

# UKAuthority Digital Health & Social Care 2019 17 May 2019, London

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## Extending the digital integration of care

### Lessons from UKAuthority’s Digital Health and Social Care Conference 2019

*A UKAuthority Event Briefing Note*

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## Introduction

“If a person is in a hospital bed we should be ready to start preplanning their care after discharge.”

This was one of the more telling comments to be heard at UKAuthority’s recent Digital Health and Social Care Conference, illustrating a growing preoccupation in the sectors – the need for a much more effective integration between the two.

It was a factor in most of the presentations and discussions at the event – which was sponsored by Blue Prism and Affinity Works – conveying the consensus that this is now a priority in the provision of UK public services. The NHS is spending a large chunk of its budget on people, mostly over 65s, whose problems could be alleviated by better social care; and shortcomings in the hospital discharge process for those needing further care are continuing to stoke up the problem of ‘bed blocking’. It needs a much better integration to make the two sides more effective and raise the overall quality of care.

Many comments reflected a frustration that, despite this having been on the agenda for several years, there has been limited progress. The NHS Long Term Plan<sup>1</sup> includes relatively few references to social care, and the Government’s long promised green paper on the latter has still not been published.

But there is an enthusiasm for what digital technology can contribute to solving the problems; and initiatives have sprung up among plenty of healthcare organisations and local authorities to provide local and regional solutions.

A number of challenges were identified at the conference, including one that has so far been in the background but cannot be ignored – the need to bring the independent care providers, private and third sector organisations contributing to the public service, into the loop. This is going to be one of the big issues in making progress.

## The priorities

A number of priorities were identified for the deployment of technology. One revolves around the need for greater efficiency in both health and social care in order to free up skilled staff from mundane yet time consuming elements of their role.

### Automation

Robotic process automation (RPA) can handle a range of routine tasks. For healthcare the list includes referrals, handling requests for patient histories, passing on test results, archiving feedback notes, and smoothing the hospital discharge process. In social care it can be used, for example, in rota planning, ordering support from agency staff and handling elements of the finances. It has the capacity to pull together information from a range of sources, manage the data flows and trigger the appropriate action or review by specialist staff.

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<sup>1</sup> <https://www.longtermplan.nhs.uk/>

While there were warnings that RPA should not be applied to failing processes, there was also a recognition that it can greatly speed up and improve the reliability of existing processes – much faster and more cheaply than building a new system. It can provide immediate improvements whereas a complex redesign can take years. It needs a selective approach towards its implementation, but it can do a lot to reduce the pressures on staff and free them to spend much more time on the work where their skills really count – and eases the financial burden on health and care services.

Automation can also go a step further into supporting the statistical modelling and analysis of data (as shown below by the case of Middlesbrough Council). Basically, it extends far beyond the capabilities of human analysts in collecting, sifting and processing possibilities within a variable timeframe and budget.

### Whole system interoperability

Other priorities reflect the need for integration. One is to continue to build on the interoperability of systems, supporting the sharing of information on care recipients not just between the NHS and local authorities but with the independent providers.

James Palmer, programme head social care at NHS Digital, warned against any repeated attempts to build a national database, saying the solution is in national rules for databases to talk to each other. “Don’t try to procure one system nationally, but don’t let everyone buy any local systems without rules,” he said. There is also the need for local organisations to recognise there could be some tension, and find the right balance, between their own priorities and ensuring systems can talk to others at a regional and national level.

There was recognition among speakers of the importance of standards in supporting this, reflecting the Department of Health and Social Care’s earlier announcements on the development of data and technology standards for interoperability<sup>2</sup>.

The nature of their development is open to debate. Among the points raised during the discussions were that it is counter-productive to develop a standard that does not align with how people need to use their digital systems – they will not use it – and sometimes too much time is devoted to the development of a ‘perfect’ standard that could soon become redundant. Technology changes quickly, digital systems are increasingly being developed through an iterative approach, and standards will have to evolve to keep up. Subsequently, local organisations should provide input how standards develop; but it has to be balanced with a central influence, most likely from a central government or professional body, to provide the credibility that encourages people to use them.

