



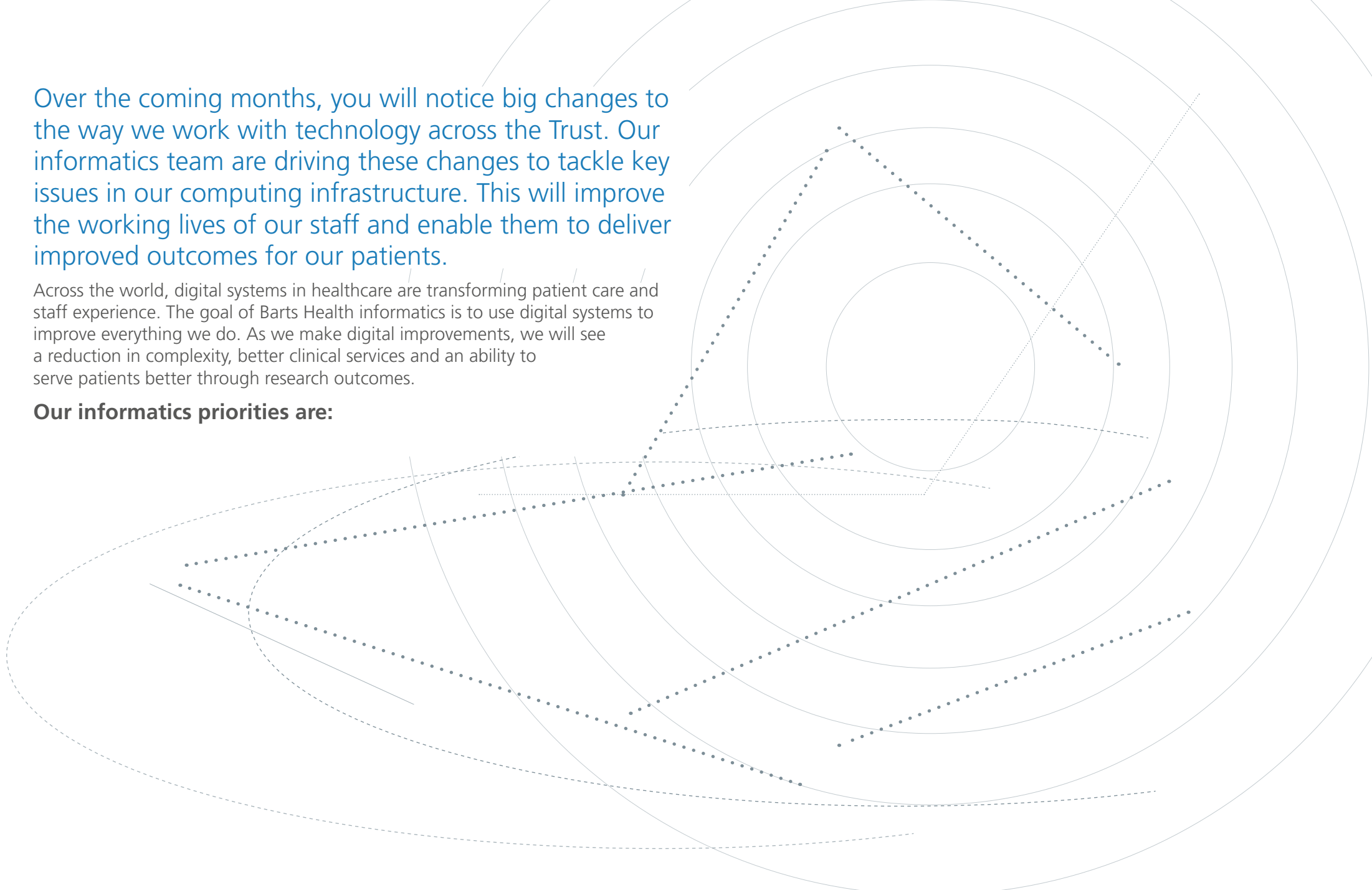
Informatics

Harnessing the power of technology
to improve patient care and make our
working lives easier

