

Edge Health

Years in Review 2023 - 2024

From Insight to Impact





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Directors' Note

The last couple of years have been a mix of change, challenge and opportunity across the health and care system. There's growing demand, long waiting lists, and persistent pressure on people delivering services. At the same time, technology and data capabilities are moving fast-bringing real promise, but also a fair bit of distraction. It's easy to get caught up in the noise.

At Edge, our focus has stayed pretty steady: helping people and organisations who are clear about what they want to achieve, supporting them to make it happen. That's taken many formsfrom building the data infrastructure behind a scaling tech platform, to helping a cancer alliance understand how to boost early diagnosis or setting out the economic case for a new genomic test to support mainstream adoption.

One highlight was our work with NHSE on Al dermatology. The findings supported a change in NICE's evaluation- from limiting Al use to research only, to recommending it for NHS-wide rollout. That's now helping people get earlier, safer diagnoses for skin cancer. A good example of how evidence, when it's well-timed and well-used, can open doors.

A lot of what we've done this year has involved cutting through complexity and helping people move forward with confidence- especially where they're facing competing pressures. Our work with GIRFT, NHS England and the Model Health System has been all about that: making it easier to see what's working, where things could be better, and how to turn insight into action.

Technology has understandably taken centre stage recently, especially AI- but the most impactful uses we've seen are the practical ones. Whether that's applying AI to improve clinical coding or using ctDNA testing to speed up cancer treatment decisions, the value comes when tech is tied directly to better care and outcomes. The same goes for data engineering, which has become a bigger part of our work- helping clients build the right systems to solve real problems, not just collect more data.

One thing that's stood out to Ed and me this year is how important accountability is done well. Not in a 'who's to blame?' way, but in creating the right environment for people to take ownership, feel supported, and want to do their best work. That mindset- clear, empowering, and curious has quietly underpinned a lot of what's worked this year.

We continue to learn that health doesn't exist in isolation. It shapes and is shaped by wider society. Whether it's through supporting people with opioid dependency or evaluating how better care can support economic productivity, the links are everywhere. And our work increasingly reflects that.

So, thank you to our clients, partners and team. We've loved the variety, the impact, and the trust you've put in us. We're looking forward to what's next.



George Batchelor
Director & Co-founder



Edward Bramley-Harker Director & Co-founder

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Key areas of impact in the past 2 years



Edge Health

Impact in 2023-2024

130 projects

delivered across the UK, Canada, Australia and Saudi Arabia.



90+ General practices supported with quality improvement and population health analytics.

173
Acute
medicine unit

metrics displayed across the SAMIT and SAMIT 75+ dashboard.

£1.6 million

estimated per 1 million population in benefits through the adoption of autonomous AI tool (DERM) for skin cancer detection.

HSJ award winners

of Data Integration Project of the Year and identified as a **UK leading management consultancy 2025** by the Financial times.



£200,000

net savings in the first year for 14 providers which implemented the East Midlands Breast Pain Pathway.

700
Registered

across 183 providers using metrics displayed on the GIRFT SPaedIT dashboard curated for Paediatricians.

120+
GIRFT
data packs

for provider and network-level Pancreatic cancer care pathway best practice and improvement.

50 + Benchmarking data packs

produced for Children's Hospital Alliance (CHA) over 4 Fiscal Quarters. These enable key stakeholders to make data-backed decisions

135 Virtual wards



across 71 providers (46% of all virtual ward providers) evaluated on whether they meet operational standards, leading to decreases in national variation.



Accredited with ISO27001, ISO9001 and Cyber Essentials+ certificate of assurance ensuring data is secure and protected.

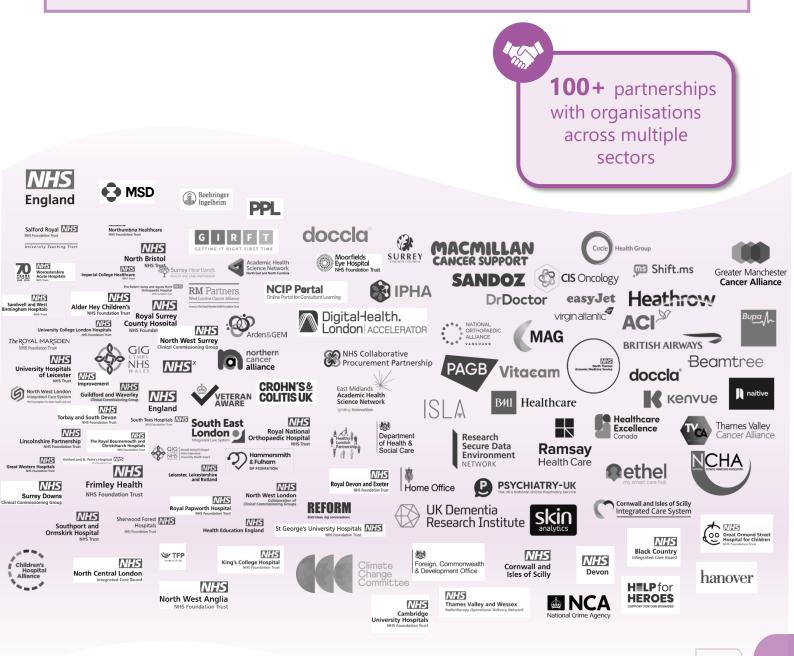
Clients and Partnerships

We're working with our most diverse client base yet- from NHS bodies to companies in health tech, pharma, life sciences and social care.

Health is no longer the domain of a single sector; it sits at the centre of a fairer, more productive society. Meeting today's challenges requires collaboration across public services, commercial innovation and policy.

Our work ranges from system improvement to helping private firms deliver scalable products-through data engineering, dashboards and models that turn data into insight and action.

Our clients face shared barriers- regulatory, operational, or commercial. The real opportunity lies in connecting them to drive meaningful, joined-up and sustainable improvement.



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Tailoring our Solutions to the Clients' Needs

The needs of our clients are evolving- faster than ever as technology matures and challenges across health and care become more complex. Reports are no longer the default output. Increasingly, our work includes writing code to orchestrate data pipelines, building dashboards embedded in workflows, and creating data products that clients can adapt and sustain.

