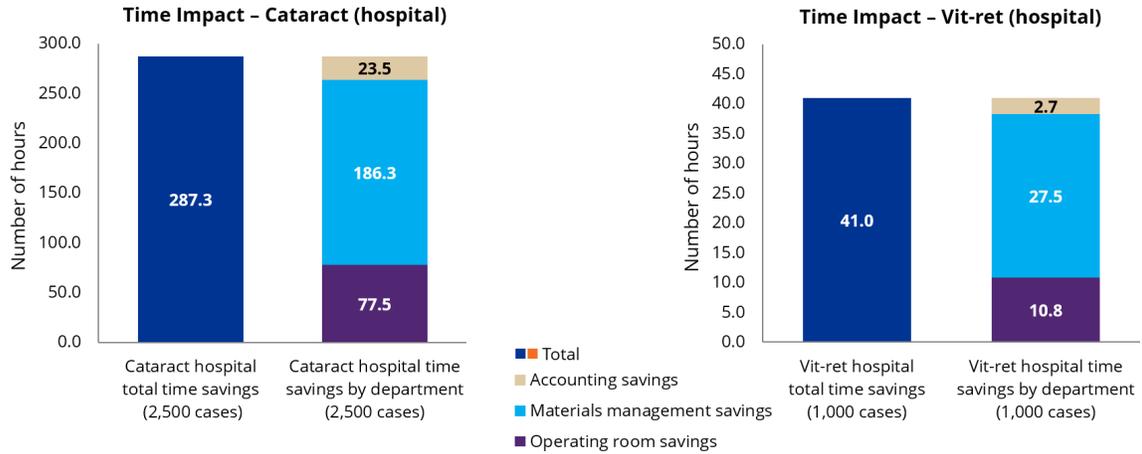


Bubble size indicates the relative average time spent for that supply type in a typical procedure when individually sourced (i.e., not included in either pack).

# RESULTS

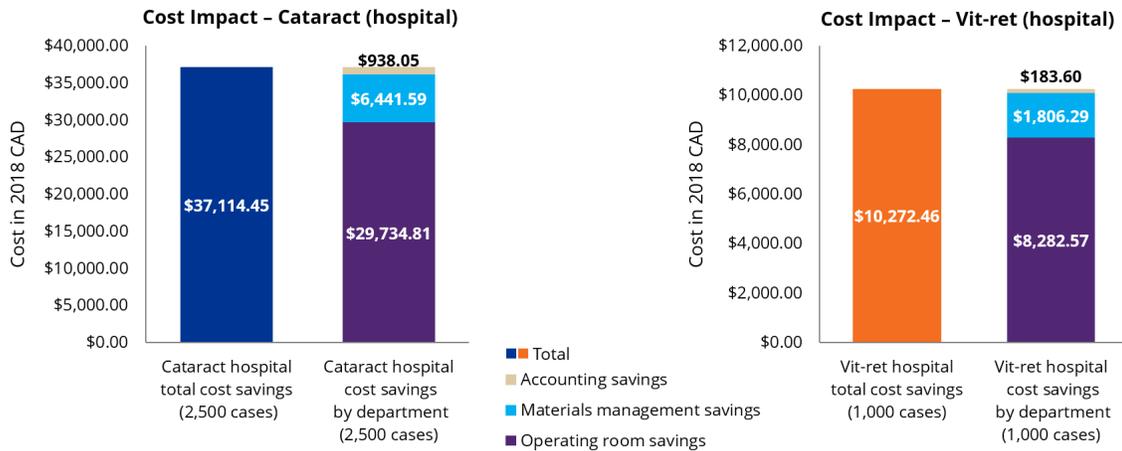
Switching from generic commodity pack use to 100% comprehensive pack use in 2,500 community hospital cataract cases can save 287 hours annually; full comprehensive pack use in 1,000 vit-ret cases potentially saves 41 labor hours at the community hospital level.

**Figure 3.** Annual time savings by department of 100% comprehensive pack use at the community hospital level



Transitioning from generic commodity pack use to 100% comprehensive pack use for cataract procedures at the community hospital level results in potential savings of CAD\$37,114; for vit-ret surgeries, CAD\$10,272 in savings can be realized.

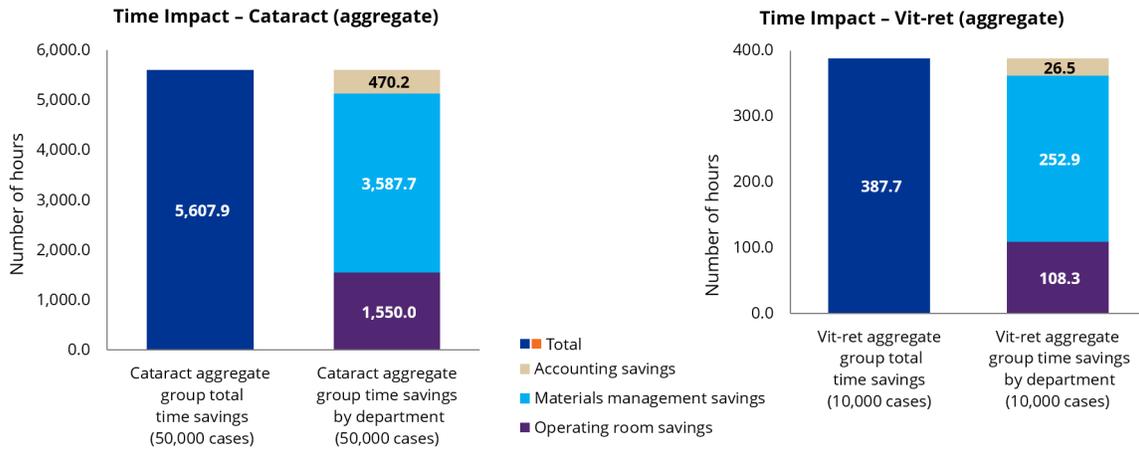
**Figure 4.** Annual cost savings by department of 100% comprehensive pack use at the community hospital level



