

Temporal trends in paediatric cataract surgery in England: analyses of national hospital episode statistics

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Introduction

- The National Health Service England Hospital Episodes Statistics (NHS HES) administrative database reports information on inpatient admissions, outpatient appointments and attendances in NHS hospitals.
- Paediatric cataract is a rare condition with the estimated incidence of congenital and infantile cataract being 2.49 per 10,000 children in the first year of life.¹
- Prompt management of cataract in children is crucial to prevent amblyopia and lifelong visual impairment.²

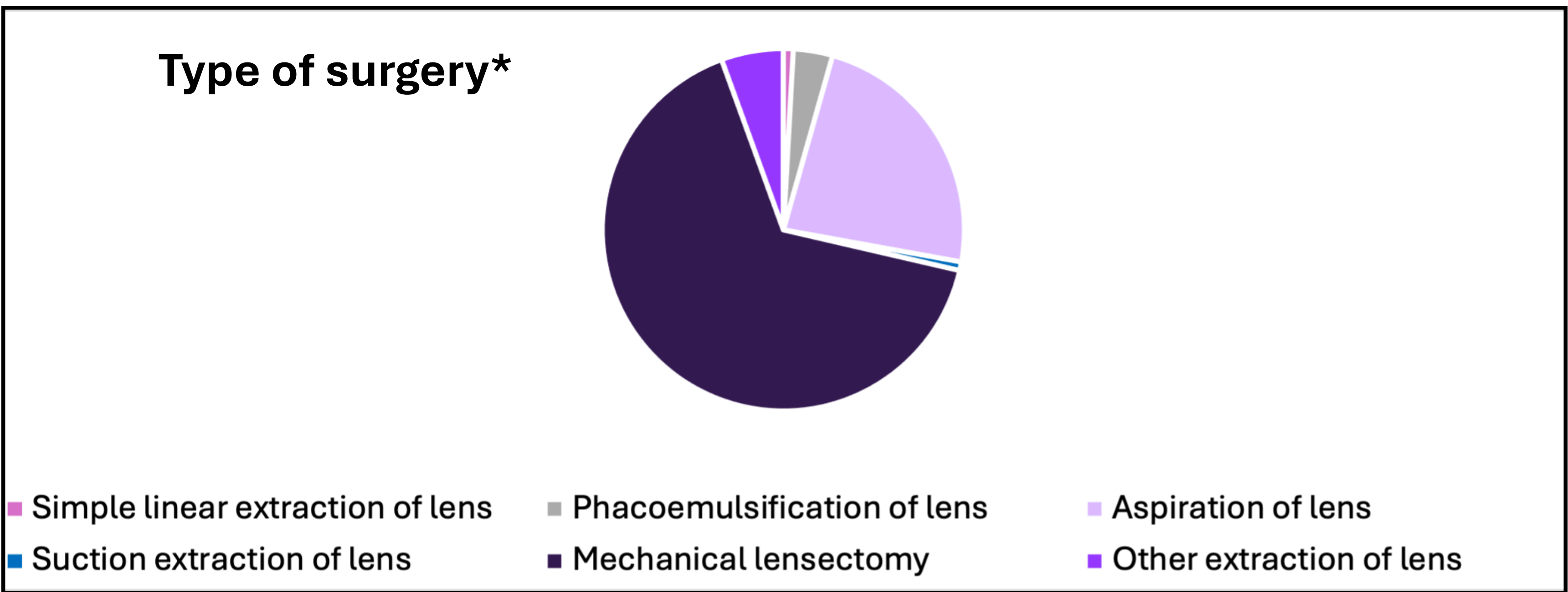
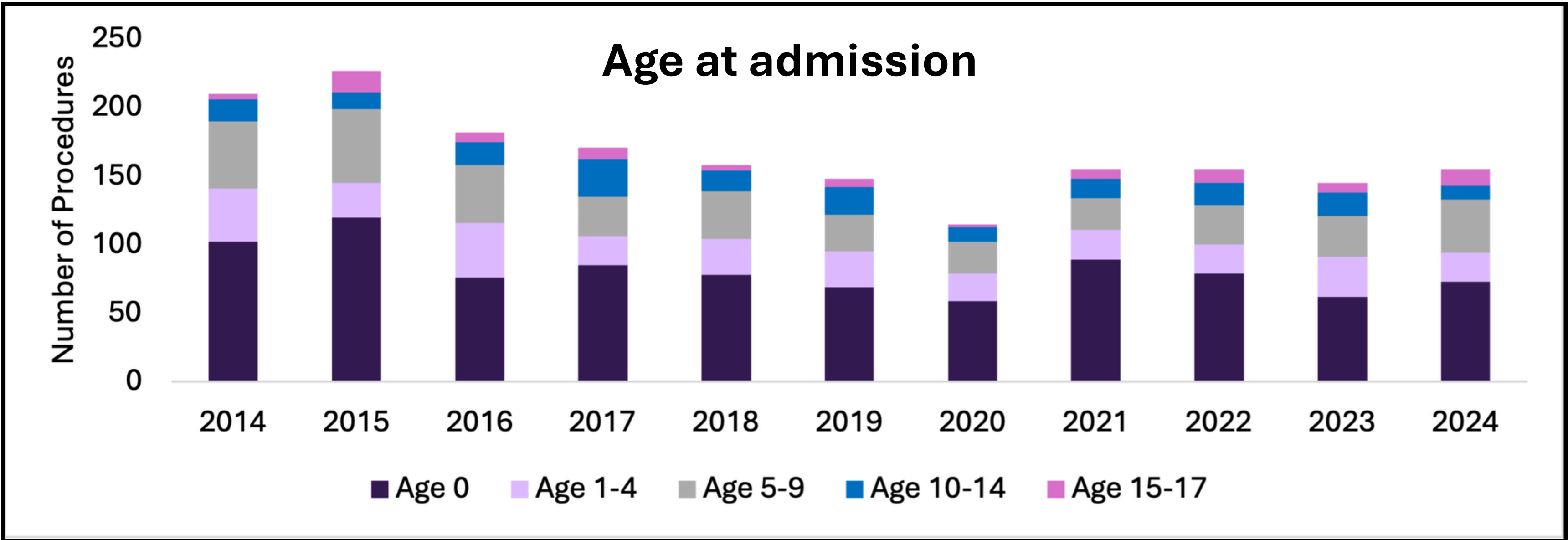
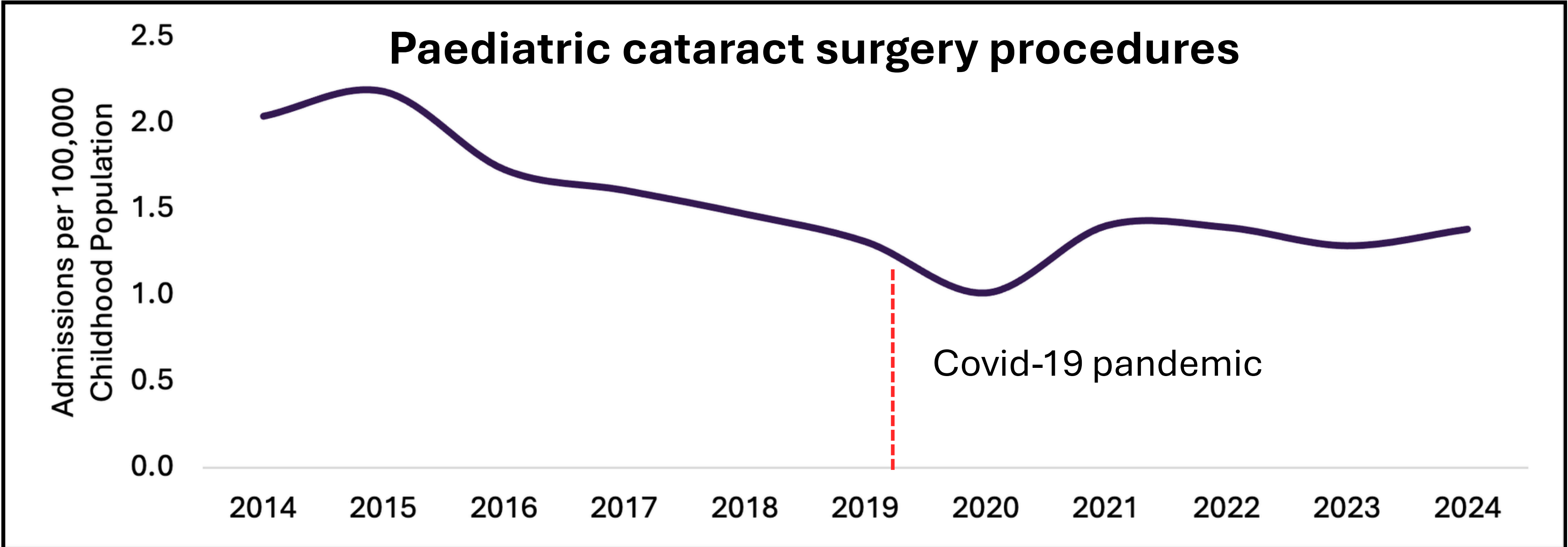
Purpose

