



Understanding Patient Outcomes by Comparing Pre-Post Hospitalization Patterns

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Objective

- Demonstrate benefit of pre-post comparison technique
 - Useful when lack of established comparison group or benchmarks
 - Effective communication tool

Focus on Joint Replacement

- Identified as priority for wait time reduction
- Predominantly elective
- Resource-intensive
- Growing and changing utilization

Study Questions

- How does hospital use among joint replacement patients compare with the experience of the same group in the year before surgery?
- Does the pattern differ among emergent hip, elective hip, and elective knee surgeries?

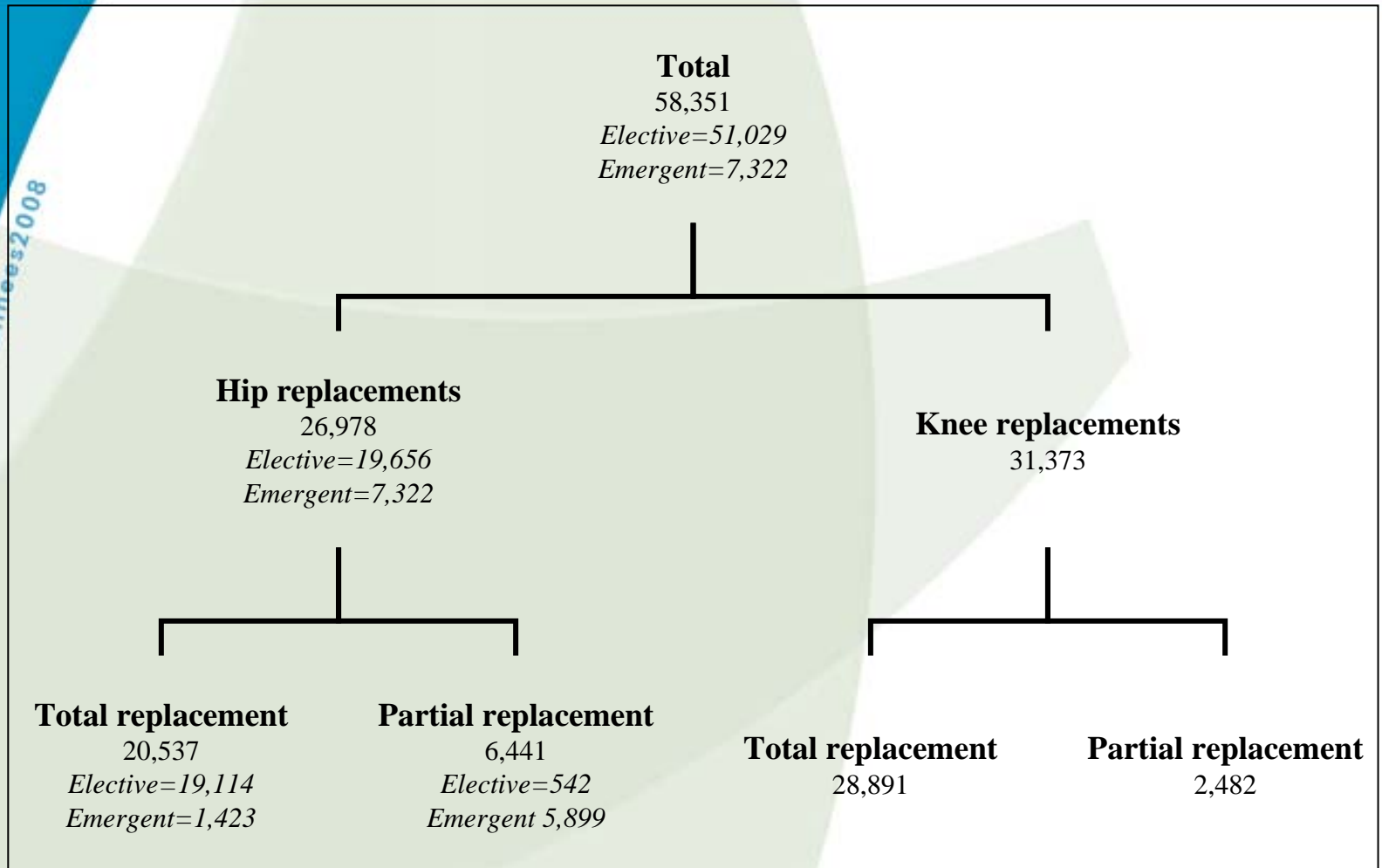
Methods

- Data source:
 - Discharge Abstract Database (DAD) (all provinces outside of Quebec)
- Sample selection:
 - Primary joint replacement in 2005-2006
 - elective and emergent
 - Records with a valid HCN