It was notable that when the conference delegates were asked to indicate their preferences about half wanted a set of interoperability standards mandated from the centre, while a few were in favour of allowing them to evolve naturally and others were undecided. If there is a lesson from this it is that, if something that works becomes widely available, people will use it.

### Resilience

Another priority is in taking the steps to ensure systems’ resilience in the event of disruptions. Organisations are well aware of the obvious necessities for cyber security and business continuity – both of which should be tested regularly – but some are worried about using solutions from smaller

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<sup>2</sup> <https://www.ukauthority.com/articles/dhsc-unveils-priorities-for-healthcare-tech/>

software providers that may not be around in the future to provide support, and that this could lead to a loss of data. This is particularly the case for smaller care providers, can raise a barrier to market for smaller firms and provide a brake on NHS bodies and councils using innovative solutions.

It prompted the suggestion of the need for a national contingency arrangement, possibly through an escrow-type plan that securely stores the code for all software systems. This would give care providers a guarantee of support if they find their software provider is no longer there to help with any systems failures. There have been indications that some software firms are open to the idea and it could help to strengthen resilience in the long term.

There is also a need to find the balance between optimism and being ready to recognise the shortcomings in implementing a system. The point came up that ‘optimism bias’ can be useful in making the case for an investment, and that for larger organisations it works effectively within their funding processes. But there is also a growing preference for iterative developments – being ready to acknowledge what doesn’t work and start again – that do not always reflect the terms attached to an investment. In some cases it creates a tension that has to be resolved to ensure a new system is effective and good value for money.

### Information flow

The need for a safe and efficient discharge process from hospitals is also important. Throughout health and social care there have been complaints about crucial information ‘falling through the cracks’, and local authorities not being alerted to the need to provide follow-up care for elderly patients as they leave hospital. The shift from paper to digital is helping to reduce the problems, and the advocates of RPA say it can do a lot to make the process more reliable, but it still relies on everyone in the care process receiving relevant information.

This has to involve the care providers, many of which are not public sector bodies. The local authorities have the statutory responsibility to care for people in need, but it is the providers such as nursing homes and community organisations that are usually commissioned to deliver it on a daily basis; and they need to know exactly what the individual needs. The providers are not included in the big IT investments, operating as businesses and being responsible for their own digital systems, and some still rely primarily on paper records. But they need to be part of the broad picture.

NHS Digital has taken it into account in its support for a series of Pathfinder projects to promote the use of digital in social care<sup>3</sup>; and it is behind an effort to create a Digital Social Care website that supports care providers in adopting digital technology.<sup>4</sup>

A presentation at the conference also made clear that some of the software companies take the issue seriously. Simon Papworth, a founding member of the recently launched Care Software Providers Association (CASPA), acknowledged the need for standards and said many care providers are eager to adopt best practice. There is a strong trend towards the adoption of electronic patient record systems, largely working on software-as-a-service (SaaS), and he forecast that 90% of the industry should be using them by 2025.

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<sup>3</sup> <https://www.ukauthority.com/articles/pathfinders-money-to-support-scaling-up-of-digital-social-care/>

<sup>4</sup> <https://www.ukauthority.com/articles/new-website-to-support-social-care-providers-in-adopting-digital-tech/>

But he acknowledged that many of the providers lack digital expertise and that some have struggled to get to grips with cyber security. This has partly been alleviated by the SaaS suppliers maintaining high standards, but it still needs improvement to remove the anxieties other organisations might have about allowing them into digital networks. One of the challenges identified at the conference is to communicate issues around cyber security in a way that resonates with care providers, who are seldom focused on the details of technology.

There is also a problem with some contracts for care provision coming with a request to use specific primary care systems that do not work well within care homes. This needs resolving, and CASPA is urging local authorities to work with its members on what their systems could provide to make life easier. This could lead to the development of a set of standards for use in contracts for home and institutional care.

All this points towards an increase in the attention paid to care providers' digital systems, and a growing appreciation that the need for interoperability extends beyond the NHS and local authorities into the independent sector.

## Local initiatives

Details of a handful of local initiatives were presented at the conference, highlighting how different organisations are focusing on specific issues.