Drawing on the experience and expertise of our multidisciplinary team, we have delivered a range of solutions in the last two years, including:



Dashboards

We develop dashboards that help clients interact with data at scale- supporting real-time decisions and long-term planning. This includes the HSJ award-winning SPaedIT, a national tool for paediatric surgery that integrates data from 180 providers.



Written reports

Our reports combine analysis with narrative to support change. Highlights include: A report for NHS England on Al dermatology, informing NICE approval. Hundreds of specialty-level packs for GIRFT, supporting providers across the NHS.



Modelling and data engineering

We build scalable data infrastructurefrom Excel tools to cloud-based pipelines and metric engines. Recent work includes supporting DHSC's Social Care Data Platform and national theatre benchmarking systems across the NHS.



Infographics

We make data clear, engaging and actionable. Examples include: NCHA's "Best Kept Secret" report; and MSD analysis showing cost savings from early PAH diagnosis.





Our Impact in 2023 and 2024

The past two years have been transformative for healthcare. Globally, health systems are still recovering from COVID-19, facing backlogs in elective care and shifting work preferences and practices. The rapid rise of Artificial Intelligence (AI) brings both challenges and opportunities, particularly around ethics and applications to clinical decisions.

In the UK, a new government has taken office with bold ambitions for reform- publishing the Darzi Review and signalling a fresh 10-Year NHS Plan. But while the leadership has changed, the underlying challenges remain. There is a growing appetite for radical ideas, yet also a deep need for stability. As the system waits for clarity, our work continues to support clients in navigating uncertainty and making meaningful progress where it matters most.

The following section will highlight some of our most interesting projects over the last two years. It will cover:

Operational Planning, Optimising Capacity and Resource Use

We've supported NHS systems with tools and insights to plan capacity, manage demand, and improve the use of limited resources- across theatres, diagnostics, and workforce.

2 Identifying & Implementing Best Practice

Through data and stakeholder engagement, we've helped Trusts, ICBs and Cancer Alliances identify variation and scale proven approaches to care.

3 Health Economics & Evaluations

We've assessed the real-world value of technologies, pathways and models of care- from AI diagnostics to national service redesign- ensuring evidence informs decisions.

4 Engineering Data Solutions and Al

We've built modern data infrastructure and analytics tools to help clients manage, connect and act on data more effectively- supporting scale, speed and sustainability.

5 International Work

Our international work has grown, especially in Canada, where we've partnered on clinical coding, digital health and evaluation frameworks- and expanded into Australia and the Gulf.

We have chosen case studies that not only display the quality of our work but also the breadth and depth of the areas that we work in.





Operational Planning

Over the past two years we have supported ICBs, NHS Trusts and other bodies with reliable analysis and tools that help to plan capacity needs, track resource use and provide the evidence they need to effect change within their organisations.

This section contains three case studies that show a few ways in which we have delivered operational planning, capacity optimisation and resource use support to our clients. "Edge Health worked closely with our clinical teams to understand the pressures and activity in SACT services and to provide recommendations to be delivered across the system including a demand and capacity tool for our biannual SACT assessments.

Edge Health are knowledgeable, professional and a very approachable team supporting the requirements of our service."

~ Lyndel Moore – TVCA Cancer Clinical Lead for Nursing and AHPs

Explore the full analysis

Enhancing Theatre Capacity Management

We supported Cambridge University Hospitals to plan confidently for both elective and emergency care. Using patient-level data and robust modelling, we helped them allocate theatre capacity more effectively and sustainably post-COVID.

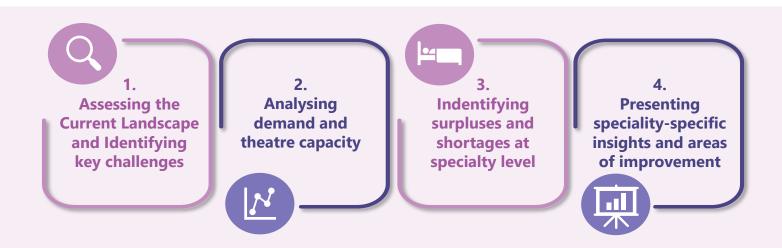
During the pandemic, Cambridge University Hospitals (CUH) had to adapt their theatre schedules rapidly- balancing rising emergency care needs with growing routine backlogs. As the immediate pressures eased, CUH sought to develop a more sustainable, data-led model to allocate theatre capacity.

This involved assessing elective and emergency data, understanding changes in patient needs, and testing whether a return to pre-COVID scheduling was viable- or whether a new, evidence-based approach would better support efficient, high-quality care.

What we did

We built a model using patient-level theatre and waitlist data to quantify demand by specialty and urgency. Alongside this, we assessed capacity by specialty, considering operational factors like staffing and equipment.

With input from clinical leads, we refined the model to reflect local context and emerging patterns in service use. We also tracked the impact of emergency demand on elective activity and considered out-of-hours workload and post-COVID changes in demand to inform planning.



What we achieved

Our analysis identified imbalances in capacity and demand across specialties, highlighting where shortages or surpluses existed.

CUH used these insights to plan more proactively- allocating theatre time where it would have the greatest impact. This led to a more strategic approach to managing waiting lists and improved theatre utilisation, with a clearer path to sustainable delivery of elective and emergency care.

Waiting List Modelling: Effectively Achieve Elective Targets



We helped Leicester, Leicestershire and Rutland Integrated Care Board use data and waitlist management to improve their performance to the top 50% in England.

Meeting national targets on waits for elective treatments and sizes of waiting lists can be extremely challenging for Trusts and has been further complicated by the pandemic. COVID-19 led to large backlogs of patients waiting longer than ever before. Starting in November 2022, Edge Health worked with Leicester, Leicestershire and Rutland (LLR) Integrated Care Board to support with operational decision-making and elective care planning to meet these targets.