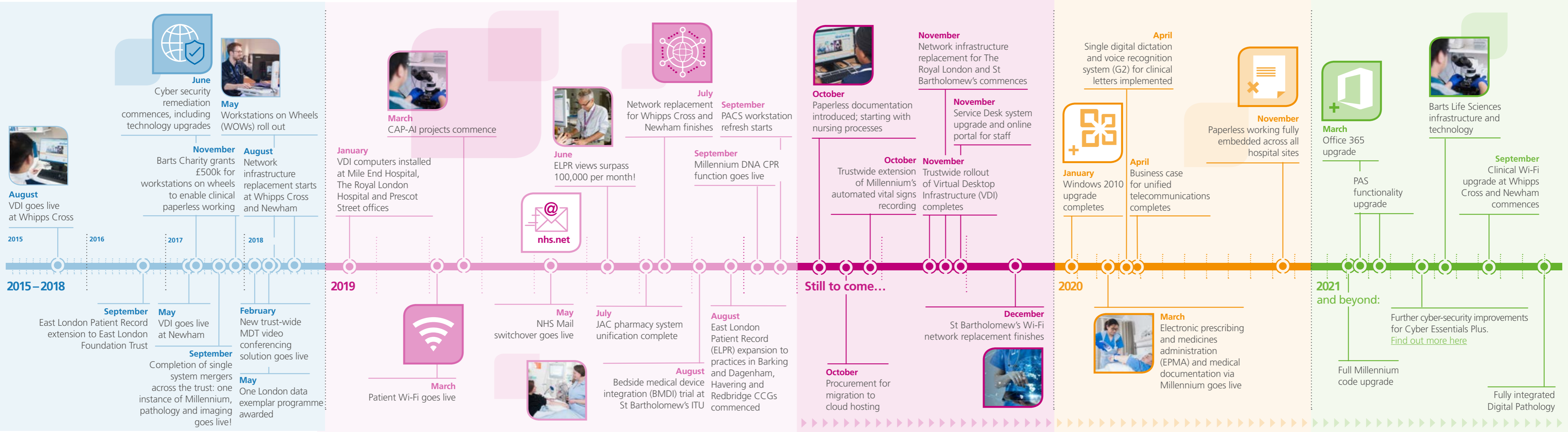
Over the coming months, you will notice big changes to the way we work with technology across the Trust. Our informatics team are driving these changes to tackle key issues in our computing infrastructure. This will improve the working lives of our staff and enable them to deliver improved outcomes for our patients.

Across the world, digital systems in healthcare are transforming patient care and staff experience. The goal of Barts Health informatics is to use digital systems to improve everything we do. As we make digital improvements, we will see a reduction in complexity, better clinical services and an ability to serve patients better through research outcomes.

Our informatics priorities are:



Informatics timeline



About our informatics service

What does the informatics team do?

The informatics team comprises both the Clinical Systems and ICT teams working together.

Our ICT service is largely focused on all the foundational infrastructure required to run hospital systems every day, like the network and security, datacentres, servers, PCs, telephony and printers. It manages the Trust's central service desk and end-user computer support.

The Clinical Systems team looks after the systems used in clinical settings, largely Millennium, and its connectivity to our imaging, pathology and several other clinical systems including voice dictation, eLPR, community EMIS and more. The team also covers application support including testing and change requests for Millennium.



Our informatics team

Over the next 5 years, business cases exceeding £20 million have been allocated for cloud hosting and replacement of our physical networks. This includes improvements to our WiFi for clinical use and developments in our patient record systems.

The informatics team has three focus areas, which are based on the mission and needs of the Trust: **a single systems approach, connectedness** and use of **information**.

Having single systems means one system and one patient record across all sites: *Millennium*, *Sectra (imaging)*, *WinPath (pathology)*, and *JAC (pharmacy)*.

Connectedness is about providing technology to staff for seamless provision of excellent care, and connecting with other service providers to share data. We will turn data into information and generate actionable insights for health professionals and



patients to conduct research, treat disease and maintain health.

We will attract patients to our Trust by having responsive services that are at the forefront in healthcare and national policies, including the NHS digital objectives from the [NHS Long Term Plan](#), [Personalised Health and Care 2020](#) and a [Paperless NHS by 2020](#).

What we've achieved to date

For Barts Health to deliver our ambitions of providing outstanding care for patients, we need robust and reliable infrastructure underpinning our systems, including staff devices, and a strong shared network between our hospitals and our local GP practices.