**Norfolk County Council** is making a major investment into superfast broadband connectivity – up to 1Gbps – for its buildings, with the potential to provide access to the network for 80,000 homes in the county. Along with the installation of 300 long range wide area network (LoRaWAN) gateways around the county, it is laying the ground for a widespread implementation of assistive technology aimed at supporting elderly people in their homes and providing significant savings. It has estimated that for every £1 spent it could save almost £5 within a few years.

The council is also running a series of digital developments to support adult social care. This includes the launch of a portal with a self-assessment function that can direct users to where they can receive support in the community or refer them to a social worker; a plan to develop interactions including messaging and sharing documents through the portal; the deployment of an e-brokerage service for the provision of care packages; and the adoption of mobile apps to support social workers.

The recently formed **Manchester Local Care Organisation** has brought Manchester City Council's social care operation together with local NHS bodies and is working on a number of digital initiatives. It has already provided a staff scheduling system supported by a mapping facility to support decisions on where to send employees in urgent cases. This is supported by moves to equip care recipients with a 4G connected tablet computer that provides all the information on their care and can feed data to a web based monitoring platform.

The organisation is aiming to create a single view of the factors affecting an individual and digital dashboards to support managers and care providers. It is also developing Connect2Support, an online tool to inform people of what services are available locally from community groups and charities.

**North Yorkshire County Council** is taking part in the Harrogate Alliance, which is working on a local version of the Yorkshire and Humber Local Health and Care Record (LHCR). It will provide for a suite of four products: a shared record for health and social care; a system to link together clinical systems; an intelligence capability for population health management; and a person held record that people could access to check on and contribute to their care.

**Middlesbrough Council**, in a project with Affinity Works, has developed a tool to help it predict demand for adult social care within its boundaries. It has been using financial data to make forecasts since 2012, but wanted a more up-to-date and granular model that could provide a more sophisticated and accurate view of the factors influencing the demand.

The crucial element has been the use of machine learning to assess the value of different configurations of statistical models; these number in the hundreds and the software could process each one much more quickly than a data analyst. It was first used in April 2018 in a forecast of the demand for long term residential care over the next 12 months, which it assessed at 726 beds. In April 2019 the actual number was 734, within 1% of the forecast.

This makes the system a highly valuable tool for finance and commissioning teams, and supports the council in its long term strategic planning. Councils and healthcare organisations have vast reservoirs of data, and machine learning is making it possible to collect, sort and assess the value of hundreds of statistical models to develop accurate forecasts – a task that has previously been too time consuming and expensive for human analysts.

## Building momentum

Progress in these areas has been confined to local and regional initiatives, and sentiment at the conference reflected no appetite for any major centralised programmes. There is a general sense that councils, local NHS bodies and their regional groupings are better equipped to approach integration in ways that reflect their local situations.

But there is a consensus in favour of the standards to support data sharing and the need for high levels of interoperability between systems. The discussions also conveyed a wish to learn from each other and avoid a widespread duplication of effort in dealing with common challenges.

There is also a sense of urgency, with the financial pressures on the care system creating the need for rapid progress in achieving the integration. It points to a number of areas in which local authority chiefs, care commissioners, NHS leaders and care providers need to focus their attention to build up further momentum.

- **Look for the opportunities for automation.** Organisations need to identify the processes that are ripe for handing over to software robots, look at how they can integrate with each other, and reduce the friction in areas where human intervention remains a necessity. And this can go beyond process automation; the Middlesbrough Council project indicates that machine learning technology enables the automation of large elements of data analysis in the planning for care.
- **Bring the care providers into the loop.** It is a big challenge, given that a lot of social care is delivered by small businesses and community groups with relatively low levels of digital maturity. But they are crucial to the way the whole system functions, and care



commissioners need to engage with them continually to build the digital bridges. They have to be made aware of the basics of interoperability, cyber security and data protection, and both sides need to understand how the others work and look for technology that supports the integration.