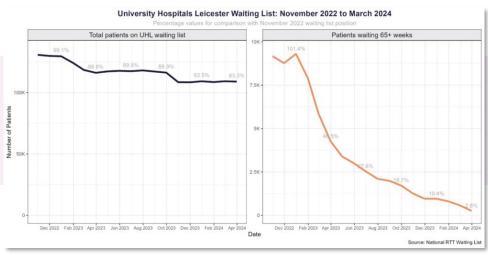
What we did

We worked closely with system leaders within LLR to extract insights from acute, community and primary care data sources. We used simulation modelling and demand forecasting techniques to outline the impacts of various system-wide interventions on the size of the waiting list. From this, we identified areas of pressure across the system and conducted demand and capacity deep-dives across 4 specialities and 9 diagnostic modalities.



MODELLING

Demand and capacity deep-dives across the most pressured specialities and diagnostic modalities.



KEY IMPACT

Major
improvement in
sole acute
provider in LLR
from being 3rd
worst-performing
Trust to the top
50% of Trusts for
waiting times.

What we achieved

Our analysis provided evidence to Trust-level leadership to make robust decisions and plan strategically for the future. We helped stakeholders focus on the most likely scenarios and consider the scale of the intervention and investment required to proactively reduce pressure on elective services. The sole acute provider in LLR improved from being the 3rd worst-performing Trust for waiting times and proportion of patients waiting over 65 weeks for elective care, to one of the top 50% of Trusts nationwide for both measures. Total waiting list size has plummeted, with LLR being on-track to meet the March 2025 target of no patient waiting over one year for treatment.

A united platform for Social Care data sharing

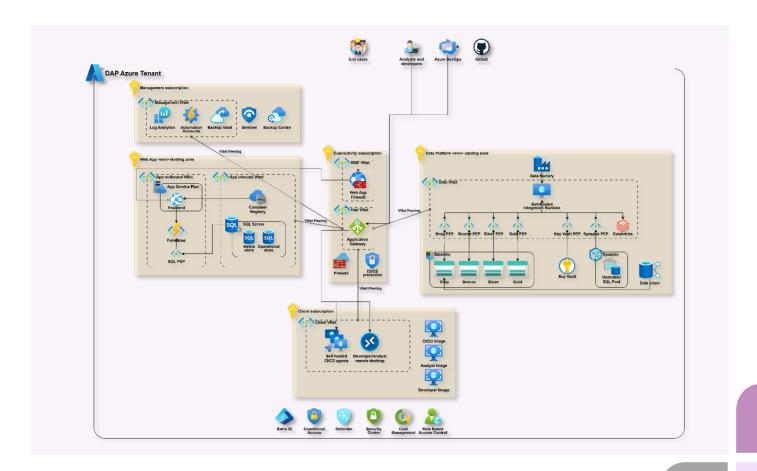
We helped the Department of Health and Social Care make the dissemination of social care data easier and more accessible.

We partnered with the Department of Health and Social Care (DHSC) to develop a Data Access Platform (DAP) aimed at improving social care data sharing and dissemination through a multiphase project. The social care sector currently struggles with accessing and sharing data due to disparate collections and submissions from providers and local authorities, resulting in a fragmented data landscape where deriving valuable insights is challenging. To solve this, DHSC plans to create a platform to bring existing social care data into one place, making it accessible and useful for stakeholders. This would level the playing field across the sector, contributing to better service delivery through improved commissioning and care provision, and achieving better outcomes and experience for people drawing upon care and staff delivering care.

What we did

The project began with an **Alpha phase**, where we engaged with DHSC members and a diverse range of representatives from care homes, local authorities, and academia.

Together, we identified the key questions and explored the current landscape of social care data that could be used to answer them. We developed a proof-of-concept solution for users to explore and engage with the data. The Alpha phase successfully passed the Government Digital Service (GDS) assessment, kick-starting the project onto a **Beta phase**, which focuses on developing the platform for a limited number of users across the sector.





Identifying & & Implementing Best Practice

Over the past two years, we have harnessed data to track performance and support systems in addressing pressing issues around unwarranted variation.

The following three case studies provide examples of the work that we do in this area and how we support organisations to identify and implement best practices by benchmarking with peers. "Our overall experience of working with Edge was very positive, and their analysis and evaluation process was robust and innovative. They handled challenges well and always sought a balanced solution with cross-stakeholder agreement. The Final Report was delivered on track and met the expectations outlined in the original scope and MOU."

~ Michael Ellis – Senior Innovation Lead, Health Innovation East Midlands

Optimising Pancreatic Cancer care pathways

We assessed treatment variation in pancreatic cancer care across England for the NHS's Getting it Right First Time programme.

Pancreatic cancer is the 10th most common cancer in the UK, with around 10,500 people diagnosed annually. Sadly, pancreatic cancer has one of the lowest survival rates among common cancers, with around 30% of patients surviving for one year after diagnosis and only 10% surviving for 5 years or more.

We were commissioned by the NHS Getting It Right First Time (GIRFT) programme to deliver comprehensive data packs at both provider and network levels for the pancreatic cancer care pathway. The goal was to highlight significant variation in care pathways and treatment approaches at service providers across England.

What we did

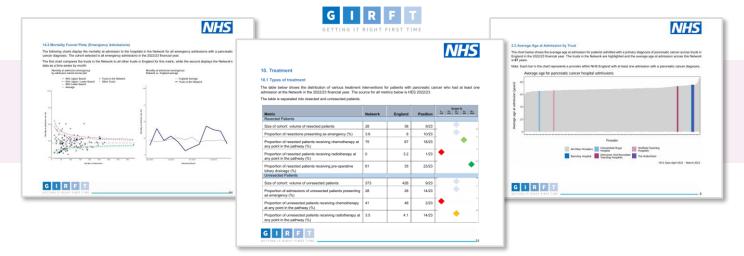
We worked closely with stakeholders and clinical leads, discussing our findings and iterating metrics throughout the project. Our team engaged with field experts to ensure robustness and delivered over 100 provider-level and 23 network-level data packs, which were reviewed in-depth at all 23 networks in a "Deep Dive" process.

Pancreatic cancer has a comparatively low-level of data availability and quality when compared to other common cancers in the UK. Therefore, we worked with a diverse range of stakeholders to navigate these challenges to effectively analyse the data available, from hospital admissions to staging and theatre data.

