

OVERCOMING KEY CHALLENGES TO PATIENT EXPERIENCE WITH A DIGITAL WORKFORCE



COVID-19 AND THE MOVE TOWARD INTEGRATED CARE

While the urgent response to COVID-19 has been the overwhelming focus for the global healthcare industry, and social care and local government sectors since it was declared a pandemic in early 2020, the longer-term ambition for integrated care remains. In fact, the pandemic has only reinforced the need for more coordination across all healthcare activities, from primary care to rehabilitation.

In England, the National Health Service (NHS) Long Term plan sets out that integrated care systems (ICSs) will cover all areas of the country by 2021^[1] and will increasingly focus on population health. The rationale for ICSs is to ease the complexity of healthcare delivery across multiple providers, from general practitioners and nurse practitioners to clinical specialists, hospitals, home care service and pharmacies. And, of course, there are similar initiatives across Europe and North America.

Models of healthcare provision differ significantly around the world, across both public and private sectors, but the challenges facing providers are universal. Rising costs of care delivery, growing demand for services from an aging population and skills shortages, which in some markets have become crippling, were already combining to put unprecedented levels of stress on current systems, even before COVID-19. The events of 2020 have brought things to a breaking point.



IMPROVING PATIENT EXPERIENCE THROUGH INTEGRATED CARE

The need for greater integration across health care systems is beyond doubt. For patients in virtually all countries, it has become almost impossible to manage the plethora of healthcare providers, health insurers and other agencies, and to understand who has ultimate responsibility for the creation and delivery of their treatment plans.

ICSs are designed to address this complexity, coordinating all healthcare activities and putting the patient and their needs at the center. The end goal is to provide better quality and seamless care, leading to enhanced patient experience and improved health outcomes for individuals and the wider population as a whole.

Importantly, given the current squeeze on funding across healthcare provision, integrated care provides cost efficiencies, with patient care journeys delivered in a more efficient and streamlined way. Care is provided at the right time in the right place and demand is better managed across the entire system.



THE BUILDING BLOCKS OF INTEGRATED CARE

There are a range of components and key characteristics that make up integrated care best practice, including:

- Early identification of people who are at higher risk of developing health and care needs and provision of proactive care
- A holistic, cross-sector approach to care and support (social care, healthcare (including mental health), housing, community resources and non-clinical support)
- Coordination of care, with joint needs assessment, joint care planning, joint care management and joint discharge planning
- Access to community-based health and care services, available when needed.

All of this is underpinned by multiagency and multidisciplinary teams, which ensures people receive coordinated care wherever they are being supported, with timely transfers of care across the health and social care systems.

This vision of integrated care is hugely exciting for governments, healthcare providers and patients themselves, but there are huge challenges in delivering it. It requires new mindsets, systems, processes and leadership across the board.

Enablers of Integrated Care*

- Local contextual factors (e.g., financial health, funding arrangements, demographics, urban vs rural factors)
- Strong, system-wide governance and systems leadership
- Integrated, electronic records and sharing across the system and with service users
- Good quality and sustainable provider market that can meet demand
- Empowering users to have choice and control through an asset-based approach, shared decision making and coproduction
- Integrated workforce: joint approach to training and upskilling the workforce
- Joint regulatory approach
- Pooled or aligned resources

* *Social Care Institute for Excellence Integrated Care Logic Model*

THE ROLE OF TECHNOLOGY IN INTEGRATED CARE

Technology is widely seen as playing a critical role in the development of ICSs, helping to bring together disparate systems, processes and people. And importantly, healthcare leaders need to approach technology as a core part of their initial strategic planning for integrated care, rather than something that they can bolt on once the program is up and running.

“There is good evidence that when it comes to developing integrated care systems, technology needs to be considered from the outset and not as an add on.... A recent NAO (UK National Audit Office) report showed that the systems not taking technology infrastructure requirements into consideration made it difficult to deliver some of the plans.”