- **Explore the opportunities in data.** Organisations need to examine all of their data sources, how they can contribute to operational efficiency and long term planning and look for the technology to make it as granular and up-to-date as possible.
- **Make a priority of standards.** Integration needs interoperability and this will only develop with robust yet sufficiently flexible standards for data and technology. Some organisations will be in a position to contribute to their development while most will only be able to follow, but all have to ensure that they are aware of their significance and relevance to the organisation's own processes, and ensure that any solutions they deploy confirm to standards widely in use.

There is a strong sense of a common cause to extend the integration of care. Technology providers are making impressive progress in developing solutions to the support the cause, and public sector organisations need to pay heed to these factors as they make their own efforts to provide better quality care.

## Partner Comment – Blue Prism

Industry voice: There is a strong case for the selective use of robotic process automation in health and social care, writes Leo Tsuneda, director of health at Blue Prism

Robotic process automation (RPA) is going to be a good thing for health and social care. While many people agonise over whether robots will take over jobs, they are in fact going to be crucial to the future provision of high quality care.

It comes down to the more efficient use of resources. In all OECD countries, with the exception of Estonia, the average annual growth in healthcare spending is exceeding that of GDP, threatening to take the financial pressures to an unsustainable level.

Increasing automation can significantly reduce the pressure, cutting the cost of administrative and data entry processes that are crucial to good care while giving skilled staff more time for the work that makes a difference to its quality.

But it is not a straightforward equation and requires a measured approach in the deployment of RPA. Organisations have to make sure that they choose the right processes for automation, as RPA is more successful when it is applied selectively.

### Best RoI

The best return on investment (RoI) from automation is those processes that are currently completed manually or where a lot of information is held in silos. Indeed, many manual processes in health and social care could be automated - such as follow-ups and e-referrals - at zero risk to patient care whilst significantly improving processing times.

In an ideal world, redesigning flawed processes and systems would be an ideal option, but in the real world we often don't have the luxury of time, resource or money to do so. It is much faster to automate an existing process so that it completes almost instantly - regardless of the underlying process trail - than it is to redesign and rebuild.

This helps most organisations achieving an immediate time to value improvement, demonstrating the effectiveness of the investment and achieving a swift RoI.

In a sector as complex as health and care, and where communication between the two sectors is proving ever more vital, RPA can provide improvements in many processes, especially those that are repetitive, and rules based. Rather than waiting for the budget and time to redesign processes, organisations should look at which processes they can automate today and assess those likely to bring the best return on such an investment.

It can provide immediate improvements, reducing the pressures on staff and freeing them to spend more time on the work where their skills really count – and easing the financial burden on health and care services.

Even when the ultimate goal is to redesign systems, RPA can provide immediate improvements and efficiencies. This is a variation on a rising trend in the digital transformation of public services, in which iterative developments often provide the best way forward, reducing risk and providing the scope to make corrections and improvements on the way.

Blue Prism - the most prominent supplier of RPA solutions to the National Health Service (NHS) - and its partners have identified the processes for which the technology has greatest potential. They include referrals, appointment bookings, handling requests for patient histories, passing on test results, the allocation of beds to patients, archiving feedback notes and the transfer of patient records and information to other organisations involved in the person's care - for example, between hospital and GP or social services.

### Hospital discharge

While most of patient discharges from hospital are administrative functions, they include crucial steps in the delivery of care. One example is in the automation of the discharge process for hospital patients, identifying those who need follow-up social care and alerting the relevant authority. It involves pulling together a range of information, a process that is currently done manually in most organisations, but which can be automated with the right data flows in place.

This can take in the processing of clinical data, identifying what is normal or abnormal and sending the appropriate messages to clinicians and patients with any necessary guidance on next steps.

Robotics has been applied to this process by Helsinki University Hospital in Finland, relieving doctors of more than 90% of the process and, in a city of 1 million people, saving 10 full time employee days per year. It has also speeded up the process and improved patient safety as the rules built into the automation ensure that the patient becomes aware of the need for any further tests.

This approach can also extend to supporting new technologies. There is already a case in Sweden of RPA being used with a platform to monitor up to 80,000 e-health alarms, reacting to any alerts by notifying the relevant healthcare professionals and triggering the appropriate responses. It can be



applied to the management of a wide range of telemedicine and assistive technologies to support people in their own homes.

