



Case study

Pioneering high-volume bilateral cataract surgery in Tayside

October 2025

Summary

Since February 2022, Ninewells Hospital in Dundee, Tayside, has been delivering a high-volume **immediate sequential bilateral cataract surgery** (ISBCS) model to address long waiting times from referral to assessment and rising demand for services. Patients undergo surgery on both eyes during a single hospital visit, reducing hospital attendances and overall recovery periods. Direct listing from optometry referral, streamlined patient flow, and innovative surgical training approaches underpin the new pathway.

To date, the hospital has carried out more than 2,000 ISBCS procedures and since June 2025, it has been managing up to 40 cases per day in a single theatre. The model has reduced the average wait from referral to surgical listing from 180 days to 11 days, doubled surgical throughput, expanded resident training opportunities, and improved patient experience – with very high levels of satisfaction and minimal complications. The waiting time from listing to surgery is around two years.

“I think it’s better to go ahead and get both [eyes] done, rather than getting one done and coming back later... Everything is now focused and looking totally different.”

Ninewells Hospital patient

The challenge

Until 2018, NHS Tayside was consistently meeting the Scottish Government's 16-18-week target for referral to treatment for cataract surgery – a procedure that improves health and quality of life, including reducing the risk of dementia by 30%. However, the combination of economic austerity and the COVID-19 pandemic caused waiting lists to grow substantially, with patients waiting a minimum of six months from optometrist referral to ophthalmologist appointment. Ninewells Hospital needed a fresh approach to manage these long waits and improve patient outcomes.

94%

reduction in average waiting times – from 180 days to just 11 – for patients moving from referral to surgical listing.

