# **HEALTH TECH** DIGITAL MAGAZINE

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#### **TECHNOLOGY IN THE SPOTLIGHT**





### Revolutionising UK healthcare with digital patient navigators

he healthcare landscape in the UK is undergoing a profound transformation with the integration of advanced digital technologies, particularly digital patient navigation systems. This technology can deliver clinical, patient, and economic benefits across the National Health Service (NHS).

From improving patient outcomes and streamlining care pathways to optimising resource use, digital patient navigators represent a critical step towards a more efficient and patient- centred NHS. Besides meeting current healthcare demands, digital patient navigation solutions also align with providers' and organisations' broader goals of improving equity, accessibility, and sustainability in healthcare delivery.

#### Advancing clinical outcomes

Digital patient navigators empower healthcare providers by offering real-time insights into patient

journeys. This tech-based solution also enables patients to track and manage their appointments, diagnostics, treatments, and follow-ups, creating a unified care continuum.

- Streamlining pathways: For patients with chronic conditions or complex care needs, navigators ensure timely referrals and minimise delays, directly impacting outcomes. For instance, they can reduce waiting times for cancer diagnostics and interventions, contributing significantly to improving survival rates.
- Reducing human error: Automation in navigation minimises manual errors in scheduling, data entry, and communication, thus improving the accuracy and reliability of clinical workflows.
- Enabling proactive care: Through AI and machine learning, these systems predict potential risks, flagging patients who may require immediate attention or interventions, ultimately leading to better health outcomes.

#### Empowering patients through technology

A patient-centric approach is at the heart of digital patient navigation. Digital patient navigators improve the patient experience by offering greater transparency, accessibility, and support. Here are some of the other advantages.

- Simplified communication: Patients and their families can receive timely updates, reminders, and personalised guidance through apps, texts, or email. This ensures they never miss critical appointments or follow-ups.
- Equitable access: For underserved populations, digital navigation provides a level playing field by providing equal access to resources and minimising geographic or socioeconomic barriers.
- Reduced anxiety: By providing clear instructions, timelines, and expectations, digital systems ease the stress often associated with navigating complex healthcare systems.
- Preventative medicine: A digital patient navigator plays a pivotal role in preventative medicine by leveraging technology to identify health risks early, guide patients through personaliaed prevention plans, and ensure timely access to screenings and interventions.

#### Economic gains for the NHS

Beyond clinical and patient benefits, digital patient navigators are revolutionising the economic landscape of healthcare delivery.

- Reducing costs: Automating routine processes and minimising unnecessary appointments or treatments may result in significant cost savings for the NHS.
- Optimising resources: By efficiently managing patient flow, these systems alleviate pressure on overstretched staff and facilities, allowing for better allocation of resources.
- Reducing readmissions: Proactive care and consistent follow-ups reduce the likelihood of preventable rehospitalisations, saving both

time and money.

### Important considerations for Digital Patient Navigators

While digital transformation like this offers numerous benefits, success depends on addressing several key factors. These include, but are not limited to:

- Privacy and cybersecurity: Protecting patient data from breaches is critical, requiring robust cybersecurity measures and compliance with privacy laws like HIPAA or GDPR.
- Accessibility and usability: The system must be user-friendly for all patients, including those with limited tech skills or resources, while maintaining a balance between digital tools and human interaction to provide personalised care.
- Data and systems integration: Seamless integration with existing healthcare systems is essential to avoid disruptions, ensure efficiency, and deliver cohesive experiences for patients and staff.

#### Transforming healthcare for the future

Digital patient navigators are not just tools; they represent a shift in how care is conceived, delivered, and experienced. They embody the ethos of a digital heartbeat, streamlining operations while enhancing human touchpoints in care.

The NHS stands to benefit immensely by embracing these systems, achieving measurable improvements in efficiency, outcomes, and patient satisfaction. As we move forward, digital patient navigators will be indispensable in shaping a more resilient, equitable, and patient- focused healthcare system.



#### Leveraging digital health technologies to enhance healthcare delivery

D igital health innovations are transforming how healthcare is accessed and delivered across the globe. By harnessing technologies such as telemedicine and Al-driven diagnostics, healthcare systems are becoming more efficient and accessible. These innovations are especially crucial in underserved communities, where traditional healthcare services may be limited or unavailable.

In today's rapidly evolving healthcare landscape, digital health technologies are playing a pivotal role. The advancements in this field are not only revolutionizing how care is delivered but are also significantly enhancing the quality and accessibility of healthcare services. Particularly in underserved communities, these technologies serve as a lifeline, providing essential medical services where they are needed most. Among these technologies, cell counting software plays a vital role in laboratory settings by ensuring precise and efficient cell analysis, which is crucial for both research and clinical diagnostics.

#### The impact of digital health innovations

The array of digital health innovations available today includes telemedicine, Al-powered diagnostics, wearable health devices, and mobile health apps. These tools are reshaping the way patients interact with healthcare providers, making it possible to receive consultations and follow-ups without the need for physical presence at a clinic.