Methods Continued

- Hospital use
 - 365 days preceding and following surgery
 - Built hospitalization episodes
 - Excluded:
 - episodes where there was another primary joint replacement
 - patients who died in the index joint replacement episode

Study Group



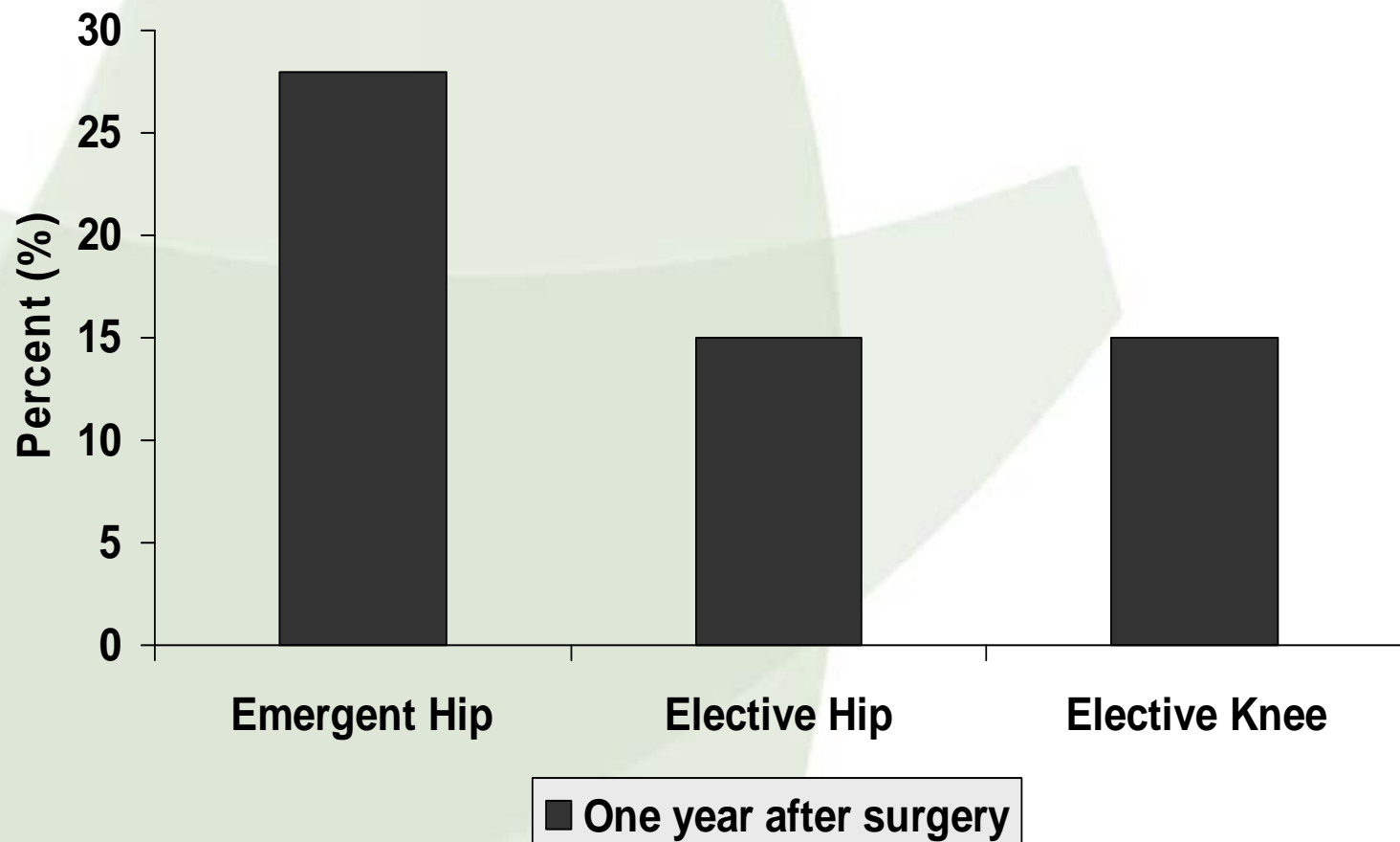
Data Source: Discharge Abstract Database 2005-06

All provinces excluding Quebec

Emergent vs Elective Patients

- Emergent group:
 - Older
 - More females
 - More comorbidities
- Emergent group potentially more frail and medically complicated.