SOME METRICS OF INTEREST

Our metrics included:

- Number of admissions
- Average length-of-stay
- Admissions per bed
- Cancellation rates
- Readmission rates



What we achieved

We collected detailed notes of best practices and areas for improvement across all service providers visited by GIRFT. These insights were summarised into recommendations and contributed to a National Report aimed at optimising the pancreatic cancer care pathway in England, with a focus on reducing variation and improving survival rates.

Improving Early Cancer Explore the full analysis Diagnosis across West London

We identified actionable steps to improve early cancer detection within primary care for Royal Marsden Partners across North and South West London.

Early cancer detection is crucial for improving outcomes and saving lives. The NHS Long Term Plan aims to diagnose 75% of staged cancers early (Stage I/II) by 2028, yet in 2023, only 57.6% met this target. Most cancers are identified through symptomatic pathways rather than screening. Thus, early diagnosis is heavily reliant on these pathways. Patients must be supported and encouraged to present early in primary care and support must be made available to primary care so they can make appropriate referrals to Urgent Suspected Cancer Pathways.

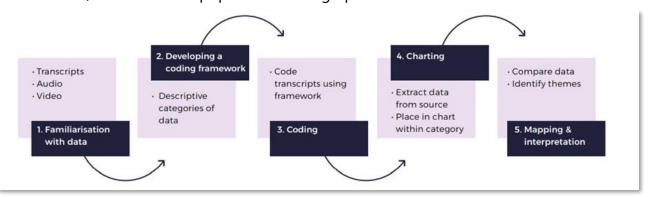


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What we did

We supported RMP in conducting 46 interviews with GPs across West London and conducted a mixed-methods analysis. The interviews were analysed using Framework Analysis which involved thematic analysis of the transcripts. These were enriched by quantitative analysis of data to include referral behaviour, workforce and population demographics.



What we achieved

The research identified **six actions** for general practice to increase early cancer detection and diagnosis. The six actions below are being combined with support made available to primary care teams to improve early detection rates within the cancer alliance.



GIRFT Welsh Theatres Efficiency

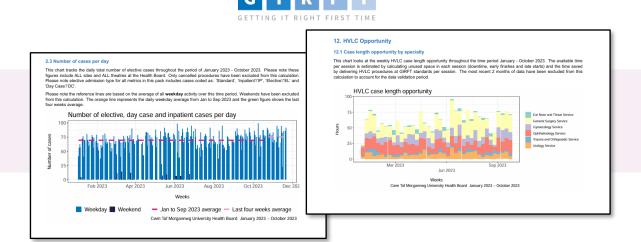
We assessed efficiency across all seven Welsh Health Boards' Theatres and advised how to make efficiency improvements.

Theatres across Health Boards in Wales were facing inefficiencies in managing resources and had limited ability to evaluate performance across specialties and departments. Edge Health were commissioned by the NHS's Getting It Right First Time (GIRFT) programme to deliver comprehensive fortnightly data packs at Health Board and site level across 9 months in 2023/24. The goal was to identify and highlight potential inefficiencies that Welsh Health Boards were facing, allowing board operational management to tackle these problems.

What we did

Our data engineering team developed a custom theatres data pipeline and script that would automatically prepare the data received from the Health Boards. This could also flag data quality issues to allow rapid correction, ensuring that the data used to measure theatre inefficiencies was of high quality. We delivered seven Board level packs, and one national level pack every two weeks.

We attended monthly regional meetings to support conversations within small groups of stakeholders, and to provide expert advice on the data. The regular engagement with stakeholders was key to the success of the project, ensuring that the data packs were fit for purpose and easily interpretable.



What we achieved

The project's progress report demonstrated that, compared to the initial baseline, 76% of metrics had a marked improvement at the time of the most recent data update. In addition, we facilitated shared learning during progress updates, with health boards discussing best practices for improvements across elective activity delivery in theatre.

IMPACT

Improvement in 76% of metrics during the lifespan of the project, with over 50 packs developed to enable Health Boards across Wales to assess progress in theatre efficiency.



Health Economics & Evaluations

Health Economics and Evaluations have formed one of the four key pillars of our work over the last couple of years. We apply health economics and research tools to develop real-world applicable and academically rigorous narratives on the viability of products and services.

This section contain three case studies that aim to provide an insight into our work in this area.

"Edge provided an excellent service to the programme. The lead project manager was particularly receptive to all our requirements and acted in a timely manner whenever called on to do so. The analysts worked exceedingly harmoniously with our NHS team. There is no doubt that without Edge's commitment to the programme it would not have made the significant progress it has. I can wholeheartedly recommend the company."

~ Senior NHSE Leader

Revolutionising Lung Cancer Diagnosis: the Economic and Clinical Impact of ctDNA Testing in the NHS

We evaluated the costs and benefits of ctDNA testing for Non-Small Cell Lung Cancer, showing that significant benefits can be delivered

In 2020, 37,211 people were diagnosed with lung cancer in England. Two thirds of this population are at an advanced stage and have limited life expectancy, complex care needs and often experience high levels of attendances and appointments while awaiting diagnosis and treatment.

Liquid biopsy, a cutting-edge diagnostic method, involves testing blood samples for biomarkers like circulating tumour DNA (ctDNA) to detect cancer-related genetic mutations.

KEY INSIGHT

Incorporating the latest genomics advances into routine healthcare will help deliver the UK government's vision in "Genome UK: the future of healthcare".

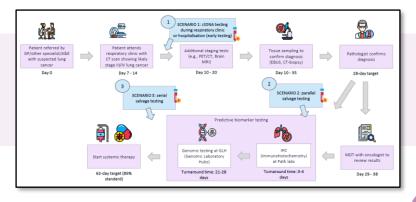
What we achieved

Our initial findings in the early phase of the health economics analysis of ctDNA testing combined academic methods with commercial insight to assess the economic implications in the NHS. This involved collaboration with clinical experts and synthesis of information from academic literature. As a new technology, our analysis considered various clinical scenarios and sensitivities for critical assumptions. Outputs from the initial analysis were also validated against national ctDNA pilot data.

Through our research and health economic modelling, the application of ctDNA was found to deliver significant benefits relative to its costs. This finding was primarily driven by ctDNA testing enabling earlier blood testing and potentially avoiding tumour genomic testing, which meant patients avoided complications due to biopsy and accessed targeted treatments earlier – lowering wider system costs.