Telemedicine allows you to consult with healthcare professionals remotely, which reduces the need for travel and minimizes time away from work or family. Al-driven diagnostics can analyze vast amounts of data quickly and accurately, aiding physicians in making informed decisions faster than ever before. These innovations collectively work to create a more streamlined healthcare system that focuses on prevention and early intervention.

Moreover, these advancements help bridge the gap between patients and healthcare providers, particularly

in remote areas where access to traditional medical facilities might be challenging. By integrating digital solutions into everyday practice, you can expect improved patient outcomes and more efficient use of resources.

#### Integrating cell counting software in healthcare

The integration of advanced technologies into healthcare also extends into laboratory settings. The implementation of cell counting software is essential for accurate cell analysis, which is vital in both research labs and clinical diagnostics. This software enhances the precision of experiments and tests, ensuring that results are reliable and consistent.

With automated solutions provided by platforms like Chemometec.com, laboratories can significantly increase their throughput while maintaining high standards of accuracy. This not only accelerates research progress but also improves diagnostic processes in clinical settings. You benefit from enhanced patient care due to quicker diagnosis and treatment plans tailored to individual needs.

By reducing manual errors and increasing efficiency, these technologies contribute to better patient outcomes and operational excellence within healthcare systems worldwide. As digital health technologies continue to evolve, the potential for further improvements in medical research and patient care remains vast.

#### Challenges and future prospects

Despite the undeniable benefits offered by digital health technologies, challenges remain in their widespread adoption. Data privacy concerns must be addressed to ensure patient information is protected at all times. Additionally, robust infrastructure is required to support these technologies effectively across diverse geographic regions.

The future of digital health looks promising as ongoing innovations strive to overcome existing barriers. Trends such as increased interoperability among devices and enhanced data security measures are expected to further advance the field. The potential impact on medical research is profound, with tools like cell counting software paving the way for new discoveries. Your investment in digital health solutions will be crucial for continued progress. By fostering innovation and addressing current challenges, we can work towards a future where healthcare delivery is equitable and effective for everyone globally.

The transformative potential of digital health technologies cannot be overstated. They hold the key to enhancing healthcare delivery by making it more efficient, accessible, and patient-centric. As we continue to innovate in this domain, it is essential to prioritize investments that address disparities in care provision.

By embracing these technological advancements, you can contribute to a healthcare system that meets the needs of all individuals worldwide. Continued dedication to innovation will ensure that every person has access to quality medical care when they need it most.





Enhance patient communication and reduce translation costs

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### New Research finds Celiac Disease can be diagnosed up to four years earlier with AI

eliac disease affects an estimated 1 percent of adults and children worldwide. Yet, many individuals endure years of symptoms before receiving a diagnosis. Studies suggest it can take more than a decade for some to be diagnosed.

A groundbreaking study by Maccabi KSM Research and Innovation Center and Predicta Med highlights the potential of machine learning models to identify patients at risk for undiagnosed Celiac disease using electronic medical records (EMRs). The findings, published in Nature Portfolio, Scientific Reports Journal, found that these models could identify patients with Celiac disease up to four years before the first documented evidence of the disease. The study received ethical approval from the Helsinki Committee.

Currently, Celiac disease is diagnosed through serologic tests and intestinal biopsies but knowing who to send for testing is a challenge, especially among adults who may have a variety of symptoms or be asymptomatic. In this study, a team of researchers analyzed anonymized EMR data from Maccabi Healthcare Services, a leading Israeli HMO, which included data from over 2.9 million patients. The study population included cases of patients with highly elevated levels of the antibody for tissue transglutaminase (tTG-IgA), a highly predictive marker for Celiac disease, and control patients with no documented indication of Celiac disease.

The researchers trained machine learning models on one set of cases and controls using only commonly performed lab tests and basic demographic information (sex and age) and evaluated the models' ability to distinguish between patients of both types on a test set composed of previously unseen cases and controls. Area under the curve (AUC) was the metric used to assess how well a model can distinguish between the case and control patients. The AUC score ranges from 0 to 1, with higher values indicating better performance. The models were tested at various time intervals between one and four years before the initial Celiac disease positive serologic test, which led to the patient being diagnosed.

Five algorithms were trained and tested: logistic regression, decision tree, random forest, XGBoost and multilayer perceptron. Among them, XGBoost performed best, achieving an AUC of 0.86 one year before diagnosis

and maintaining strong accuracy (AUC > 0.8) even at longer intervals of up to four years. Key predictors of unidentified Celiac disease autoimmunity included low hemoglobin, low ferritin, low HDL (High-density lipoprotein cholesterol), and elevated liver function tests.

This study offers a promising framework for using machine learning to detect patients at risk for Celiac disease, demonstrating the feasibility of leveraging routine clinical data for early detection. This approach could potentially be integrated into healthcare practices where comprehensive EMR systems are in place.

"Early identification of celiac disease can significantly improve patient outcomes, as those diagnosed earlier often experience better intestinal healing and reduced symptoms, whereas delayed diagnosis is linked to persistent health issues despite adhering to a gluten-free diet," said Dr. Amir Ben-Tov, Pediatric Gastroenterologist and Senior Clinical researcher at KSM Research and Innovation Center.