2,000+

ISBCS procedures carried out since June 2022

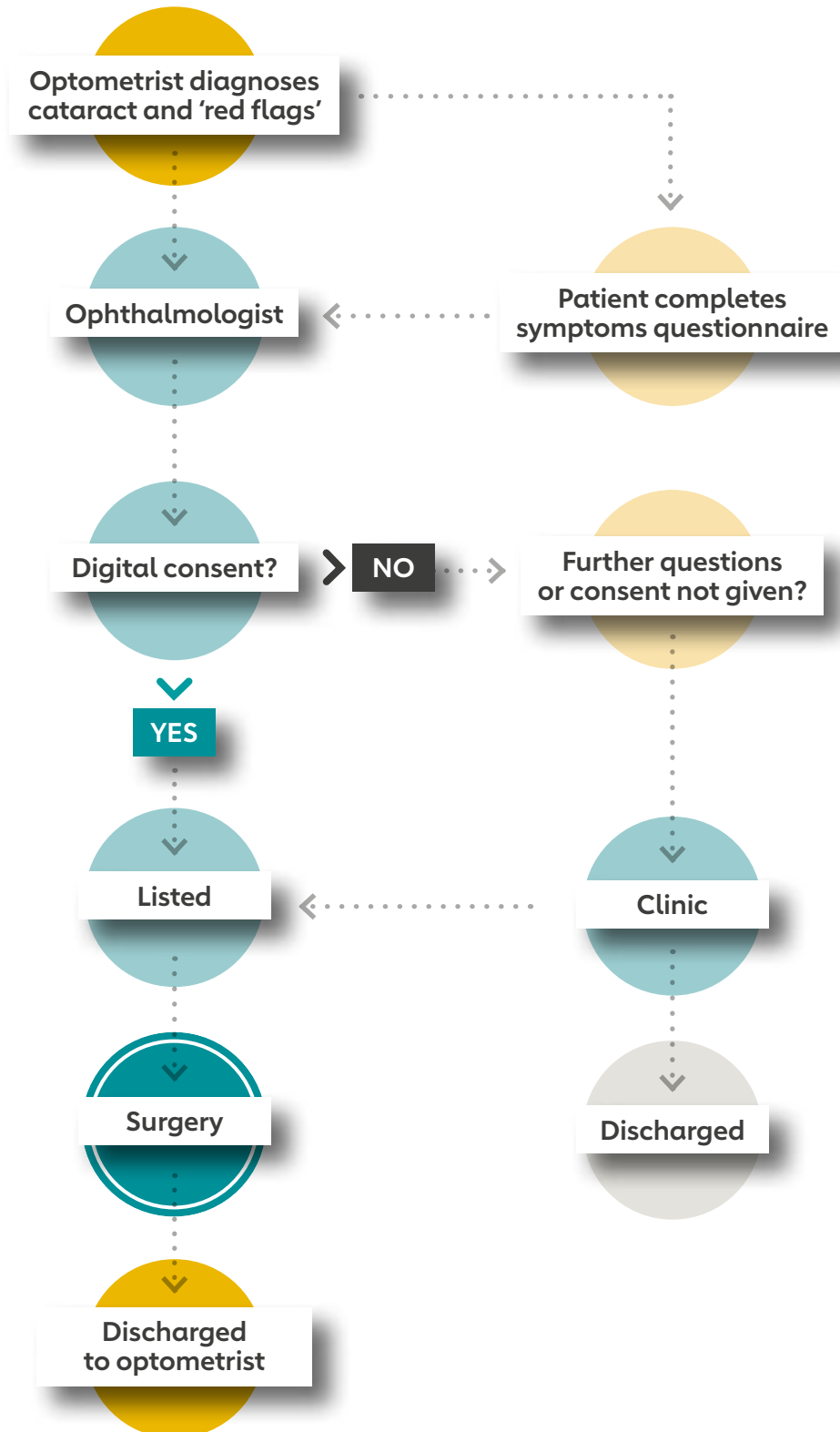
The solution

The hospital's ophthalmology department implemented a high-volume ISBCS model (see figure 1).

Most patients qualified, with primary exclusions for those on immunosuppressants or living in nursing homes, where there is a higher risk of infection, and for those patients with corneal ectasia, a history of uveitis and/or Fuchs dystrophy.



Figure 1: The high-volume ISBCS pathway



The hospital introduced several innovations to support the high-volume ISBCS workflow:

- **Direct listing**

Patients are scheduled for surgery after optometry referral. They give informed consent after consuming information about the procedure, including a video that introduces staff and the theatre environment. Patients can request to proceed, ask further questions (answered via a face-to-face clinic or telephone call), or opt out. This approach usually removes the need for in-person preoperative consultations but retains a personal touch.

- **Streamlined patient flow**

Pioneered by ophthalmic nurses, changes such as eliminating unnecessary gowning and trolleys enables patients to walk into theatre in their own clothes. This saves time, increases clinical volume, and improves patient comfort.

- **Enhanced surgical training**

A time-banking system reserves an hour per day to ensure resident doctors gain surgical experience. As resident doctors perform more surgeries, their operating times shorten, increasing the sustainability of the high-volume model.

“The resident doctor that came to me first was a senior who had done 600 cataracts. By the time he’d finished his training, he’d done 2,800.”

*John Ellis,
consultant ophthalmologist,
Ninewells Hospital*

Outcomes and impact

The model has reduced the waiting times for consultant decision by 94%, helping to manage the cataract backlog. Additional benefits included:

- **Surgical efficiency**

The team perform in one day what previously took a full week, doubling throughput from 12-14 cases per day to around 30 – with very low rates of bilateral complications.

- **Improved patient wellbeing and satisfaction**

Faster recovery and fewer hospital visits enable patients to quickly improve their quality of life. Most patients (92%) are happy to be listed for surgery directly and only three patients have declined same-day surgery for both eyes.

- **Environmental gains**

Fewer hospital trips for patients and reduction of single-use plastics result in lower carbon emissions.

- **Expanded training opportunities**

Resident doctors exceed the national requirement of 350 cataract surgeries, with no case selection limiting their exposure. They operate on a full spectrum of patients, including those with post-trauma eyes, pseudoexfoliation, and Parkinson's disease with tremors, as well as patients who are seated in a semi-upright position during surgery.

“I am hugely proud of the team’s performance, showing once more that NHS Tayside teams are in the vanguard of innovation and improvements that is benefiting the health of our population.”

*Professor Grant Archibald,
NHS Tayside Chief Executive*

Key takeaways for other units

Necessary ingredients for success are:

- **Strong leadership and team cohesion**

Efficiency, innovation and morale depend on shared purpose. Direct listing can significantly reduce delays, but omitting a pre-operative patient consultation requires full support from the wider clinical team.

- **Staff and political buy-in**

Nurses, as the largest part of the ophthalmic team, are pivotal. Recognising and valuing their contributions ensures morale and retention, while senior management support sustains the model.

- **Comprehensive strategic planning ahead of implementation**

High-volume ISBCS requires multiple interdependent changes to workflow. Units must be ready from day one.

- **Fit-for-purpose clinic space**

Theatre design is critical. At Ninewells, a 25m² theatre optimised staffing and costs, requiring only seven nurses per day compared with 11 for a dual table workflow using two adjacent theatres.

“I have nurses who have swapped their off duty [days] so they can be in on the high-volume day of the week. It is the most popular day.”

Charge nurse, Ninewells Hospital

References

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