Our work also contributed to the commissioning of ctDNA on the Genomic National Test Directory.

Moreover, ctDNA testing is expected to improve equity in genomic testing access substantially, expanding coverage over a broader spectrum of gene mutations and ensuring the inclusion of patients for whom adequate tissue biopsies might not be viable.





National Breast Pain Pathway Evaluation

We evaluated the East Midlands Breast Pain Pathway both within the East Midlands and nationally to show that it is safe, effective, satisfies patients and is cost beneficial for the system.

Presentations for breast pain can be challenging to manage in primary care and often lead to referrals into the urgent suspected breast cancer pathway. This contributes to patient anxiety, exacerbated by further testing once seen in secondary care. It also adds additional pressure on strained urgent breast cancer (USC) pathways. However, the referral of women experiencing breast pain into breast cancer pathways can be avoided, and breast pain alone carries no increased risk of breast cancer. To tackle this problem, the novel East Midlands Breast Pain Pathway was developed.



Partnerships In September 2022, we partnered with Health Innovation East Midlands and the East Midlands Cancer Alliance to evaluate the East Midlands Breast Pain Pathway, involving five providers. In view of its success, a National Evaluation was launched in September 2023, spanning 17 providers across nine cancer alliances, concluding in September 2024.

What we did

Each centre involved in the audit submitted data from their CBPCs, any follow-up data for patients, Patient Recorded Outcome Measures (PROMs) and family history data. Collectively, this covered over 7,000 CBPC attendances and reached a catchment population of over 3.4 million females ages 15 and over. Centres were also asked to submit the costs of their clinics, and we interviewed key stakeholders from the CBPCs. Bringing together varied data sources allowed us to comprehensively evaluate the success of the CBPC model, specifically patient satisfaction, patient outcomes and value for money.

What we achieved

The Pathway has been positively received by patients across all sites. In particular, patients expressed a significant change in emotions before and after attendance at the CBPC, from negative to positive. This highlights the benefits that patients experience through the reduced anxiety that a non-hospital community setting can provide. A paper detailing our findings has recently been accepted in the peer-reviewed Journal of Evaluation in Clinical Practice.

The novel pathway allowed a reduction in USC referrals, reducing pressures on the service, allowing to prioritise patients with the highest clinical needs and ease the anxiety of those experiencing breast pain. For patients experiencing breast pain alone who received a diagnosis of breast cancer, there was no delay to care on the new pathway. Whilst not all clinics in the national audit proved to be cost-effective, evidence shows that clinic maturity and staff experience contributes to a clinic's cost effectiveness, so over time they are expected to release net positive benefits.

KEY INSIGHT

88.2% of Urgent Suspected Cancer referrals were avoided prioritising patients with the highest clinical needs.



Evaluating Implementation of AI as a Medical Device in the NHS: Skin Cancer pathways

We evaluated the use of AI in skin cancer pathways, considering safety standards, budget impacts and long-term surveillance.

The NHS faces unprecedented demand for dermatology services, with one in four people seeking consultations annually, increasing treatment waiting lists and doubling of skin cancer referrals from primary care in the last decade.

Al as a Medical Device (AlaMD) offers a promising solution to expand service capacity and improve access to specialist care. AlaMD in skin cancer has been piloted within the NHS since 2020 through Skin Analytics, and we were asked by NHSE to evaluate national data to understand the safety, implementation and value for money of Al use for skin cancer.



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What we did

We analysed data on over 33,000 skin lesions reviewed by Skin Analytics' AI, DERM, and compared its performance to that of dermatologists through a rapid semi-systematic review and meta-analysis.

We combined this with structured interviews with Trusts who have implemented AlaMD to understand benefits and challenges. In addition, we conducted a comprehensive literature review of Post-Market Surveillance (PMS) best practices and created an example practical methodology on how to ensure AlaMD use within the NHS can be monitored for long-term safety. We condensed our findings in a report to inform national policy and uptake of AlaMD within skin cancer pathways.

What we achieved

Our findings indicate that DERM's diagnostic accuracy in ruling out melanomas is at least as good as in-person consultations with dermatologists. This suggests that AI could play a crucial role in distinguishing benign from concerning lesions, streamlining referrals, and ensuring those in need of urgent care are seen promptly.

POTENTIAL SAVINGS

2.3x cost-benefit ratio for potential future savings to current pathway by removing or reducing second-reads

We also identified potential system-level efficiencies, finding that each pound spent could return up to £2.30 in savings. In this context, our report highlights AlaMD's potential to refine the triage process, thereby addressing the rising demand for services and reducing waiting times for assessments.

While our economic analysis suggests potential savings, the primary focus of the report was on the clinical and operational implications of AlaMD, and what steps should be taken to monitor its use in Dermatology through PMS. Our report condenses PMS recommendations from several literature sources and offers an example of how PMS could be implemented in practice.

In May 2025, our report formed part of the key evidence used by NICE to recommend DERM for use within NHS organisations during their Early Value Assessment process—altering an early decision that it should be restricted to research use.



Engineering Data Solutions & AI

positive experience to work with colleagues at Edge Health."

~ Senior Trust Director of planned care

"The project was key in supporting us to transition to a stable but optimal theatre schedule once our theatre

capacity was restored. The team provided externality to affirm our own data modelling, and were considerate to the views of stakeholders. It was a

Sellior Trust Director of planned care

Over the last couple of years, we have harnessed our data engineering skills to develop dashboards, pipelines and embed AI into products across a wide variety of health services.

This section contains three case studies to showcase a few ways in which we have helped our partners.

We offer Technical Knowledge and Skills to Capitalise on **Emerging Opportunities**



Data modelling & database management

SQL, NoSQL, access controls, optimisation









Data integration and **ETL** pipelines

Azure Data Factory, Airflow, integration from HL7, FHIR, DICOM









Distributed compute for **Big Data**

Spark, Hadoop, Databricks, DLT





Cloud computing & Scalability

Azure, GCP, AWS, Azure DevOps, Terraform









Privacy & Security

ISO27001, Cyber Essentials+ and **DSP Toolkit** certified







Analytics, Al and Machine Learning

R, Python, Tableau, Power BI, PyTorch











Bridging the Gap in Paediatric Health Data Post-Pandemic

We worked with GIRFT to design a Children and Young People dashboard that reviewed key domains of service provision in a way that works for all dashboard users.