The developed tool could potentially evolve in the future to a pre-screening method to flag patients for further evaluation, including serologic tests and biopsies. Predicta Med is conducting pilots with leading US based hospitals, to prove the tool's effectiveness in prospective settings. An on-going study with a major hospital in California shows high agreement between the Al's indications and the clinician's disease risk assessments in a prospective real-world environment.



# The critical need to secure patient information in an increasingly digital healthcare landscape

A ndy Ramsbottom, Director of Global Strategic Accounts at leading software escrow provider Escode, discusses the critical importance of ensuring the healthcare sector is prepared for any technological disruptions as the sector becomes increasingly reliant on technology.

Technology is driving forward a new era for the healthcare sector. The UK government recently announced the future of fully digital health records as well as the increased use of wearable health devices, These innovations are reshaping patient care, offering faster, more personalised treatment, and streamlining medical operations. And as the UK health software and IT market grew 21% in 2023, the sector is showing no signs of slowing down its tech adoption. However, this digital shift comes with heightened risks. As healthcare becomes more dependent on technology, the potential for disruptions, such as system failures or software outages, threatens both the efficiency of operations and, more critically, patient safety.

Ensuring operational resilience in this digital landscape is no longer optional; it is vital for maintaining the integrity of healthcare services. Healthcare organisations must confront these risks directly to safeguard patient care, maintain trust, and enable future growth.

#### The expanding role of technology in healthcare

Technology now touches nearly every facet of healthcare, from administrative tasks to life-saving interventions. Scheduling, diagnostic imaging, telemedicine, and real-time patient monitoring all rely on interconnected digital systems. We're already seeing the likes of AI reshaping medical tools like X-rays to improve accuracy and efficiency. This integration enables better tracking of patient data, predictive analytics, and remote care, improving patient outcomes.

So, what are the potential risks? While technology enhances efficiency and care delivery, it also underscores the need for a robust approach to system resilience, ensuring healthcare organisations can operate smoothly even when digital disruptions occur.

#### The risks of digital disruptions

In healthcare, disruption isn't just an inconvenience – it can have serious consequences, impacting patient safety, delaying treatments, and disrupting care coordination. Even the failure of non-critical systems, like scheduling software, can lead to significant delays in diagnoses and care. When electronic health records (EHRs) are inaccessible, reverting to manual processes increases inefficiencies and the risk of errors.

Downtime also comes with financial and reputational costs. Just one hour of disruption can be expensive, and prolonged outages can damage public trust, especially if they result in cancelled procedures. Additionally, many healthcare organisations rely on third- party software for critical functions, such as lab results or pharmacy services, and any disruption to these systems can delay patient care. We saw just one example of disruption in the supply chain when Synnovis, a blood testing lab for the NHS, meant that the NHS couldn't use its systems to run essential blood tests in the London region.

#### Strengthening software resilience in healthcare

With the deepening integration of technology, it's never been more important to ensure operational resilience. While healthcare professionals are experts in patient care, building resilience against technical disruptions requires proactive planning and collaboration with IT providers.

It may seem daunting for healthcare decision-makers to know where to start in securing robust IT systems. However, there are some fundamental steps that they need to take to build the foundations for strong operational resilience.

#### Create contingency plans

While not every disruption can be anticipated, having contingency plans can reduce the impact on healthcare services when issues arise. Clear protocols, such as knowing who to contact during system outages and how to manage manual processes, enable healthcare providers to quickly address disruptions and maintain continuity of care. These plans are critical for minimising downtime, which is fundamental to ensuring quality patient care.

#### Strengthen contractual agreements

Robust contracts with software vendors offer healthcare organisations protection in case of service failures. Strong agreements should include provisions that hold vendors accountable for timely issue resolution. Escrow agreements are also vital, ensuring that the critical source code behind essential applications is available if a vendor can no longer maintain the software. Tri-party escrow agreements between healthcare providers, software vendors, and escrow providers ensure continuous access to systems, even if a supplier fails.

#### • Understand your supplier's supply chain

Healthcare organisations must also go one step beyond their own software providers and think about their thirdparty suppliers, creating a chain of dependencies. If a hospital's patient record system goes down because of one of its suppliers, this will create a domino effect impacting the hospital and its patients.

Understanding supplier contingency plans to handle supply chain disruptions is essential. This knowledge

provides reassurance that they are prepared to manage their own risks, minimising the impact on healthcare operations in the event of broader disruptions.

Having these plans in place will give healthcare providers peace of mind that they and their patients are well protected from any IT disruptions or outages.

#### Ensuring resilience in a digital healthcare world

Digital transformation offers tremendous opportunities for improving patient care, but it also introduces new risks. Healthcare professionals must adopt these innovations while preparing for the technical challenges that come with them. By focusing on software resilience through proactive planning, monitoring, and strong thirdparty relationships, healthcare organisations can protect their operations, maintain patient trust, and ensure the continuity of care.

As healthcare becomes increasingly digital, securing patient information and maintaining system resilience is critical for preserving trust and supporting future growth.





# NHS Supply Chain announces new cyber security collaboration as part of IT transformation

HS Supply Chain today announced the appointment of Leidos as its new cyber security provider. The collaboration underscores NHS Supply Chain's commitment to protect and defend its networks from cyber-attacks as part of its IT transformation.