With Trust funding and grants from NHS England, the informatics team has already made important improvements to **cyber security** following the WannaCry cyber-attack of May 2017. Significant investment in infrastructure replacement has increased our resilience and stopped daily threats to our network. In addition, Barts Charity funded some new initiatives, including Workstations on Wheels and CAP-AI projects.

Following our Trust merger in 2012, the informatics team has **unified multiple versions of similar systems**, including Millennium, imaging, pathology and pharmacy systems, and over ten data warehouses.

There is now one instance for each of these systems using the latest versions, which means all health professionals now use the same patient record no matter what site they attend.

It's been a difficult journey with frustrations faced by all staff. The informatics team appreciates the patience of colleagues, as well as the assistance from staff who have led changes to our technology. Behind the scenes a quiet revolution is taking place with several improvements occurring in 2018-19 and many more to come!



Where we are now

Over the 2018-19 fiscal year, the Trust focussed on initiating infrastructure remediation and the management of core technology services. This included new models of maintaining and supporting:

- Network, security and patient WiFi
- Virtual Desktop Infrastructure
- Cloud hosting
- Support services for staff
- Delivery of statutory requirements such as NHS Mail.

The installation of **Virtual Desktop Infrastructure (VDI)** has been completed at Whipps Cross, Newham, Mile End and The Royal London Hospitals and corporate sites. Implementation at St Bartholomew's Hospital is currently underway. This means quicker log-in times, greater mobility for clinical staff and the ability to support remote access for staff working away from the Trust.

In early 2019, **patient WiFi** was upgraded in all hospitals, providing an

improved experience for our patients, and the migration of 20,000 accounts to NHS Mail (nhs.net) was successfully completed. Staff can now easily send secure emails which contain patient identifiable information to others who also use NHS Mail, utilising access to a national NHS Mail directory.

With a single unified instance of our Barts Health Millennium, sites can now view **patient records in real-time from any location**, irrespective of where the patient has come from or is being transferred to within the Trust. Millennium is our primary system for clinical care and the administration of patient care, and is used to improve patient safety through the review of online data. Consistency of terminology for problem and diagnosis listing within Millennium is improving. This will assist with handover, summary documents and messages to GPs and other NHS organisations. In cases where Millennium cannot provide a suitable solution within the clinical setting, our approach is a single system



integrated to Millennium, such as the imaging and pathology systems. In early 2019, the pharmacy systems were unified across sites and all stock management is now recorded and controlled once. **Digital dictation systems** will also continue to be rationalised, with G2 being rolled out in its latest version.

Recently, our **East London Patient Record (ELPR)** portal reached the amazing milestone of hitting over

100,000 views per month. ELPR is one of the UK's most advanced implementations of health information exchange, with sharing across our east London providers for over 200 GP practices, neighbouring acute providers (Homerton), mental health (ELFT and NELFT), hospice care and social care (London Borough of Newham) and community. We remain national leaders in achieving this scale of digital cooperation across such a diverse set of providers.



David Van Heel, Deputy Chief Clinical Information Officer, using a WOW (workstation on wheels).