# RESULTS, CONTINUED

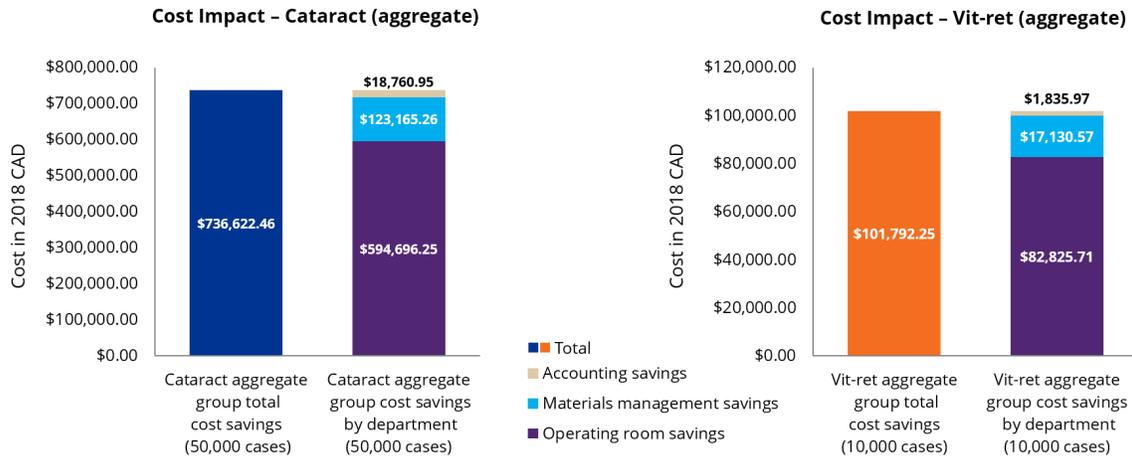
100% comprehensive pack use in 50,000 cataract cases at the aggregate group level potentially saves 5,608 hours. In 10,000 vit-ret cases, 388 hours of labor can be saved annually.

**Figure 5.** Annual time savings by department of 100% comprehensive pack use at the aggregate group level



At the aggregate group level of 50,000 cataract cases, annual savings of CAD\$736,622 is potentially gained. Full comprehensive pack use of 10,000 vit-ret cases in aggregate can save over CAD\$101,000 yearly.

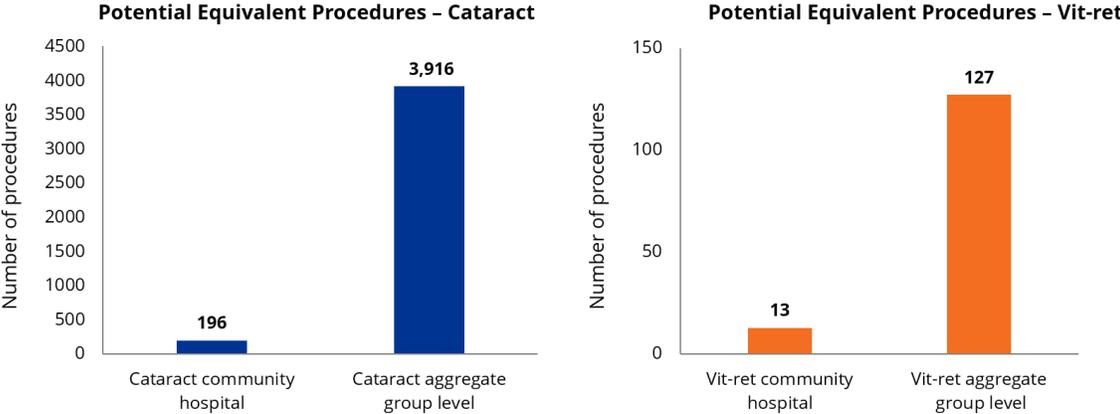
**Figure 6.** Annual cost savings by department of 100% comprehensive pack use at the aggregate group level



# RESULTS, CONTINUED

Surgery preparation time savings (OR department) of 100% comprehensive pack use translates to 196 potential equivalent cataract procedures at the facility level and 3,916 at the aggregate group level; 13 and 127 additional vit-ret procedures are potentially gained at a hospital or in aggregate, respectively.

**Figure 7.** Potential equivalent procedures resulting from 100% comprehensive pack use



*Note: Results assume all operating room preparation time savings are efficiently used for additional procedures and does not attempt to account for patients' demand for surgeries.*

## DISCUSSION AND CONCLUSIONS

- This BIM is the most detailed accounting of the supply lifecycle for cataract and vit-ret procedures to date.
- Comprehensive surgical pack use in Canada can improve cataract and vit-ret surgery efficiency by providing substantial labor and cost savings at the facility level.
  - Time savings are most notable for the materials management department.
  - Greatest cost savings are realized for the OR.
- Full comprehensive pack use can lead to surgical preparation time savings allowing for potential additional procedures.
- This demonstrates that additional government funding to support comprehensive pack use may permit more patients to receive cataract and/or vit-ret surgery.