- To describe national temporal trends in hospital episodes for cataract surgery in children between 2014 and 2024.

Methods

- A retrospective analysis of NHS England HES databases was conducted.
- Operations Classification of Interventions and Procedures (OPCS-4) codes (C71, C72, C74) were identified for cataract surgery.
- Inpatient episodes, between 2014 and 2024, in children aged 17 and under with a cataract operation coded as the main procedure on admission were extracted.

Results



- Across the study period there were a total of 1,821 inpatient paediatric episodes in which the main operative procedure was lens extraction.
- The codes most commonly used to capture cataract surgery were mechanical lens extraction (C74.3: 65.8%, 95% CI 63.7%–68.0%) and aspiration of lens (C71.3: 23.4%, 95% CI 21.5%–25.4%).
- The highest rate of paediatric cataract procedures was in 2015/16 at 2.2/100,000 children (95% CI 1.9–2.5), and the lowest in 2020/21 at 1.0/100,000 (95% CI 0.8–1.2)

Discussion

- There is evidence of a decline in paediatric cataract surgery rates since 2015/16, initially driven by the changes in activity for children under 1 year old: 18.1 episodes per 100,000 live births in 2015/16 (95% CI 14.8–21.3) versus 11.5 (95% CI 8.9–14.0) in 2016/17.
- Changes in disease incidence and / or the worsening UK workforce crisis in paediatric ophthalmology may be factors contributing to the reduced activity in recent years.³
- HES data are limited by the absence of granular data on diagnosis, associated clinical context or procedure detail, and concerns over validity of coding and missingness.

Conclusion

- Children are most likely to undergo intervention in the first year of life, a critical period for visual development.
- There is evidence of reduced activity in recent years, despite some post-pandemic recovery. The cause for the overall fall in activity since 2015/16 remains unclear.
- HES data provides a valuable insight into treatment trends for operated cataract in children, which may support future service planning.

References

1. Rahi JS, Dezateaux C. Measuring and Interpreting the Incidence of Congenital Ocular Anomalies: Lessons from a National Study of Congenital Cataract in the UK. Invest. Ophthalmol. Vis. Sci. 2001 Jun;42(7):1444-1448.
2. Lloyd IC, Wilson ME, Trivedi RH, Biswas S, Ashworth JL, Green E, et al. Update on pediatric cataract surgery. Asia-Pacific Journal of Ophthalmology. 2025 Jul 1;14(4):100229
3. Clough N, Magan T, Jain S. The UK paediatric ophthalmology workforce crisis – a national perspective. Eye. 2025 Mar 18;39(9):1793–6.

*as coded for in returned data