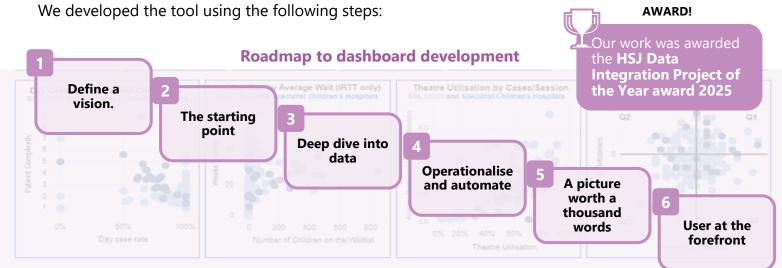
Children and Young People (CYP) have been particularly disadvantaged by growing waiting lists, as they wait for procedures that can have huge impacts on their life but are not often a matter of life or death. As a result, paediatric waiting lists have been a lower priority and have seen a 58% growth since 2021.

In addition to increasing waitlists, there is a large data gap when it comes to CYP. The collected and reported data is often not detailed enough to highlight pressures on CYP services. A large proportion of existing metrics excludes CYP under the age of 17, and age is often an optional field in data collections. Therefore, managers and commissioners are often left in the dark when it comes to assessing CYP needs.

What we did

We partnered with the Getting It Right First Time programme to address the information gap in paediatric care. In collaboration with the national director for Paediatrics, Professor Simon Kenny (OBE), we have developed an analytical tool – Summary Paediatric Indicator Table (SPaedIT), which sheds light on the unmet need of CYP and offers insights into actions that providers could take to address the issue.

SPaedIT covers eight key paediatric surgical specialties and serves 180 providers who provide treatment for CYP, including both specialist providers and district general hospitals. The tool uses eight distinct data sources that are updated monthly and offers over 35 indicators to give a deep understanding of paediatric healthcare services.



What we achieved

SPaedIT was designed to work for all levels of leadership in a provider, from clinical to operational. They can review four key domains of service provision (demand, capacity, flow and outcomes) to help assess and plan services. The tool makes comparisons of pressure, diagnosis of root causes and effective discussions and planning for solutions easier for leadership. Since SPaedIT went live, an ever-growing userbase consisting of clinicians, operational managers, theatre managers, regional and national teams have been using the tool to help inform their decisions.

CanCollaborate: Data-engineering to level up cancer data management

We worked with a cancer alliance and two providers to develop a dashboard that optimised patient management and system resources.

System-working can often be difficult when Integrated Care Boards and Cancer Alliances only have access to limited data. This means that providing operational and strategic support to Trusts delivering cancer care is challenging for systems, who can struggle to identify capacity bottlenecks that are causing breaches in critical 28-day diagnostic standards and 62-day treatment standards.



Partnerships Edge Health partnered with Northern Care Alliance and two trusts (The North Tees and Hartlepool NHS Foundation Trust and The South Tees Hospitals NHS Foundation Trust) to develop CanCollaborate to improve system working and management of cancer patients.

Data engineering development

Cloud based solution features









Seamless data integration

We established a secure, automated data transfer process with Trusts, with encrypted data uploaded to our system every hour. Our methodology enables us to link patient pathways from disparate systems, enabling an integrated view of complex pathways across both Trusts, while eliminating manual intervention.

Real-time updates

Our system ensures that North Tees, South Tees and NCA always have access to the same live information. The ability to monitor the PTL dynamically allows for responses to emerging issues, helping NCA to deliver shared solutions.

Leveraging cloud technologies for data processing

We developed robust pipelines in Azure, integrated with Databricks, to ensure efficient and secure data handling and timely output of the processed data to a SQL database.

Web application interface

Explore the full analysis

We developed an interface that users could interact with through a variety of tabs including a waitlist summary and demand & capacity tabs.

What we achieved

Based on testing outcomes of the tool, CanCollaborate has the potential to increase the percentage of patients meeting targets by an average of 15% across tumour sites.



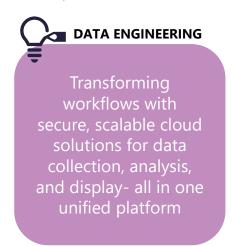
Collaborative Innovation: Transforming Surgical Data Management

We developed a modern cloud platform to manage diverse workflows for handling national theatre data in a secure, scalable solution.

The client collected fortnightly operating theatre data nationwide, but growing data volumes, user numbers, and complexity of analysis required infrastructure upgrades. We were tasked with migrating workflows to a modern cloud platform, creating a scalable system to securely collect, process, quality control, analyse, benchmark, and display data on a unified platform.

What we did

We worked closely with the client's team to co-develop a robust data pipeline and a versatile metric engine capable of dynamically constructing metrics, such as utilisation rates, based on all collected data, updated fortnightly. These metrics were then securely made accessible to authorised users across the organisation. The data pipeline was built using Azure and Databricks, leveraging a unified data access layer to ensure seamless integration and efficient data management.

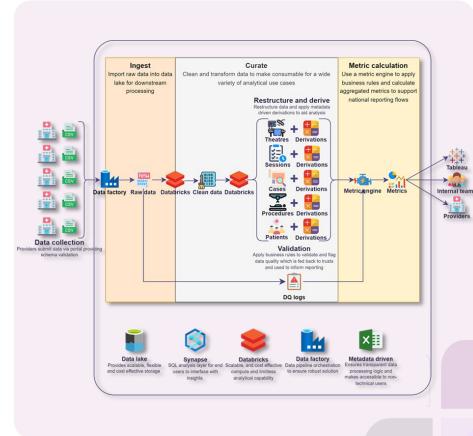


What we achieved

The infrastructure that we codeveloped with the client now continuously processes theatre data from all operations across the country and displays it back to enable benchmarking and improvement on the ground.

The new system enables quicker calculations which are more robust and automated data processes. More users can now access the system simultaneously, and the response time for queries and data retrieval has been reduced significantly.

