Immediate Sequential Bilateral Cataract (ISBCS): **A Public Health Solution for a Global Public Health Pandemic**

Authors: Megan Quinn (NHS Highland), Andrew Cassels-Brown (NHS Highland & NHS Orkney), Andrew Pyott (NHS Highland), Ingeborg Steinbach (Centre for Sustainable Healthcare), Susan Macleod (NHS Orkney), Pamela Walker (NHS Orkney), Cassandra Thiel (New York University Langone Healthcare), John Buchan (London School of Hygiene & Tropical Medicine)





Orkney

Introduction

ISBCS is an accepted global public health strategy and recommended by the Royal College of Ophthalmologists (RCOphth) as an appropriate response to the Covid-19 public health pandemic¹. An initial study on 10 patients in the Western Isles showed patients attended four appointments +/- additional appointments (see figure 1) in the bilateral cataract surgery pathway and concluded ISBCS saved 43.8kg of travel-related green-house gases per participant. Subset of 34 underwent an additional journey for pre-operative covid-19 testing (see figure 1).



Objectives

- 1. To calculate travel-related carbon emission savings in ISBCS over two years.
- 2. To evaluate the impact of Covid-19 on the ISBCS pathway and travel-related carbon emissions.

Methods

Demographic data was collected for all who had ISBCS at Balfour Hospital, Orkney over 2018 – 2020. The initial WI study provided a theoretical ISBCS patient journey number. A standardised online route planner was used to calculate kilometers travelled. UK government carbon conversion factors were used. The carbon footprint of the return journey to the operation, and to the post-operative check was combined to produce carbon savings. In the Covid-19 subset, an additional trip to Balfour hospital was added.

Results

102 bilateral operations were recorded in two years. Following exclusion, 98 participants were eligible for analysis. There were 59 females and 38 males. An average of 8.8 kg of carbon green-house gas emissions per participant was saved when participants underwent bilateral cataract surgery vs unilateral, totaling 849.60 kg.

A subset of 34 participants had bilateral cataract surgery after the UK covid-19 lockdown and thereby underwent five

Results cont

Bilateral cataract surgery saved an average of 14.2kg per participant of travel-related carbon emissions vs unilateral surgery in this subset (see graph 1). There were no posterior capsular rupture; 0.5% of participants had CMO.



Key Points

- ISBCS can produce safe quality outcomes above/ compatible with NOD Audit outcomes.
- ISBCS produces safe quality outcomes above NOD Audit averages.

3. Identify post-operative complications of ISBCS.

return journeys.

References

1. The Royal College of Ophthalmologists, United Kingdom & Ireland Society of Cataract & Refractive Surgery. Immediate Sequential Bilateral Cataract Surgery (ISBCS) during COVID recovery: RCOphth/UKISCRS rapid advice document. [Internet] 2020.

Available from: https://www.rcophth.ac.uk/wp-content/uploads/2020/07/Immediate-Sequetial-Bilateral-Cataract-Surgery-Guidance-2.pdf

Acknowledgements

With thanks to the Medical Illustration Department, Glasgow Royal Infirmary, for their help in poster production.