— Sarah Scobie, Nuffield Trust

Looking ahead, intelligent automation will be vital in helping healthcare institutions meet future demands. In England, it is estimated that the healthcare system will need between 350,000 and 700,000 more workers by 2030, on top of the 1.58 million people that already work in the sector. Technology will be essential in enabling this, transforming employee recruitment and retention to ensure that providers have access to the highly skilled and engaged talent they need. They will also need digital platforms to improve employee experience and foster employee wellbeing.

In addition to more human resources, ICSs will also require stronger connections and interfaces between healthcare, social care and housing to deliver joint services and enhance patient outcomes. Technology usage across the sector will need to become more integrated and more strategic in order to meet future needs, and that will mean far greater adoption of new technologies such as artificial intelligence (AI) and intelligent automation across all parts of the organization.

BARRIERS TO INTEGRATED CARE

The need for a greater integration of people, processes and systems within healthcare provision is nothing new but it has now reached a point where providers simply can't afford not to succeed.

Attempts to improve integration in the past have often been hampered by the sheer complexity and fragmentation of care provision in most developed countries. The fact is that within every organization, healthcare professionals have different roles, responsibilities and ways of working that are not always easy to coordinate. In some cases, organizations will have different objectives and KPIs that may conflict with those of another body.

On top of this, there will be different parts of the healthcare system that fall under different organizational and political management, with separate and sometimes competing budgets. This situation becomes even more problematic when healthcare is integrated with wider social and community care services.

Perhaps even more ingrained and difficult to reform is the notion of payment and revenue cycles within healthcare. Professionals (and the organizations and departments they work for) are reimbursed separately for the services they provide, but very rarely for the final result in terms of patient health or outcomes.



In the U.S, for example, payment models in healthcare do not lend themselves to integrative thinking and collaboration, and this can lead to unnecessarily complicated revenue cycles, resulting in confusion and uncertainty.

Of course, there are also major hurdles to overcome in integrating IT estates and systems across the healthcare sector. Most providers operate with fragmented, legacy IT systems, making it extremely difficult to track the patient journey within the organization, let alone across multiple entities. There are also major challenges (and risks) in the effective sharing of patient data across multiple providers.

INTELLIGENT AUTOMATION ENABLES INNOVATION TO SUSTAIN NEW MODELS OF INTEGRATED CARE

As healthcare organizations around the world look to accelerate their journeys toward integrated care, they are developing a range of different delivery and commercial models. In many instances, government bodies have given providers the flexibility and autonomy to experiment with different approaches to integrated care, recognizing the need for professionals to establish models that work at a local level and can feed into a broader national framework.

As such, innovation is now a major focus for all stakeholders, as they look to re-imagine what type of integrated care system could best serve the needs of patients and staff and, critically, how they can best achieve that vision, based on the reality of today. This urgent need to innovate is a major driver in adoption of intelligent automation across the healthcare sector.

Intelligent automation, where traditional robotic process automation (RPA) technology is combined with AI and additional capabilities such as natural language processing, has the potential to address many of the barriers to integrated care outlined above, over the coming years.

With intelligent automation, healthcare organizations have access to a software platform that can automate any business process, interacting with line-of-business applications in the same way as a human worker, but more quickly, accurately and 24 hours a day, seven days a week. Intelligent, AI-enabled digital workers act as the integration layer between existing legacy systems to ensure data and information flows quickly and safely within, and beyond, the organization. This eliminates the need to dedicate prohibitively expensive human resources to undertake these tasks.

Importantly when it comes to fulfilling the integrated care agenda, intelligent automation enables healthcare providers to increase the speed and scale of innovation, allowing them to develop and launch new services and applications, both internal and external, without long-winded IT infrastructure projects.

And it allows them to use their data, which until now has typically been untouched or underutilized, to generate meaningful and actionable insights into current operations and to deliver more timely, proactive and personalized care to patients.

BREAKING DOWN THE BARRIERS TO ICSS

Intelligent automation can deliver enhanced patient care, cost savings, and improved access, while freeing up capacity for over-stretched frontline staff. It smashes the established **'Iron Triangle'** in healthcare, where access and effectiveness can only be improved through increased spending. And, unlike other industries, where there are fears that AI will lead to mass job displacement, in health and social, care digital workers complement human skills and talents, by reducing the burden of repetitive and administrative tasks and freeing up of staff to spend more time on direct clinical care with patients.

