Meeting the future cataract demand: RCOphth Cataract workforce guidance and calculator

Alexander Kin Chiang Chiu (1), Declan Flanagan (2), Barny Foot (1), Jonathan Bhargava (3).
(1) The Royal College of Ophthalmologists, (2) Moorefield's Eye Hospital NHS Foundation Trust, (3) Countess of Chester Hospital NHS Foundation Trust

Introduction

Data analysis published in the way forward (1) document in 2017 predicted that there will be increase in demand for cataract surgery of 25% over the next 10 years. However, our workforce census in 2016 and 2018 (2) has showed significant gaps in the workforce where historical training numbers have not kept pace with service demand.

There is a wide variation in currently accepted pathways for cataract surgery. The 2019 Getting It Right First Time (GIRFT) Programme National Specialty report for ophthalmology (3), endorsed by the RCOphth, included three recommendations for cataract surgery:

1. Improve conversion rates for patients referred for cataract surgery to 80-85% by implementing consistent referral criteria, improving training for community optometrists, and using shared decision-making tools during the referral process.
2. Deliver routine cataract surgery in a maximum of 30 minutes of theatre time, through streamlining turnaround processes.
3. Use locally commissioned primary care optometry services to review patients who have had uncomplicated / routine cataract surgery and have no serious ocular comorbidity

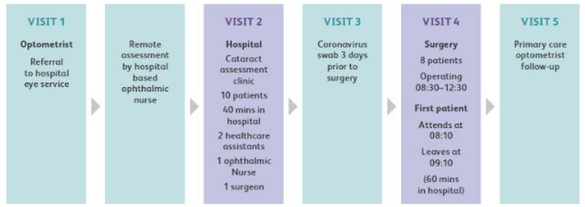
This national document aims:

1. to quantifies the demand for cataract surgery in the UK for the next ten years
2. make evidence-based recommendations to address the GIRFT report on the optimum model(s) of care for cataract surgery services
3. quantify the optimum workforce required to deliver safe, efficient and sustainable cataract service within the Hospital Eye Service.
4. a 'workforce calculator tool' that will help predict cataract numbers and provide staffing requirements for any population size entered.

Methods

Representatives of all interested parties and regions of the UK were invited to participate in the Cataract Workforce Guidance Development Group. A chairperson was selected through a competitive interview process. We incorporated RCOphth guidance on restarting and providing cataract safely in compliance with NHS Covid pandemic requirements. After completing guidelines, a consultation of clinical leads, nurse managers and business managers was conducted.

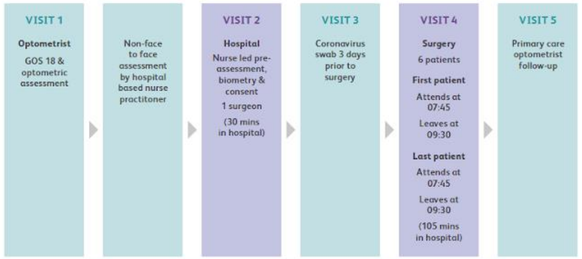
Hospital based cataract pathway



Hospital based cataract pathway summary:

- 6 patient 'events'
- 5 patient visits
- 3 in the community
- 2 in hospital
- 1 telephone consultation
- 100 minutes in hospital
- 8 eyes of 8 patients = 240 minutes of operating in a 240-minute (4 hour) session
- 2 theatre scrub nurses
- 2 theatre support workers
- 2 ward staff nurses
- 2 ward healthcare assistants
- 1 surgeon

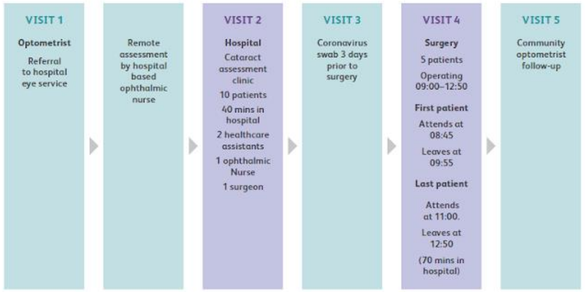
Community based cataract pathway



Community based cataract pathway summary:

- 6 patient 'events'
- 5 patient visits
- 3 in the community
- 2 in the hospital
- 1 telephone consultation
- 135 minutes in hospital (per eye)
- 6 eyes of 6 patients = 120 minutes of operating in a 240-minute (4 hour) session
- 2 theatre scrub nurses
- 1 theatre support worker
- 2 ward staff nurses
- 1 ward healthcare assistant
- 1 surgeon

Hospital based immediate sequential bilateral cataract pathway



Hospital based immediate sequential bilateral cataract pathway summary:

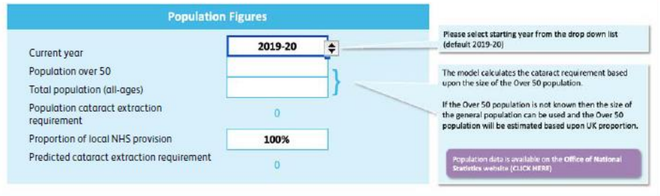
- 6 patient 'events'
- 5 patient visits
- 3 in community
- 2 in hospital
- 1 telephone consultation
- 110 minutes in hospital for both eyes
- 5 patients (10 eyes) on operating list = 200 minutes of operating in a 240-minute (4 hour) session
- 1 cataract assessment clinic will provide cases for 2 theatre lists
- 2 theatre scrub nurses
- 2 theatre support workers
- 2 ward staff nurses
- 1 ward healthcare assistant
- 1 surgeon

1. References
2. The Royal College of Ophthalmologists. The Way Forward: Cataract, January 2017 available from https://www.rcophth.ac.uk/standards-publications-research/the-way-forward/
3. The Royal College of Ophthalmologists. Workforce Census 2018 available from https://www.rcophth.ac.uk/publications/workforce-census-2018/
4. Getting It Right First Time. Ophthalmology GIRFT Programme National Specialty Report 2019 available from https://www.gettingitrightfirsttime.co.uk/surgical-specialty/ophthalmology/

The Workforce Calculator

A key objective of this project was to calculate the current and future multidisciplinary workforce, but particularly the surgical workforce, required to deliver a sustainable cataract service to meet the demand from a defined population. This requires an understanding of the current and likely future demand for cataract surgery to calculate the multidisciplinary staff required for the previously described pathways.

Forecasting the rates of cataract surgery across defined populations is not exact. Differential changes in population size, demographics and divergence from standard predictions alongside changes in disease incidence and health seeking behaviour can introduce unpredictable variation. We developed a simple user-friendly model with the flexibility to predict workforce requirements for a range of populations and/ or organisations, as well as comparative demonstrations of how different patient pathways influence workforce requirements.



The model calculates how many ophthalmic surgeons, nurses, healthcare assistants and community optometrists will be required to deliver a service capable of meeting the predicted and expected demand for surgery for a defined population. This is achieved through the user defined values for the proportion of surgery delivered using each described pathway, then adapting the staff requirement to deliver each pathway. A total workforce requirement is then derived. The model allows for mixed pathways on a proportional basis.

Our recommendations:

- Through implementation of the suggested pathways, individual units and on a bigger scale, care commissioning groups will be able to plan services in terms of staffing and facilities to provide cataract capacity to meet demand for the next 10 years.
- An increase of just 1 patient per operating list, going from the current average of 7, to 8 cases will require 7,731 less operating lists annually at a national level with a current population of 66,650,000. (61,845 to 54,114 operating lists)