Proportion hospitalized at least once



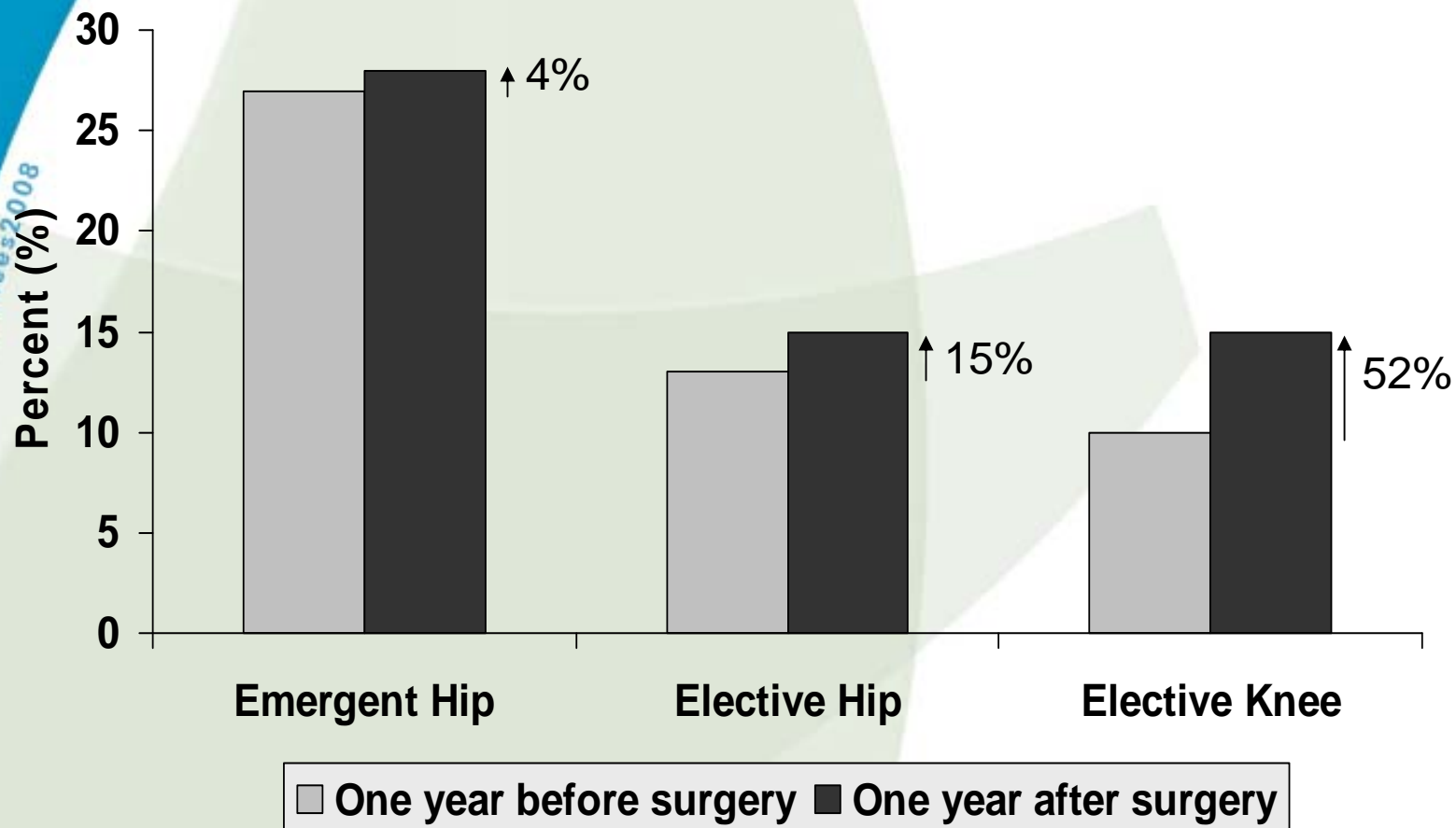
Data Source: Discharge Abstract Database 2005-06