For ICSSs, intelligent automation can help healthcare organizations overcome many of the challenges outlined above and achieve the three key enablers to delivering world-class, genuine integrated care to patients, including:

1. Standardizing practice and processes
2. Data sharing, visibility and analytics
3. Facilitating collaboration

In the next section, we will demonstrate how intelligent automation can address these three critical success factors, creating a framework and culture of innovation and accelerating the journey towards integrated care.



CHALLENGE 1: STANDARDIZING PRACTICE AND PROCESSES

Why it matters

In order for ICSs to work effectively, patient experience must be seamless and consistent across all providers and at every stage of the care pathway.

This means that practices and processes need to be standardized across ICSs, so that patient care and communications look and feel the same to each patient at every touchpoint.

In order to achieve this level of standardization, ICSs need to put a system-wide governance in place to oversee communications, processes and procedures across all areas of the organization. Likewise, healthcare organizations need to come together to pool and align their resources and, where possible, create shared functions in areas such as IT, HR and finance.

How intelligent automation helps

An intelligent automation platform such as Blue Prism gives healthcare organizations and adjacent bodies the capacity to standardize patient experience without the need for disruptive (and costly) overhauls to current processes and systems. Digital workers can be deployed behind the user interface to seamlessly transfer requests and results in real-time between systems and organizations, while patients have a consistent experience when accessing services and information.

An example of this would be a single request portal where patients can book appointments or request information for services across the entire ICS. Rather than having to go to multiple stakeholders along the patient journey, patients are empowered to manage their own care through a single log-in, providing greater speed, visibility and engagement. Information is presented in the same way to avoid patient confusion and build confidence in the system.

CHALLENGE 2: DATA SHARING, VISIBILITY AND ANALYTICS

Why it matters

ICSs depend on the smooth and secure transfer of data through relevant systems and applications. This enables straightforward analysis and an informed, complete picture view of the patient's journey and future treatment plan. On a broader level, this patient data can be combined to generate an accurate view of overall population health and to identify trends and address potential issues as early as possible.

How intelligent automation helps

Across many healthcare organizations, procurement of digital platforms and applications has been localized (and decisions made in silos), meaning that organizations and departments within a single ICS will be using different systems to do the same thing.

As we have seen, many of these systems do not integrate or talk to one another, meaning that patient data does not automatically move between systems, and requires time-consuming and costly human intervention.

Digital workers act as the glue between these systems, meaning that when a patient visits a new department or hospital, the clinician can be confident that they are presented with all of the relevant information relating to that patient, with up-to-date data and a full care history.



CASE STUDY: INNOVATION AND PLANNING, GATHERING USABLE CLINICAL DATA

The chief medical information officer at the Royal Free London NHS Foundation Trust is currently working on a project to use Blue Prism digital workers to gather usable data and insight into outpatient clinics.

Currently, the information gathered about outpatient clinics is limited, in part because the way that NHS bodies are paid for this work means that the detailed clinical coding that happens for in-patient work is not required.

So NHS bodies can identify the number of clinics that have been held but not necessarily the patient's diagnosis. For instance, it would be difficult to answer the question 'how many patients with Parkinson's have you seen?' or 'how many patients with type 1 diabetes have been treated?' However, this detailed information would be extremely useful for planning purposes to forecast demand, as well as for clinical audits. It would also be a useful reference point when developing insight into overall population health.

Under the current system, it would be possible to ask clinicians to record this type of information on the patient record system but it would be an additional task and they may not see the benefit of doing it and doing it well.

However, there is another way of capturing this information. Following outpatient clinics, letters are written to the patient and their GP. These letters tend to follow a standard format with the diagnosis in the title or heading of the letter.

This data is semi-structured so can be read and analysed by a digital worker.

So, the proposal is that a digital worker will 'read' the letters to identify and record the diagnosis. At first, the work will need to be reviewed and checked by a member of staff but the digital worker will be programmed to flag when it is not sure about a diagnosis. These flagged items will be reviewed, and the digital worker will learn and improve so the number of flagged items will reduce over time.

