**BACKGROUND**

- Children with bilateral cataracts may undergo immediate sequential bilateral cataract surgery (ISBCS) or delayed sequential bilateral cataract surgery (DSBCS).
- ISBCS: Surgery on both eyes during the same general anaesthesia.
- DSBCS: Each eye is operated on on separate days; requires a second anaesthesia.
- ISBCS is viewed with caution because of the risk of bilateral endophthalmitis.
- However, proponents of ISBCS emphasize that the incidence of serious adverse outcomes is low and is outweighed by benefits such as avoidance of multiple anaesthesia, faster visual rehabilitation, and potential for decreased costs.

**OBJECTIVES**

There is a paucity of literature regarding the cost-effectiveness of ISBCS compared with DSBCS in children. Therefore, the objective of this study was:

To determine whether ISBCS for childhood cataracts is more cost-effective than DSBCS in resulting in bilateral clear visual axis eight weeks postoperatively, from both a societal and health system perspective.

**METHODS**

A retrospective cohort study of children who underwent ISBCS or DSBCS at a tertiary referral paediatric hospital was conducted.  

**Table 2:** Clinics, Follow-up Costs, and Sensitivity Analyses

<table>
<thead>
<tr>
<th>Clinic</th>
<th>Follow-up Costs</th>
<th>Sensitivity Analyses</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISBCS</td>
<td>$1,836.69</td>
<td>100% savings</td>
</tr>
<tr>
<td>DSBCS</td>
<td>$3,900.46</td>
<td>100% savings</td>
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</tbody>
</table>

**RESULTS**

- 53 children were included.
- 37 in the ISBCS group; mean age: 4.41 months.
- 16 in the DSBCS group; mean age: 5.23 months; mean time between surgeries: 4.25 days.
- ISBCS and DSBCS were equally effective. It was therefore not possible to calculate the incremental cost-effectiveness ratio (ICER).
- ISBCS resulted in cost-savings of $3,319.50 per patient with clear visual axis bilaterally from the societal perspective and $1,834.76 from the health system perspective.

**SENSITIVITY ANALYSES**

- The incremental cost was most sensitive to variations in the surgical costs associated with ISBCS and DSBCS, from both the societal and health system perspectives.
- ISBCS remained less costly than DSBCS in all cases when all parameters were varied, from both perspectives.

**CONCLUSIONS**

- ISBCS is equally effective and less costly than DSBCS from a societal and health system perspective for the treatment of bilateral cataracts in children. The cost-saving persisted even with extensive sensitivity and scenario analyses.
- Cost is an important determinant for health system planning, and the potential cost-savings associated with ISBCS are especially important in the context of Canada’s medical system, where the judicious utilization of available resources is key.

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