All provinces excluding Quebec

Adding context:

Hospitalizations in the one year *prior* to and one year following joint replacement

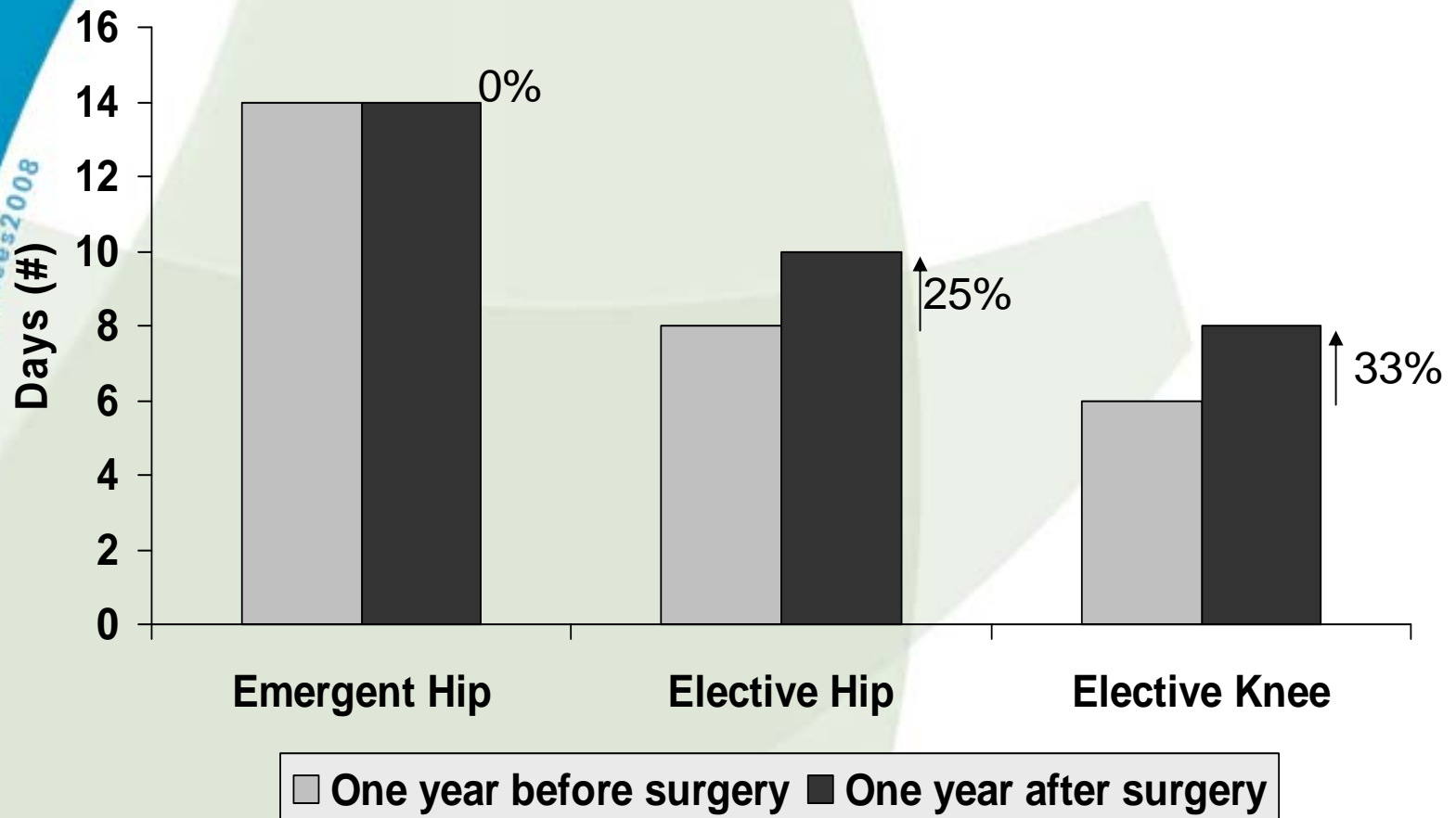
Proportion hospitalized at least once



Data Source: Discharge Abstract Database 2005-06

All provinces excluding Quebec

Median length of hospital episodes



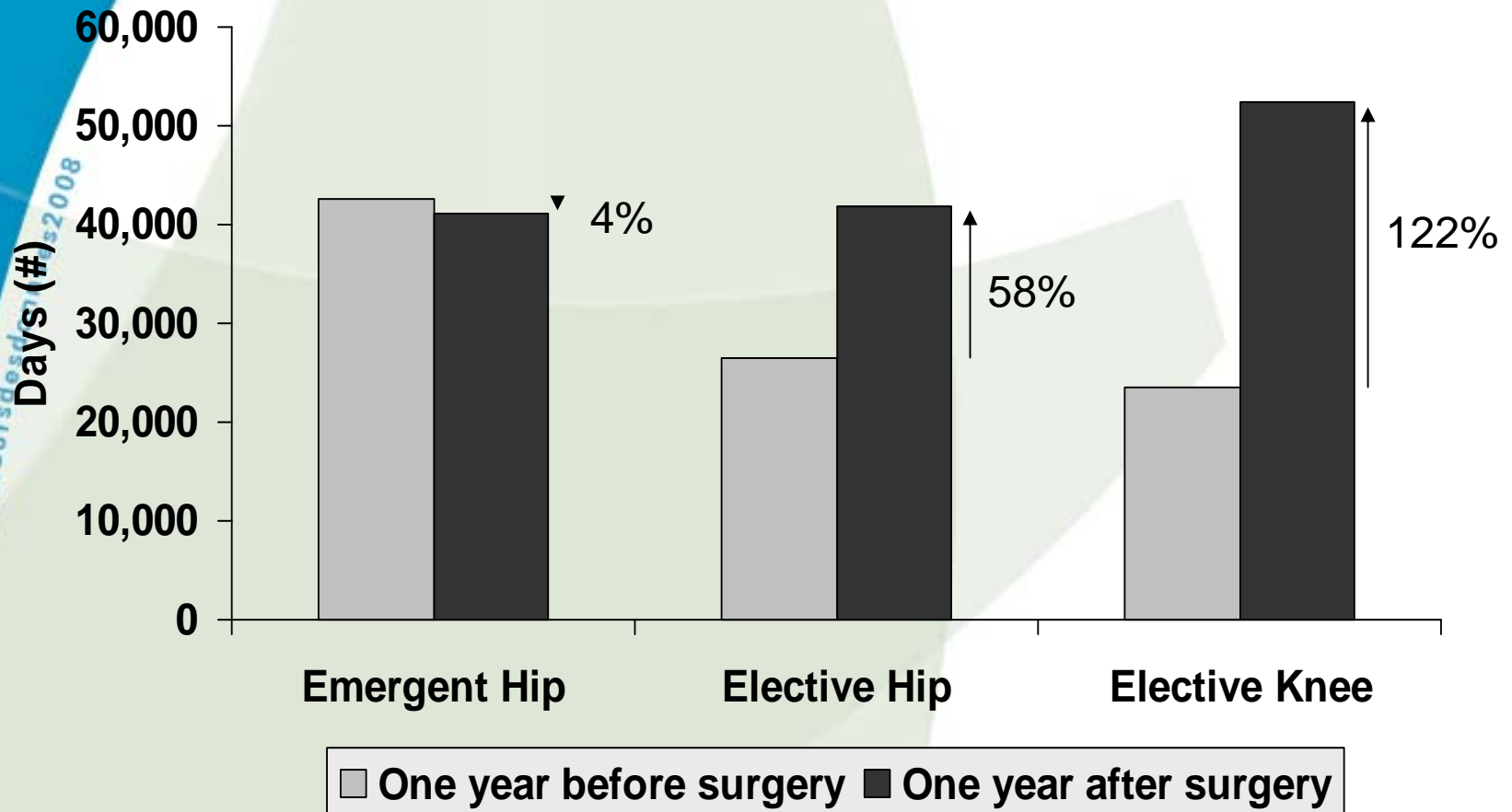