If this automated process works at the Royal Free, it will then be usable by other NHS trusts and associated bodies in England via the **Blue Prism NHS Digital Exchange** (See below for more details).

The potential for digital workers to gather this sort of clinical information from each organization across an ICS and deliver meaningful, actionable data at a macro level is enormous. Suddenly, clinical staff and business leadership would have highly valuable, real-time insight into patient demand for clinical services, allowing them to resource according to need and to have a far more accurate picture of population health at any moment in time.

CHALLENGE 3: FACILITATING COLLABORATION

Why it matters

Closer collaboration between healthcare organizations and associated care and housing services is at the very core of the shift towards integrated care. By integrating precious resources (skills, processes and systems), efforts are no longer duplicated across organizations and departments, best practices are shared and innovation is accelerated.

Ultimately, greater collaboration frees up staff time and drives down expenditure, enabling resources to be redirected to patient care.

How intelligent automation helps

A great example of closer collaboration within healthcare is the **Blue Prism NHS Digital Exchange**, a private-access platform enabling collective innovation for NHS leaders across England. It is a central pool of tried and tested automations that allows NHS organizations to share knowledge and deploy and scale a digital workforce at speed. It essentially enables access to advanced automation technologies, as well as NHS-wide collaboration via the digital workforce.

NHS trusts that are signed up to the Digital Exchange get free access to a range of existing process automations which have been built and are now being successfully deployed within other trusts. It allows NHS trusts to scale their automation strategies quickly and securely, and to accelerate the positive impact on both patient care and staff time and capacity. All content on the marketplace is developed and owned by the NHS, and its use is strictly restricted to NHS bodies.

The automations, relating to both front and back-office processes, can be used by other NHS trusts, either in whole or in part to speed up the deployment process without the need to design and build them from scratch. It means that trusts can release time for their clinical and corporate staff faster, more efficiently and at a reduced cost.

The Digital Exchange is an example of how healthcare organizations can work together to drive efficiencies, protect and support front-line staff and improve patient care through intelligent automation.



Looking ahead, this type of platform or marketplace can play a huge part in enabling ICSs to pool resources, collaborate on new automations and inspire each other with new innovation.

ICSs can also explore creating their own Blue Prism Private Digital Exchange (DX Private) to facilitate collaboration. This is an online marketplace for finding and downloading pre-built disruptive technologies and applying them to Blue Prism process automations. And importantly, with DX Private, the ICS can set the standards for what assets their organization uses to ensure that any whole or partial automations that they access meet their security requirements.

With DX Private, an ICS could also collaborate with external third parties where it is beneficial to do so. For example, in the US, healthcare providers could share and collaborate on automations with tertiary care providers, healthcare payors and other third parties to streamline operations, accelerate revenue streams and enhance patient experience.

With DX Private and the Blue Prism intelligent automation platform, individual healthcare providers and a wider ICS is no longer constrained by silos. DX Private can be shared between different associated domains and teams can include external collaborators for limited projects. The result is more powerful collaboration and faster, more successful intelligent automation at scale.