Matt Wynn, Executive Director for Data and Technology at NHS Supply Chain, said "Our collaboration with Leidos demonstrates our intent to continue to drive forward an improved cyber security posture. Ensuring robust, proactive security and vulnerability management is crucial for safeguarding the wider business against external threats and helping protect the NHS.

"The three-year contract will see us evolve our cyber security function, providing 24/7 security operations and focussing on threat and vulnerability management.

"As well as being incredibly experienced in this businesscritical field, Leidos have a deep understanding of the types of environments we will be working in where multiple collaborators work seamlessly together as a single, unified Technology team." Rachel Million, Head of Cyber Security at NHS Supply Chain, said: "This collaboration is a significant step in strengthening our cyber security posture. The importance of which has been highlighted with the Synnovis ransomware attack last summer, demonstrating the very real threats faced by the healthcare system."

Eric Freeman, Chief Executive of Leidos UK & Europe said: "Leidos brings extensive experience in delivering trusted cyber solutions. With decades of cyber experience and a global workforce skilled in this domain, our team utilises advanced capabilities to counter threats and secure what matters most. We are committed to adding value to NHS Supply Chain and supporting its essential work in delivering excellent patient care."

The collaboration is an important building block in the transformation of IT at NHS Supply Chain, aimed at building the best operational services to meet future technological needs and aspirations, including supporting digital interactions with customers and suppliers.

#### What next for AI in 2025?

A I adoption has continued at pace throughout 2024, but the vast majority of organisations have yet to embed AI enabled innovation within core operational processes. One third are engaging in limited implementation, while 45% are still in the exploratory phase. While there is no denying the power of GenAI, the majority of businesses have struggled both to identify tangible use cases for AI and determine how best to safely and effectively use the technology in customer and/or employee facing activities.

A number of trends are set to change those figures significantly during 2025. Firstly, technology partners are leveraging AI technologies to deliver packaged solutions based on proven use cases to ease adoption. Secondly, AI is transforming companies' ability to use predictive analytics across multiple internal and external data sources to achieve the next level in realtime business management, including dynamic pricing. Finally, of course, the deployment of GenAI tools such as SAP's Joule within public cloud solutions is adding a further incentive to organisations' digital transformation strategies. Why remain on premise when competitors can routinely explore, innovate and gain benefits from embedded AI in the cloud?

Don Valentine, Commercial Director, Absoft expects Generative AI to evolve from a solution in search of a problem to become embedded in Business-as-Usual activity during 2025 to deliver tangible operational benefits.

#### Solving Specific Problems

Companies are on different AI adoption curves but, while conceptually exciting, many have yet to determine just how and where AI could be deployed to deliver tangible, repeatable value. This to set to change during 2025, not only as business use cases become more obvious but also as IT vendors and consultants come to market with packaged bites of AI solutions. Simple tasks such as using AI to match electronic bank statements will enable a finance team to move from handling 50% exceptions to perhaps just 5% – and can be quickly deployed.

This packaged approach is helping organisations to identify pertinent business use cases. SAP, for example, is embedding its Joule GenAI tool within its public cloud offerings, including the Success Factors HR and Payroll solution. This native deployment of AI will take the Employee Self-Service facility to the next level, allowing employees to not just view their payslip statements and history, but also ask questions about everything from salary sacrifice contributions to the reasons for tax deductions.

Taking this a step further, an employee will be able to quiz the system to gain a personal view of HR policies, for example to understand the specifics of parental leave, including payment value and leave duration options. Beyond the employee facing solutions that both reduce pressure on the HR team and improve employee engagement, AI can improve business insight. A line manager quickly interrogating the data to understand why head count dropped the previous month, will be able to take a quicker and more targeted response to boost retention.

#### **Dynamic Pricing**

Indeed, Al's data analytics power is even more compelling for many businesses, not least the ability to run predictive analytics across multiple data sources – both internal and external. For example, one Seafood Company has leveraged GenAl to achieve highly effective dynamic pricing models.

Understanding both the likely amount of in-bound stock and also the forecast weather – which affects customers' buying habits as well as catch volumes – has allowed the company to determine appropriate pricing for the next week or two weeks. Furthermore, with an inbuilt feedback loop, the business is constantly learning from its pricing model and continuously improving the process to drive additional profit.

The ability to extend the use of AI beyond internal data by folding in other, public data sources is hugely exciting, especially for any business operating in a volatile marketplace. Oil companies, for example, can combine internal data on production volumes with inflation forecasts, projected windfall tax costs, even country specific tariffs, to quickly model likely cash position. This use of historic, current and trusted external data provides a powerful new predictive aspect to business modelling that will also accelerate AI adoption during 2025.

#### **Building Confidence**

For the majority of organisation still wrestling with how and where to deploy AI, this 'packaged' approach to AI adoption will presage an enormous step forward in both confidence and targeted usage. It will also influence cloud adoption strategies, with AI tools embedded within public cloud solutions reinforcing and likely accelerating system migration arguments.

This productization of AI will not, however, remove the need for careful planning and testing. Indeed, the fact that so many people have already embraced free GenAI tools outside work to summarise documents and fast track research will make it even more critical to ensure everyone recognises the need for robust and rigorous implementation models.

