

# BMEC TriVice Case Study

## Overview

The Birmingham and Midland Eye Centre (BMEC) is one of Europe's largest tertiary eye hospitals, renowned for clinical care, research, and education. As a centre of excellence, BMEC offers specialised tertiary referral services across Birmingham and the West Midlands. Committed to providing 'Right Care Right Here,' BMEC treats patients at Birmingham City Hospital and other local sites, ensuring high-quality care closer to home for Sandwell and Birmingham residents.

## Challenges

The Birmingham and Midland Eye Centre (BMEC) encountered several challenges in managing emergency eye patients across the West Midlands. The centre received most referrals from optometrists and operated a 'walk-in' system for emergencies. Non-urgent patients were often redirected to community optometrists, but they might have been referred back to BMEC, leading to an inefficient patient journey. Optometrists felt pressured to send patients to BMEC's Eye Emergency Department (EED) due to inadequate responses from BMEC's email referral system and difficulties in obtaining telephone advice.

The EED's triaging system relied heavily on manual, face-to-face methods, including paper-based forms and verbal assessments, lacking a telephone triage system. This manual process was time-consuming, prone to errors, and could delay treatment, which was critical for serious eye conditions. The labour-intensive nature of manual triaging strained staff resources, potentially overburdening them and affecting the quality of care. The slow and inefficient process also resulted in long waiting times, decreased patient satisfaction, and reduced productivity.

## Solution

TriVice, developed by Capri Healthcare Ltd., is an electronic triaging system designed specifically for ophthalmology patients. This AI-driven platform enables rapid and accurate triage of various eye conditions, including emergencies like retinal detachment, macular degeneration, and glaucoma. The system provides real-time responses and

easy access for all involved parties, thereby reducing unnecessary patient journeys and preventing delays in patient care.

## Trust's approach

BMEC and Capri Healthcare have collaborated to co-design triaging algorithm and implemented TriVice, an electronic triaging system, to address the challenges in emergency eye care. TriVice employs algorithms and machine learning to analyse patient symptoms, providing a priority score to indicate urgency. This system enables clinics to prioritise urgent cases and allocate resources efficiently, reducing waiting times and improving patient outcomes. By decreasing unnecessary emergency department visits, TriVice ensures timely and appropriate patient care.

TriVice facilitates real-time triaging by BMEC doctors, offering timely management advice to referrers. Referrers can upload images, videos, and other relevant information and utilise a secure messaging chat system. This reduces non-urgent patient attendances and directs patients to appropriate care pathways.

TriVice enhances patient evaluations by improving accuracy and consistency with referrer-provided data, ensuring timely care and reducing misdiagnosis risks. It prioritises urgent cases in clinics, promoting swift treatment for critical eye conditions to improve clinical outcomes. By optimising resource allocation in the Eye Emergency Department, TriVice enhances efficiency, lowers costs related to manual processes, and standardises triaging protocols for consistent patient management. Additionally, TriVice gathers and analyses data on symptoms and treatments, providing insights that aid in continuous improvement of emergency eye care services.

## Outcome:

TriVice offers multiple advantages for BMEC's Eye Emergency Department (EED):

1. **Increased Demand for Emergency Services:** TriVice effectively identifies and prioritises urgent cases, increasing referrals for emergency eye care.
2. **Enhanced Capacity for Urgent Cases:** By efficiently prioritising urgent cases, TriVice helps EED allocate resources more effectively, increasing their capacity to treat critical patients.
3. **Improved Resource Utilisation:** The system ensures timely and efficient patient care, reducing waste and enhancing the overall quality of care.

4. **Better Patient Outcomes:** TriVice ensures prompt and appropriate treatment, leading to improved clinical outcomes and higher patient satisfaction.
5. **Reduced Wait Times:** The system decreases patient wait times, enhancing patient satisfaction and clinical outcomes.
6. **Increased Patient Throughput:** TriVice streamlines the patient intake process, allowing more patients to be seen in less time.
7. **Accurate and Consistent Assessments:** The system provides accurate and consistent patient assessments, reducing misdiagnosis risks and ensuring timely care.
8. **Effective Resource Allocation:** TriVice optimises resource allocation, ensuring patients receive necessary care promptly.
9. **Cost Savings:** The system reduces costs associated with manual intake processes and increases revenue through improved patient throughput.
10. **Addressing Increased Workload and Costs:** While TriVice implementation may initially increase the workload for clinical staff and require investment in technology and training, the long-term benefits of improved resource utilisation and patient outcomes outweigh these challenges, ultimately leading to better patient care and satisfaction.

## What's Next for BMEC

The TriVice implementation journey continues for BMEC. The Trust plans to collaborate with their IT system supplier to integrate TriVice with their electronic patient records system using APIs. This integration will enable staff to manage referrals and subsequent appointments within their existing systems, enhancing efficiency and maximising the benefits of TriVice.

Additionally, BMEC intends to utilise more of TriVice's functionality by adding desktop widget on GP's practice management software such SystmOne, EMIS for easy access.

## Want to Know More?

Contact BMEC's TriVice Deployment Team at [support@trivice.net](mailto:support@trivice.net)