The combination of speed, accessibility, and automation ensures that the system is not only keeping pace with current demands but is adaptable and scalable for future needs.





Driving Improvements in Clinically Coded Data Across British Columbia

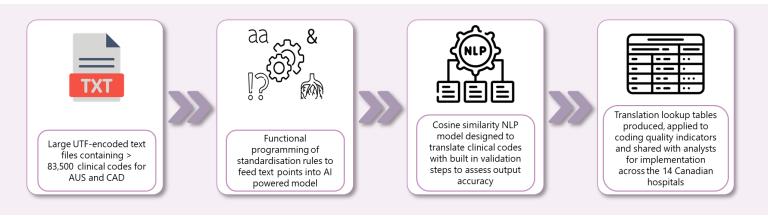
We worked with our partners to identify and address clinical coding errors across British Columbia.

In hospitals across British Columbia, clinical coders in Health Information Management (HIM) convert patient information in Electronic Medical Records (EMRs) into coded data, using ICD-10-CA for diagnoses and CCI for procedures. This standardised data enables easier analysis and supports benchmarking provincially and internationally. In Canada, data is reported to the Canadian Institute for Health Information (CIHI) and provincial Ministries of Health, with inpatient data sent through the Discharge Abstract Dataset (DAD) and emergency data through the National Ambulatory Care Reporting System (NACRS). Continuous quality assessments and education are essential to maintain high-quality coded data.

What we did

Over 15 months, we supported Beamtree's analytics workstream across 14 hospitals in British Columbia, enhancing clinical coding quality. Using Beamtree's PICQ and RISQ software, we analysed patient records, identifying coding discrepancies and hospital harm indicators to assess the impact on key metrics like Resource Intensity Weights (RIWs).

To streamline this, we developed an Al-powered NLP solution that automated clinical code translation between Australian and Canadian systems, achieving over 98% accuracy. This solution enabled the use of 617 pre-existing metrics in Canada without redesign, accelerating delivery by six months.



What we achieved

Our findings, detailed in a report, provided actionable recommendations, including improving collaboration between coding and decision support teams, optimising record allocation based on coders' expertise, and prioritising high-importance records. Additionally, we informed education sessions, guiding coders to reduce errors and standardise practices for greater data accuracy.

The recommendations from this work have been used to develop a workplan and business cases for the Lower Mainland and Interior Health clinical coding teams, informing clinical coding practices and workforce strategy in the years to come.

Framework for incorporating health economics in Canadian Health evaluations

We used our health economics expertise to develop a tailored evaluation framework in Canada.

In March 2024, Health Excellence Canada (HEC) asked Edge Health to develop an economic evaluation framework for their organisation. HEC collaborates with health and social care organisations across Canada to spread innovative healthcare delivery models and build capacity within the healthcare sector to improve safety and quality.

Our work was the first step in HEC's ongoing internal strategy to start incorporating health economics into evaluations of their programmes supporting healthcare innovation implementation.

What we did

We developed the evidence for HEC's economic evaluation framework through a combination of research (document reviews, literature reviews) and engagement. We also drew on our experience conducting economic evaluations, utilising case-studies of published work conducted for other healthcare sector clients. Throughout this engagement, we focused on engagement and capacity building within HEC, organising sessions with the evaluation team to walk-through our outputs and developing interactive tools to help internal teams conduct economic evaluations in the future.

To align the economic evaluation framework with **HEC and partner's strategic priorities**, we:

- Conducted a document review of HEC's impact strategy including their logic model, performance management framework, and other documents on value-based healthcare.
- Conducted 14+ key informant interviews with the HEC Executives, evaluators and partner organisations.





We then focused on how the economic evaluation framework could be applied to **HEC's innovation implementation programmes** and:

- Conducted a document review of existing programme evaluations at HEC.
- Coordinated with HEC's finance department to assess HEC investment across the programme evaluations.
- Held focus group sessions with the different cohorts including leadership, management committees and evaluation teams.

What we achieved

This was enabled by working closely with HEC and partners to thoroughly understand what was needed prior to developing the framework and tailoring technical outputs to the appropriate level for different audiences. This framework is now being use by HEC as a "how-to" guide for both internal and external stakeholders.



Sharing our Insights and Learnings

We have demonstrated the impact of our work by speaking at numerous conferences, events and ceremonies across the UK in the last two years.

YOUNG STATISTICIAN MEETING 2024

Maria, Senior Consultant, spoke at the Young Statisticians Meeting in July 2024 at the University of Birmingham. Her presentation focused on the work that Edge Health has done and applications of statistics in healthcare, helping to inspire the future generation of data analysts and scientists.







NOA CONFERENCE 2023

Tom, Consultant, presented his work at the NOA conference in November 2023. He spoke about uses for Patient Level Information and Costing System (PLICS) data in the NHS, such as identifying variation between trusts in reported spending habits.



CHAVASSE CONFERENCE 2024

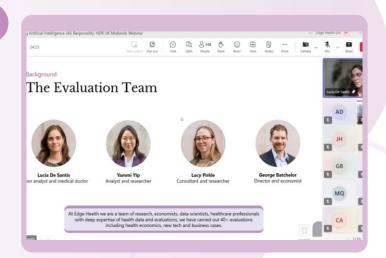
Ed, Director, presented his work at the Chavasse Conference in September 2024 in Liverpool. His presentation consisted of insights from the evaluation of the Veterans Covenant Health Alliance (VCHA) and what is next for the programme.



Sharing our Insights and Learnings

HEALTH DATA RESEARCH UK 2024

Lucia, Consultant, was a keynote speaker at the 2024 HDR UK conference on Using Artificial Intelligence (AI) Responsibly. She gave a presentation summarising the findings of the white paper "Evaluating Pathways for AI Dermatology in Skin Cancer Detection" to around 200 professionals. The audience clinicians, researchers included representatives from NICE, the MHRA and the CQC.







EARL CONFERENCE 2024

Ella, Senior Analyst, and Stef, Consultant, spoke at EARL 2024 (The Enterprise Applications of the R Language Conference) EARL is a cross-sector technology conference focusing on the commercial use of the R & Python programming languages. Ella and Stef's talk focused on "Strategic Forecasting in Healthcare", which they had previously used with demand and capacity projects.