The benefits of allowing employees to ask questions about payslips and HR policies are clear, not least in releasing HR staff to focus on added value activities. But if there are any errors in the Al's interpretation, the repercussions will be significant. Companies require confidence in their data, the toolset/ solution and the business case and this can only be achieved through rigorous trialling, benchmarking and testing prior to deployment. These tools are enormously powerful – and with power comes responsibility.

#### Conclusion

GenAl's accessibility has been key to its rapid growth but, until now, the sheer breadth of deployment opportunities has been overwhelming. Throughout 2025, as IT vendors release targeted AI solutions that address specific business needs, companies will have the chance to fine tune their perceptions of AI and identify the most compelling business cases.

Whether that is within the area of predictive analytics or specific transactional process improvement, external support, such as an SAP partner, will play an important role in allowing companies to exploit these new native AI solutions. Working closely with the business experts, a third party can help to define and refine the boundaries of AI deployment and ensure the company is comfortable with the way it is using AI.

Some may prefer to start with allowing managers to use AI to interrogate data simply to gain a better understanding of business trends, rather than going straight to employee or customer facing usage. Others will be confident in the latter use case and look to improve employee and customer engagement. Either way, a close collaboration with experienced experts will be an important aspect of building up AI adoption throughout 2025, even in an increasingly packaged environment.



### Beyond technology: Empowering people for successful digital transformation in healthcare

he NHS stands at a pivotal moment, propelled by Lord Darzi's independent review and Keir Starmer's commitment to a digital-first healthcare system, bolstered by increased funding announced in the Autumn Budget. The need to accelerate digital transformation has never been more urgent. However, while the promise of innovative technology garners attention, the human factor remains the linchpin in ensuring these transformations succeed.

Global spending on digital transformation is set to skyrocket to \$3.9 trillion by 2027, according to the International Data Corporation (IDC). Yet, a staggering 70% of these initiatives fail to meet their objectives. The culprit? It's rarely the technology itself, but rather a lack of robust change management – the process of preparing people to adopt new systems and processes effectively.

#### The human challenge in digital healthcare

Digital transformation holds immense promise for healthcare, from breakthroughs in efficiency and diagnosis, to revolutionising patient care. But even the most advanced systems are only as effective as the people who use them. For the NHS to become digitally connected, its workforce must fully adopt and integrate new tools into their daily routines. Without their buyin, even the most advanced systems risk becoming expensive failures.

Resistance to change, whether due to fear of complexity or previous negative experiences with digital systems, is a significant barrier. This is particularly true in healthcare, where many professionals have spent decades working with traditional methods. For these systems to succeed, it's essential to address and support these human challenges head-on.

#### What is change management, and why does It matter?

Change management is the structured process of helping teams and organisations transition to new ways of working. It's not about the technology itself but about how people perceive, accept, and integrate it into their workflows.

In the NHS, this means equipping staff with the knowledge and confidence to understand not only how to use new tools, but also why they're essential. This understanding fosters acceptance, reducing resistance and ensuring smooth adoption. Without this step, digital transformation efforts risk being underutilised or outright rejected, leading to wasted investments and missed opportunities to enhance patient care.

#### The high stakes of NHS digital transformation

The NHS operates in a high-pressure, resourceconstrained environment, where failure is not an option. Digital transformation represents a monumental shift for many staff, and overcoming resistance requires more than training sessions – it demands empathy, communication, and a focus on aligning new systems with the realities of daily operations.

Take, for example, a nurse accustomed to paper records, who might struggle to see the benefits of a digital system. Without being shown how it saves time, reduces errors, and improves patient outcomes, adoption may be met with resistance. Change management bridges this gap by demonstrating value and providing ongoing support.

Equally important in healthcare's digital transformation is collaboration with the right technology providers. Suppliers who go beyond delivering products and instead partner with organisations to support adoption can make a significant difference.

This partnership might include mapping out workflows to align technology with clinical processes, providing hands-on training, and offering on-site assistance to address challenges as they arise. Importantly, these providers should prioritise user feedback, ensuring solutions evolve alongside the needs of healthcare professionals. For example, a digital patient record system may initially function well but might require adjustments based on clinician input to improve usability. Providers willing to refine their systems in response to real-world feedback demonstrate their commitment to long-term success.

#### Continuous improvement and collaboration

Effective digital transformation doesn't end with implementation. Ongoing collaboration between healthcare organisations and technology suppliers is crucial to sustaining success. Regular reviews, feedback sessions, and collaborative planning ensure the technology remains relevant and continues to deliver value.

For the NHS, this iterative process is vital. As patient needs and clinical practices evolve, so too must the systems designed to support them. Suppliers that embrace flexibility and responsiveness enable Trusts to adapt seamlessly, maintaining alignment with strategic goals.

#### A people-centric revolution

At its core, digital transformation in healthcare is about more than just technology – it's about people. Nurses, doctors, administrators, and support staff are at the heart of the NHS, and their ability to adapt to and embrace new systems determines the success of any initiative.

By focusing on change management and fostering strong partnerships with technology providers, healthcare leaders can ensure digital transformation is a people-first revolution. This approach not only improves adoption but also drives long-term success, delivering meaningful improvements in patient care and operational efficiency.