There is also an impressive use case in Finland for RPA in social care, where the city of Espoo has deployed the technology to support rota planning, the estimating and ordering of staff support from temporary employee agencies, the creation of service vouchers and handling of financial applications.

### Business case

The common factor underpinning these is a strong business case for RPA. Robots can monitor a wider range of data than people, work more quickly and accurately, and are able to work on a 24/7 basis. This provides for a big increase in organisational productivity, saves on paying staff for the routine tasks and leaves more resource for the actual delivery of care.

All this highlights a potential that cannot be ignored. The pressures on the health and social care sectors in the UK are increasing inexorably, and RPA can provide large savings in some areas while speeding up and strengthening many processes.


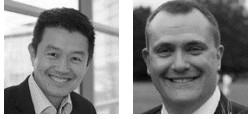





It is set to become an important element in the future of care.

**Blue Prism pioneered Robotic Process Automation (RPA), emerging as the trusted and secure intelligent automation choice for the *Fortune 500* and public-sector market. Blue Prism's connected-RPA supported by the Digital Exchange (DX) app store marries internal entrepreneurship with the power of crowdsourced innovation.**

**For more information visit [www.blueprism.com](http://www.blueprism.com) or to discuss how automation can help your organisation, email [Hamish Derrick](mailto:Hamish.Derrick@blueprism.com), account director, public sector at Blue Prism.**

## Speakers and their presentations

[\(Visit the Digital Health & Social Care event hub\)](#)

	<p><b>Technology Enabled Care in Norfolk</b> (<a href="#">Slides</a>)          Geoff Connell, CIO Norfolk County Council / immediate past president of Socitm and Sarah Rank, Adult Social Services, Norfolk County Council</p>
	<p><b>Intelligent process automation in health and social care – practical use cases</b> (<a href="#">Slides</a>)          Tiina Leivo, Head of Healthcare, MD, PhD, Digital Workforce</p>
	<p><b>How intelligent automation is improving operations</b> (<a href="#">Slides</a>)          Leo Tsuneda, Director of Health, Blue Prism          Neil Spencer, Client Executive, Enovation</p>
	<p><b>Social Care &amp; Health Collaboration – The Yorkshire and Humber Care Record and Harrogate Alliance</b> (<a href="#">Slides</a>)          Neil Bartram, Business Partner, Technology &amp; Change, North Yorkshire County Council</p>
	<p><b>Harnessing technology for care in Manchester</b> (<a href="#">Slides</a>)          Paul Teale, Lead Enablement Manger, Manchester City Council</p>
	<p><b>Predictive modelling for adult social care demand</b> (<a href="#">Slides</a>)          Carl Johnson, Information Analyst Commissioning and Procurement, Middlesbrough Council and Tom Knight, Director, Affinity Works</p>
	<p><b>Digital Social Care</b> (<a href="#">Slides</a>)          James Palmer, Programme Head Social Care, NHS Digital</p>
	<p><b>Learning from the LGA Care and Health Improvement Programme</b> (<a href="#">Slides</a>)          Mark Golledge, Programme Manager, Care and Health Digital Lead, Local Government Association and Abby Vella, Adviser, Care and Health Improvement Programme, Local Government Association</p>
	<p><b>CASPA Who, What and Why now?</b> (<a href="#">Slides</a>)          Simon Papworth, Founding Member, Care Providers Association</p>

## Our Partners



### Gold Partner

In this digital era where start-ups are constantly disrupting markets, only the most agile and innovative enterprises survive and thrive. At Blue Prism, we pioneered Robotic Process Automation (RPA), emerging as the trusted and secure intelligent automation (<https://www.blueprism.com/product>) choice for the Fortune 500 and public sector market. Blue Prism's connected-RPA can automate and perform mission critical processes, allowing your people the freedom to focus on more creative, meaningful work. More than 1,000 major enterprise customers leverage Blue Prism's digital workforce, empowering their people to automate billions of transactions while returning hundreds of millions of hours of work back to the business.

Blue Prism delivers automation and connected-RPA that frees up your people to create, build and innovate.