Conclusion

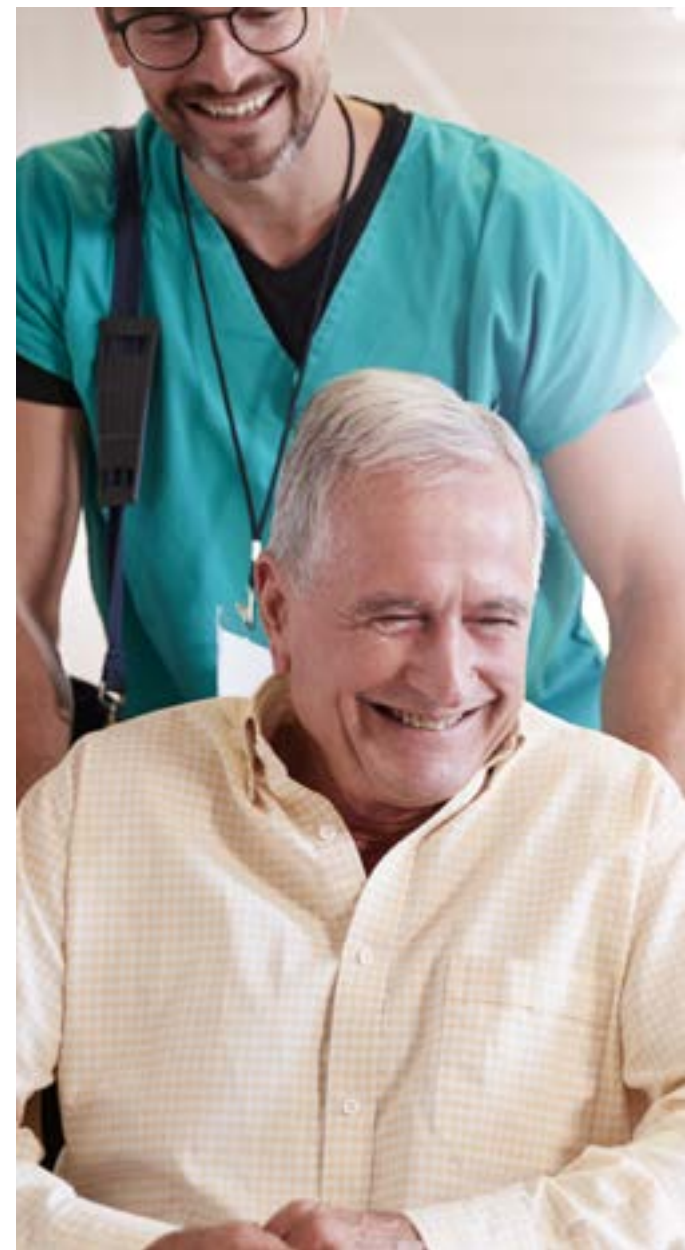
As healthcare organizations around the world continue to look for innovative solutions to manage both the current COVID-19 crisis and longer-term resourcing challenges, the shift toward greater integration and collaboration has to be viewed as a positive step. As we have seen, ICSs can deliver a wide range of operational and financial benefits and, most importantly, they can drive enhanced patient experiences throughout the patient journey.

However, delivering this level of cooperation and collaboration across a highly fragmented, complex and ever-changing healthcare landscape is extremely challenging. In most countries, people, systems and processes operate in organizational and departmental silos, with little collaborative thinking, no common objectives and a lack of data and visibility. As this paper has detailed, there are no standardized processes, very little data sharing and limited integration across healthcare systems.

For healthcare leaders looking to drive ahead with their integrated care agenda, these are the big problems that need solving. And they need solving urgently and with minimal cost.

Intelligent automation may not present all of the answers but, as we have seen, the introduction of a digital workforce can have a profound impact on the ability of ICSs to create greater consistencies in care and patient experience across all of its components parts. With intelligent digital workers operating as an integration layer, joining up systems, processes and people across the ICS, barriers to closer collaboration are broken down. This in turn frees up the flow of data and insight across the ICS (and beyond where appropriate) to provide clinical staff and senior leadership teams with real-time insight into patient demand and population health.

Most importantly, intelligent automation provides ICSs with the resources, insight and integrative approach that is essential to improving patient experience at every touchpoint. This is where the true value of intelligent automation lies, freeing up hardworking healthcare workers to spend more time with patients and provide consistently excellent levels of care. Ultimately, intelligent automation has the potential to deliver on the integrated care vision.





About Blue Prism

Blue Prism is the global leader in intelligent automation for the enterprise, transforming the way work is done. At Blue Prism, we have users in over 170 countries and more than 2,000 businesses, including Fortune 500 and public sector organizations, that are creating value with new ways of working, unlocking efficiencies, and returning millions of hours of work back into their businesses. Our intelligent digital workforce is smart, secure, scalable and accessible to all; freeing up humans to re-imagine work. To learn more visit www.blueprism.com and follow us on **Twitter @blue_prism** and on **LinkedIn**.

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