The future of the NHS depends on it.





Rob Young, UK General Manager for Beckman Coulter, Matthew Kershaw, chief executive of Croydon Health Services NHS Trust and Simon Brewer, SWLP Managing Director

# New SWLP laboratory at Croydon Hospital transforms the diagnostic facility into one of the most advanced and innovative in the UK

ondon, January – South West London Pathology (SWLP) introduces cutting-edge technologies to its laboratories to create one of the most modern, innovative, and efficient clinical blood science services in the country. The installation of the analysers at Croydon is the first step of the rollout of new blood sciences services at all SWLP sites across the network, covering clinical chemistry, haematology, coagulation, serology, and pre-analytical automation, in collaboration with Beckman Coulter, a global leader in clinical diagnostics.

South West London Pathology is an NHS pathology partnership providing a wide range of services to a large population of over 3.5 million people across South West London, made up of 5 hospital sites: St George's University Hospitals NHS Foundation Trust, Croydon Health Services NHS Trust, Kingston Hospital NHS Foundation Trust, Epsom Hospital, and St Helier University Hospitals NHS Trust, to provide a single, integrated pathology service across South West London and beyond. It offers a wide range of diagnostic and clinical support services to these five hospitals, 450 GPs across London and surrounding areas, and other NHS institutions and private organisations. Simon Brewer, SWLP Managing Director, says, "The successful introduction of the Beckman Coulter analysers at Croydon Hospital marks our first step towards an exciting new future for our clinical blood science services. As we continue to introduce new analysers across our network, we will be able to push the boundaries of diagnostic services in this area. I am confident that our partnership with Beckman Coulter will allow us to become a leading blood sciences service."

Rob Young, UK General Manager for Beckman Coulter, added: "We are proud to provide Croydon with critical laboratory equipment which utilises the newest technologies and performs in line with the world's most advanced laboratories. By enhancing the capabilities of the laboratory staff, we are enabling them to not only increase the volume of tests but also to improve the quality of the results they provide to the clinical community. Our fundamental mission is to improve the operation of the laboratory, allowing the Croydon Health Services team to focus on safeguarding and improving patient health across the community."

#### Advancing Nursing with Artificial Intelligence: How Can AI Improve Patient Care?

t is no secret that healthcare systems worldwide are overburdened. From increasing patient complexity (and volume) to persistent staffing shortages and rising operational costs, healthcare is stretched thin. As healthcare providers seek solutions to these pressing issues, artificial intelligence (AI) has emerged as a powerful tool with the potential to transform patient care delivery and support healthcare professionals in their critical work.

Advancements in technology have transformed many aspects of the healthcare sector—from educational institutions offering online nurse practitioner programs to the rise of telehealth post-COVID-19 pandemic and now the implementation of artificial intelligence. This integration of AI into nursing practice represents a significant opportunity to enhance patient care quality, streamline clinical workflows, and support nurses in making informed decisions while maintaining the essential human element of healthcare delivery.

#### The Current Landscape of Nursing and Technology

Nursing is a key part of healthcare and has always adapted to technology. The post-COVID-19 era, for example, saw a dramatic shift towards telehealth and remote patient monitoring.

Similarly, advancements in technology have transformed many aspects of the healthcare sector — from educational institutions offering online nurse practitioner programs to the rise of wearable health tech and remote consultations. These innovations underscore the healthcare sector's reliance on digital tools, with AI now poised to redefine nursing practices.

#### Al's Role in Enhancing Patient Care

Al's integration into nursing can revolutionize patient care in several ways.

#### 1. Early Detection and Diagnostics

Al-powered tools, such as predictive analytics and machine learning algorithms, can identify patterns in

patient data that human eyes might miss. For example, these systems can:

- Predict sepsis in patients hours before symptoms become critical.
- Analyze imaging data to assist with early cancer detection.
- Alert nurses to deteriorating patient conditions through real-time monitoring systems.

These capabilities enable nurses to act swiftly, significantly improving patient outcomes. Early detection can be extremely helpful when it comes to effective healthcare and predictive algorithms can make a real difference in that.

#### 2. Streamlining Administrative Tasks

One of the major challenges in nursing is the administrative workload. Al can automate tasks such as scheduling, patient record management, and documentation, allowing nurses to focus more on patient care. For instance:

- Virtual assistants can transcribe notes and update electronic health records (EHRs).
- Al algorithms can optimize staff scheduling, ensuring adequate coverage, and reducing burnout.

#### 3. Personalized Patient Care

Al can tailor care plans based on individual patient needs. Using data from wearables and health apps, Al systems can:

- Provide real-time feedback on patient vitals.
- Recommend lifestyle modifications to manage chronic conditions.
- Alert nurses to deviations from expected recovery patterns.

This personalization ensures that care plans are both effective and patient-centric. Monitoring recovery periods to understand any variations can also help detect postsurgery complications and infections early. This can be a game-changer in terms of proactive healthcare.