- Efficiency – Blue Prism digital workers automate your key operation processes around the clock with superior accuracy for increased productivity
- Connectivity – Blue Prism's connected-RPA opens up a whole new world of solutions as you digitise paperwork, forms and documents, add cognitive abilities via artificial intelligence (AI) and connect to the Internet of Things (IoT)
- Creativity – automation frees up time for your people to innovate by cutting out time spent on admin and data entry, ultimately giving your people more time to create and innovate for a competitive edge

### **Blue Prism Digital Workforce makes Health and Social Care efficient, patient centric, and more agile than ever before.**

The health and social care sector, like most today, relies heavily on data and holds very sensitive, personal patient information in multiple systems. Interoperability, security and full audit trails are just some of the reasons why Blue Prism Digital Workforce is the right solution for this sector. In order to ensure high quality patient care, digital transformation must take place. A Blue Prism Digital Workforce can help free up staff and is proven to increase job satisfaction and aid in staff retention. Our user-friendly functionality, mature and proven implementation methodology, and enterprise strength scalability means that the NHS, local authorities and care providers can experience a fast return on investment, greater efficiency and better collaboration around the people in their care. Today more than 40 trusts have come to rely on Blue Prism's connected-RPA.

Find out more about our sector offerings at [www.blueprism.com](http://www.blueprism.com).



## SME Partner

Affinity Works specialises in solutions for local authorities that turn data from local line of business applications and from open data sources into valuable insights. Our data hubs allow councils to collect and analyse data with engaging interactive dashboards that are available online on-demand. The benefit is greatest where partner organisations in health and in neighbouring local authorities share their data, facilitating wider cross region and cross domain analysis that lead to better market management and significant efficiencies.

To find out more visit: <http://www.affinityworks.co.uk/>

## Participants

### Where they came from

Abbots Care Ltd (x2), Achieving for Children, Affinity Works, Barnet CCG, Birmingham City Council, Bournemouth, Christchurch & Poole Council (x3), Brighton and Hove City Council and CCG, Care Software Providers Association, Colchester Borough Council, Doncaster Council, Dorset Council, Dorset County Council, East Sussex County Council, Essex & Herts Digital Innovation Zone, Hampshire County Council (x3), Haringey Council, Hertfordshire County Council, Kent County Council, Lambeth Council, Local Government Association (x2), London Borough of Camden NHS, London Borough of Hammersmith and Fulham (x2), London Borough of Haringey (x2), London Borough of Hounslow (x2), London Borough of Waltham Forest, Luton Borough Council & Luton CCG, Manchester City Council, Middlesbrough Council, Newcastle City Council, NHS Birmingham & Solihull CCG, NHS Digital (x2), Norfolk County Council (x3), North Yorkshire County Council, Oxford University Hospitals, Royal Borough of Kingston Council, South Gloucestershire Council, South London and Maudsley NHS Foundation Trust, Southend-on-Sea Borough Council, Southwark Council (x2), Surrey County Council, Sutton Council, Westminster City Council

### What they do

Administrator, Adviser – Care and Health Improvement Programme, Assistant Director of Customers, Digital & ICT, Assistant Team Manager, Assistive Technology Coordinator (x2), Associate Director of Finance, Business Architect, Business Improvement Manager, Business Relationship Manager, Clinical Lead Technology Enabled Care, Commissioning Lead, Darzi Fellow, Data Integration Project Manager, Digital Access Support Team Manager, Digital Design Manager, Digital Programme Manager, Director of Digital & ICT, Enterprise Architect, Founding Member, Head of Business and Technology, Head of IMT, Head of Integrated Care, Head of New Business, Head of Reablement, Head of Resources, Head of Service – Commissioning, Health and Social Care Integration Project Manager, Health Interventions Co-ordinator, ICT Change Programme Manager, ICT Group Manager, Informatics Manager, Information Analyst Commissioning and Procurement, Information and Guidance Team Manager, IT Manager, Lead Officer, Managing Director, Marketing Manager, Principal Officer, Principal Officer, Older People's Commissioning, Programme Head Social Care, Programme Manager (x3), Project Manager (x5), Psychiatrist, Senior External Funding Officer, Service Manager - Systems & Performance, Technology & Change Business Partner and TECHS development officer

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