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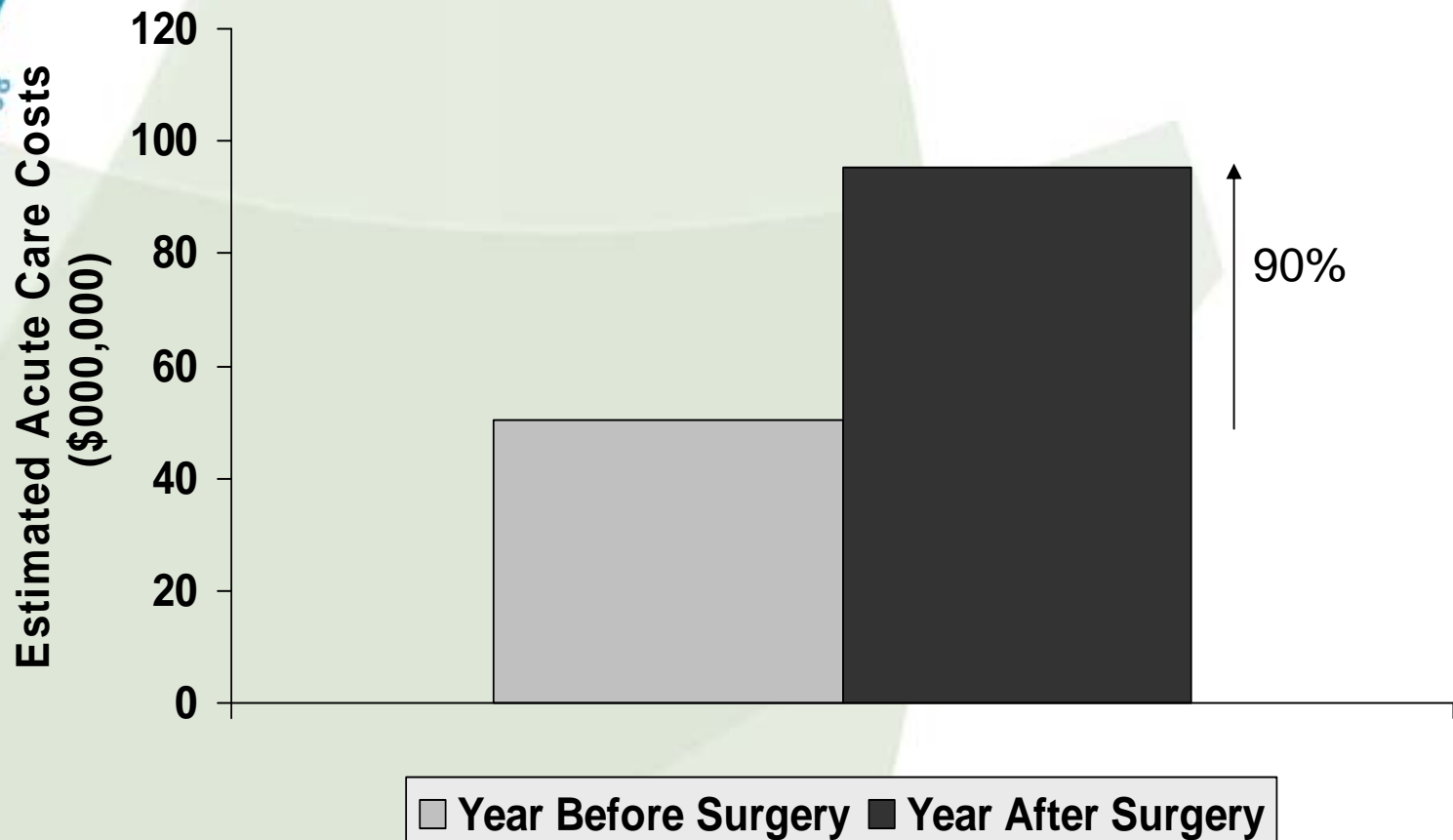
Data Source: Discharge Abstract Database 2005-06

All provinces excluding Quebec

Total number of hospital days



Elective Patients: Total estimated inpatient costs



Data Sources: Discharge Abstract Database Canadian MIS Database
2005-06, All provinces excluding Quebec

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Conclusions

- Compared to baseline, elective patients display an increased demand for hospital services following surgery than emergent patients
- Context is important in understanding outcomes
- Pre-post method creates more compelling story and greater incentive for action