#### Educational Implications for Nurses

As Al becomes integral to nursing, educational institutions must evolve to equip future nurses with the necessary skills. Many online nurse practitioner programs as well as in-person nursing programs are increasingly incorporating Al modules into their curricula, preparing students to interpret data from Al tools, collaborate effectively with Al systems in clinical settings, and uphold ethical standards in Al-driven decision-making.

#### Overcoming Challenges in AI Integration

While AI offers immense potential, its integration is not without challenges.

#### 1. Ethical and Privacy Concerns

Patient data security remains a top priority. Higher levels of technological integration will inevitably pose new challenges with respect to cyber security. Healthcare providers must:

Ensure compliance with regulations like HIPAA. Employ robust encryption methods to protect sensitive information.

#### 2. Resistance to Change

Adapting to AI tools requires a cultural shift within healthcare teams. Strategies to overcome resistance include:

Providing comprehensive training programs. Demonstrating the tangible benefits of AI in practice.

#### 3. Cost and Accessibility

The high cost of AI implementation can be a barrier, particularly for smaller healthcare facilities. However, partnerships with technology providers and government incentives can help bridge this gap.

#### The Future of Nursing with AI

Looking ahead, Al's role in nursing will continue to expand. Innovations on the horizon include:

- Al-Driven Robotics assisting with physical tasks such as lifting patients or delivering medications.
- Virtual Nursing Assistants providing 24/7 support to patients via chatbots.

• Advanced Predictive Models enabling precision medicine by analyzing genetic data.

These advancements promise to make nursing more efficient and impactful while maintaining the human touch that is central to patient care.

Artificial intelligence is not a replacement for nurses but a powerful ally in improving patient care. By embracing AI, nurses can improve their practice, reduce burnout, and deliver more personalized and efficient care.

As tertiary education focusing on technology prepares the next generation of nurses, the potential of AI to transform healthcare becomes even more tangible. The time to integrate AI into nursing practice is now - a step towards a future where technology and humanity work hand-in-hand to achieve the best patient outcomes.



## Sonio Unveils Transformative AI-Powered Voice Solution to Revolutionize Ultrasound Workflows

Sonio Expands Its AI-Powered Ultrasound Solutions with Sonio Voice, Transforming Maternal-Fetal Medicine Through Intelligent Clinical Reporting

S onio, a global leader in Al-driven MedTech innovation for women's and children's health, announces the launch of Sonio Voice, a cuttingedge voice-recognition solution that redefines OB-GYN ultrasound reporting.

Building on Sonio's expertise in leveraging the latest advancements in artificial intelligence, Sonio Voice seamlessly integrates with the company's flagship Ultrasound reporting platform. This revolutionary tool employs state-of-the-art AI to transcribe, analyse, and input ultrasound data in real-time as sonographers perform exams. By eliminating manual data entry, Sonio Voice optimizes workflows, reduces administrative burdens, and empowers healthcare professionals to focus on delivering superior patient care. "With Sonio Voice, we are advancing our mission to lead the Al-driven transformation of ultrasound workflows," said Cécile Brosset, CEO and co-founder of Sonio. "Our portfolio is a testament to how transformative technology can deliver unprecedented value and efficiency, enabling our customers to provide better care with smarter, faster tools."

As Sonio continues to set the standard for innovation in medical imaging, Sonio Voice represents another milestone in its journey to revolutionize ultrasound practices. The solution reflects Sonio's commitment to empowering clinicians with the best tools to improve outcomes for women and children worldwide.

To learn more about Sonio, visit our website https://sonio.ai/us/



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### NHS prevents over 1,800 emergency responses by treating patients closer to home

Ver 1,800 emergency responses in Bedfordshire, Luton and Milton Keynes have been averted, with patients treated closer to home, following the introduction of a new system to reduce unnecessary ambulance deployments and hospital admissions.

The Unscheduled Care Co-ordination Hub (UCCH) is a clinical triage and patient navigation centre where clinicians from different health and care providers work together to ensure patients receive the best care in the right place.

Staff at the hub, which is based in Luton and covers the whole region, review ambulance waiting lists to identify patients needing urgent attention who aren't critically ill or injured. When these patients are identified, call handlers ensure they get the most appropriate care, which isn't always ambulance transport. For instance, after fully evaluating a patient's needs, the UCCH might recommend that someone who dialled 999 be seen by a community nurse instead of being taken by ambulance to an accident and emergency department. Similarly, a caller to 111 might receive a visit from an advanced care practitioner and a community therapist.

This intervention reduces unnecessary hospital demand by arranging for appropriate care at or close to home where possible and transferring patients from ambulance waiting lists to community providers. This helps reduce long ambulance waiting times and allows the ambulance service to reach patients most in need of emergency care more quickly.

Another option is 'hospital at home', which allows the care team, including nurses, physiotherapists, occupational therapists, and doctors to provide regular check-ins through visits, phone, or video calls. New technologies,



such as monitoring devices, track vital signs at home, and the team adjusts care plans as needed. This approach offers comprehensive, patient-centred care without the need for hospital stays.

Anita Pisani, deputy chief executive at Cambridgeshire Community Services NHS Trust which provides services across Bedfordshire, Luton and Milton Keynes, said:

"I cannot overstate the importance of unscheduled care hubs. These hubs are essential in providing timely, expert care to our residents, ensuring they receive the right treatment in the most appropriate setting.