Sharing our Insights and Learnings

PANCREATIC CANCER UK 2024

Kate, Senior Analyst, and Stef, Consultant, prepared slides for the GIRFT Clinical Leads to present. The presentation was titled on "Improving outcomes in Pancreatic Cancer: The NHS England GIRFT pancreatic cancer programme".







NHS CONFED 2024

George, Director, delivered a presentation and took part in a panel discussion at NHS Confed on 'Harnessing Data for Research and Innovation'. He shared insights from his own experiences and the broader evaluation of others' innovations, and Edge Health's recent work.

CHA WORKSHOP 2024

Lucia, Consultant, and Izaak, Senior Analyst, presented a summary of the Children Hospital Alliance's (CHA) analysis to 13 CEOs and COOs at a bi-annual meeting in Alder Hey. They also ran a workshop to discover how CHA member trusts have used these analytical pieces and plan the CHA's analytics strategy for the year ahead.





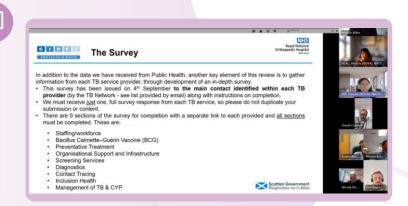
Making the most of our data – a workshop

November 2024

Sharing insights and winning the HSJ Award

GIRFT TUBERCULOSIS 2024

Yammi, Senior Analyst, presented her work on Tuberculosis in Scotland. She presented to around 50 Scottish clinicians and nurses. She gave an overview of the GIRFT data packs, including key metrics and the sources that are included within them.







Edge Health wins HSJ Award for Data Integration Project of the Year 2025!

We are thrilled that our work on the Summary Paediatric Indicator Table (SPaedIT) has been recognised at this year's HSJ Awards, winning Data Integration Project of the Year!

Developed in partnership with Getting It Right First Time (GIRFT) and the Children and Young People's (CYP) Transformation Team under the clinical leadership of Professor Simon Kenny, SPaedIT brings together eight data sources and over 40 metrics to provide much-needed insight into paediatric surgery across England. We're proud that SPaedIT is helping NHS teams identify challenges, reduce bottlenecks, and focus their efforts where they'll make the biggest difference.

We are looking forward to expanding SPaedIT's capabilities with enhanced analytics features and wider integration across additional NHS systems, ensuring this tool continues to evolve alongside the changing healthcare landscape, but more importantly – supporting providers with getting children (and their families) the treatment they need, faster.

the work in the case study on Page 20!



Making Data Accessible

Over the past year, our data engineers have been working to create a platform that makes public NHS data easier to access. This effort has led to the development of the **Data Analytics and Software Hub (DASH).**

Our goal is to simplify access to NHS data, enabling NHS teams to use public data more effectively. DASH includes two free dashboards that provide easy-to-understand snapshots of data.

These dashboards focus on:

RTT Waiting Times dashboard

Cancer Waiting Times dashboard



These tools allow users to quickly grasp key information without requiring extensive knowledge of data analytics or spending significant time on analysis.

We are dedicated to further enhancing this resource by adding more data and insights, making healthcare data more accessible and understandable for everyone.



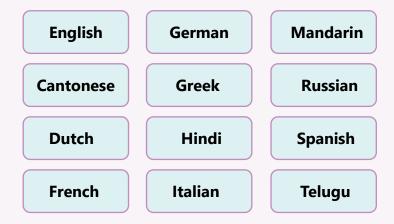


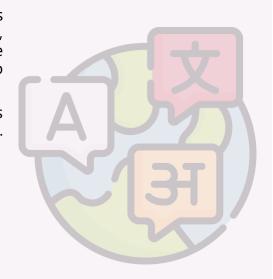
Our Team Makes Us Unique

One of our greatest strengths is the diversity of our team.

With educational experiences from over 30 world-class institutions, our team comes from a variety of backgrounds, including economics, medicine, statistics and engineering. The diversity in both sources and types of education allows us to address problems and provide solutions in creative ways.

Having a diverse team also manifests itself in a team that is capable of professionally communicating in multiple languages. These include:















MANCHESTER





























McGill











Imperial College London













Wellbeing and Social Activities

At Edge Health, we believe that a healthy and happy culture fosters great work, which is why over the last two years we have consciously prioritised the wellbeing of our team. We have introduced various Equality, Diversity and Inclusion initiatives, including dedicated Mental Health Representatives and a Wellbeing Officer, alongside initiatives aimed to support the physical and mental health of our team, such as a company health plan.

Alongside the more formal routes of promoting our team's wellbeing, we organise bi-annual team events to celebrate and reward them for their hard work. Last winter we all participated in a 'Murder Mystery' dinner while, in Summer 2024, the team enjoyed punting down the River Thames in Oxford.

We have encouraged the organic growth of 'Extracurricular' activities, including a running club, book club and climbing sessions. Alongside these, we have organised wellbeing events at the office, such as painting sessions and hotpot dinners. The range of events on offer has ensured that Edge has become a more inclusive place to work. We believe that these events have led to a healthier, happier and more integrated workforce, positively influencing team cohesion and the quality of our work.



Edge Health turns 8!

As we look back on the past two years at Edge Health, we have observed a multitude of achievements that have significantly underscored our growth and success. Whether in the form of tangible project delivery outcomes or through prestigious recognitions like our HSJ partnership award, achieved in collaboration with the SPaedIT team, these milestones have been immensely rewarding.

In February 2025, Edge Health marked its 8th birthday- a significant milestone that encouraged us to reflect on our remarkable journey and envision our path forward. From a small team of four, we have grown into a dynamic group of over thirty individuals, each bringing diverse backgrounds and experiences that enrich our organisation. This anniversary offered the opportunity to recommit to continuous improvement while celebrating our evolution.

Looking ahead, we are eager to further enhance our amazing partnerships with our valued clients, while also fostering new relationships and connections. We are excited about the future as we continue to build upon our successes, driven by innovation and collaboration, and remain dedicated to strengthening our position within the industry.