"By efficiently managing urgent cases and directing patients to community or virtual wards, we not only enhance patient outcomes but also help individuals maintain their independence and dignity. This approach is a game-changer in delivering compassionate and effective healthcare." Felicity Cox, chief executive officer at Bedfordshire, Luton and Milton Keynes Integrated Care Board, said:

"By working together in this innovative way with Cambridgeshire Community Services NHS Trust, we are delivering the very best service to our residents and helping them maintain their independence.

"In the first six days of January 2025 alone, more appropriate care was provided for 70 patients who had initially sought the help of the emergency services, which is about twice the daily average of last year. This is fantastic news for patients, as they are receiving more appropriate, targeted care within the community. Our unscheduled care hub is a testament to what can be achieved when we collaborate and put patient needs at the heart of everything we do."



# **TECHNOLOGY** IN THE SPOTLIGHT

#### **DIGITAL HEALTHCARE**

Each year we cover healthcare technology that is revolutionising the healthcare sector. This year we cover three intuitive technologies for healthcare: POCKETALK offering instant, accessible translation, giving every patient a chance to be heard and understood and improving the healthcare experience for all, Verto: Empowering Healthcare to deliver better care through transformative outcomes and Mizaic revolutionising the clinician : patient experience at the point of care, with an Electronic Document Management System built for the NHS, by a team that has worked in the NHS.



#### Future of HealthTech: Predictions for 2025 and Beyond

he health technology (healthtech) sector continues to expand at an unprecedented rate, transforming the global healthcare landscape. This article examines CEO Krishna Thakur's reflections on 2024 predictions, assesses their accuracy, and explores where healthtech is headed in 2025.

#### A Look Back: Predictions for 2024 That Came True

#### 1. Integration of AI in Healthcare

Al's impact on diagnostics has grown substantially. Beyond radiology, it now plays a critical role in pathology and genomics. The NHS AI Lab, with a £250 million budget, has invested over £100 million in promising AI solutions, validating earlier predictions about Al's transformative potential.

#### 2. Rise of Robotic Process Automation (RPA)

RPA has become vital in reducing administrative burdens, allowing healthcare providers to focus on patients. This technology streamlines workflows, enhancing operational efficiency.

#### 3. Digital Front Door Realised

The concept of a "digital front door" is now a reality. Upgraded digital health platforms, such as the NHS App, have revolutionised patient engagement. Over £2 billion in investments have enhanced these platforms, creating easier access to healthcare services.

#### HealthTech in 2025: What to Expect

#### 1. Telemedicine and Remote Monitoring on the Rise

Telemedicine will become mainstream as remote monitoring devices grow more sophisticated. These technologies will improve chronic disease management and minimise hospital readmissions, making healthcare more accessible.

#### 2. Personalised Medicine through Genomic Integration

The incorporation of genomic data into Electronic Health Records (EHRs) will enable tailored treatment plans based on genetic profiles. This personalised approach promises higher efficacy and fewer side effects.

#### 3. Wearable Technology Evolution

Next-generation wearables will go beyond tracking vitals. Real-time analysis of biochemical markers will empower users to manage their health proactively, offering a deeper understanding of their well-being.

#### 4. Enhanced Cybersecurity

With the digitisation of healthcare, cybersecurity investments will be paramount. Protecting patient data is essential to maintaining trust and ensuring the resilience of digital health systems.



#### Global Leaders in HealthTech

#### North America

The U.S. will retain its dominance in the healthtech industry due to robust venture capital investment and an innovation-friendly ecosystem. Al-driven solutions and telehealth platforms will continue to thrive in this region.

#### Europe

Europe is rapidly catching up, driven by cross-border collaborations and stringent privacy regulations. Investments in AI and digital therapeutics have positioned the region as a major player.

#### Saudi Arabia

Saudi Arabia is emerging as a leader in healthtech innovation, driven by its Vision 2030 initiative. The country has invested billions in digital health transformation, focusing on telemedicine, Al applications, and smart hospitals. Projects like the Seha Virtual Hospital, the largest in the world, showcase Saudi Arabia's commitment to integrating cutting-edge technology into healthcare. The government's collaboration with global healthtech firms has further solidified its position as a rising leader in the sector.

#### Driving Factors for Growth in HealthTech

#### 1. Technological Innovation

Advances in AI, machine learning, and wearable devices are revolutionising diagnostics, treatment, and patient care.

#### 2. Demographic Trends

The aging population and the prevalence of chronic diseases are fueling demand for innovative, patient-centered solutions.

#### 3. Policy and Investment Support

Favorable regulations and substantial investments from both public and private sectors are propelling the healthtech sector forward.

#### Investment Outlook

By 2025, healthtech investments are expected to reach record highs. The NHS alone has allocated billions for digital transformation. Private equity and venture capital firms are also contributing significantly, with a focus on startups specialising in Al, remote care, and wearables.

Krishna Thakur's insights reveal that the healthtech industry is on the cusp of another transformative year. With robust investments, groundbreaking technologies, and global collaboration, 2025 promises to redefine healthcare delivery worldwide.

# HEALTH TECH

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