Where we're heading

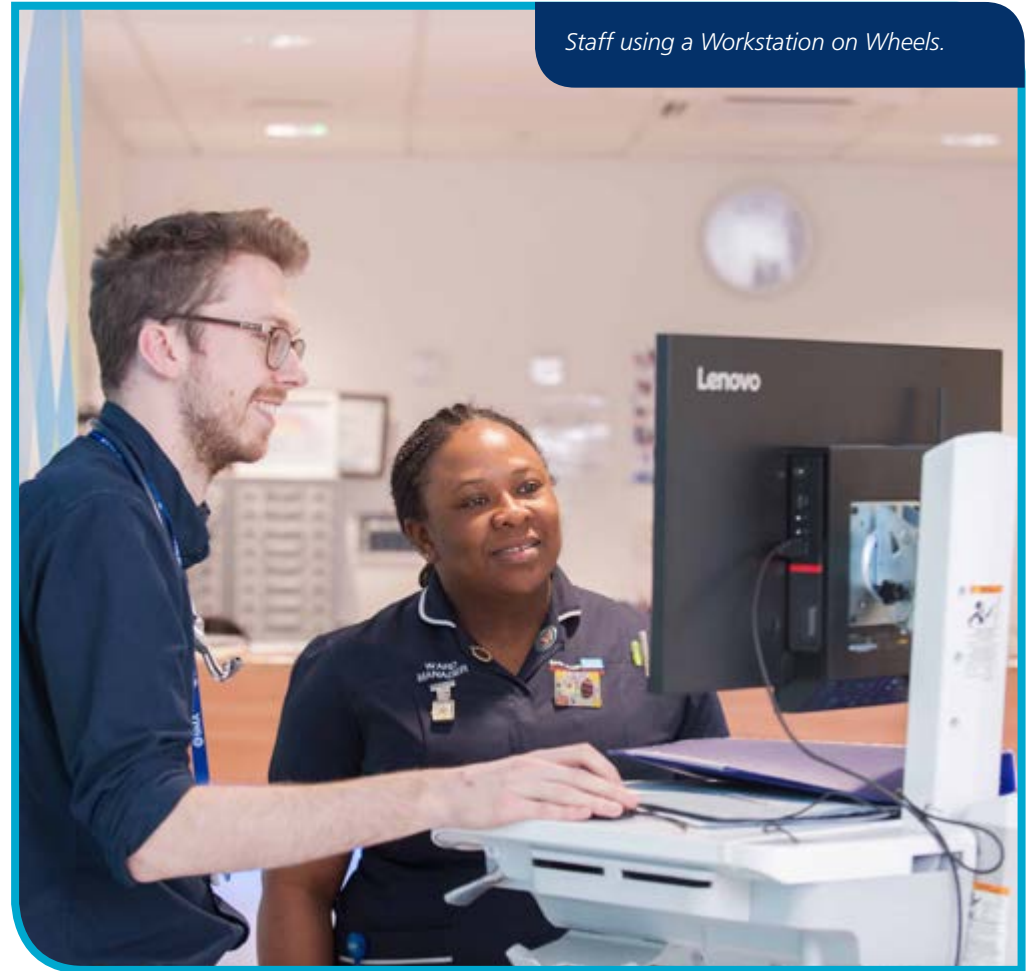
The future looks good; in the next three years Barts Health will have completed our VDI rollout, completed a full network replacement and upgraded our Service Desk to include a self-serve portal for staff.

Big things are planned in 2019-20 as all hospitals become **paperless** and record all clinical data electronically. Starting with the migration of nursing documentation to Millennium in autumn 2019, followed by electronic prescribing, medicines administration and physician documentation in the spring of 2020. This will allow detailed health records to be shared between medical practices and provide staff a more structured workflow. It will also introduce barcode matching for patient medication, paperless referrals, new patient tracking and alerts. All of this will quickly improve the quality of care we provide to patients.

These changes will require commitment from all staff to learn

how to use new technology and make the switch to digital. Our digital tools will provide automation, calculations, alerts and warnings to staff, ensuring, for example, no missed medication doses. The rollout will also include a further deployment of computers for bedside clinical use. Ultimately, these changes will provide our staff with more time to spend providing an outstanding level of care to our patients.

With the continuing support of our local partners and commissioners, the **East London Patient Record is being extended** to GP practices in Barking and Dagenham, Havering and Redbridge CCGs, and other HIEs across London. This means we will soon be looking beyond the boundaries of east London to continue our journey of delivering patient information, no matter where they find themselves needing healthcare.



Staff using a Workstation on Wheels.

Replacements of the main network across the Whipps Cross and Newham Hospital sites were completed in 2019 and deliver infrastructure stability and improved security. An additional business case to replace The Royal London and St Bartholomew's Hospital networks has also been approved, as well as staff WiFi upgrades for all sites.

Our **Barts Life Sciences** programme combines research, innovation and technologies to transform health and care services. It is the space where research, health and industry come together to spark new ideas and innovations in a powerful creative environment. As an enabler to Barts Life Sciences, the Trust's longstanding education and research collaboration with the Queen Mary University of London medical school is strengthening through joint informatics and data programmes. This includes working with partners to enable data sharing to support research for the benefit of providing better patient care.

Our size and scale means others will look to learn from us, and contribute to greater gains with forays into research and population health initiatives, which will in turn add to the improvement of patient outcomes in east London. Fully utilising new technology systems requires departments, teams and individuals to adopt and embrace electronic ways of working. We are making good progress and have already begun to see significant clinical and operational benefits. Barts Health is now on its journey of being recognised as a leader in digital ways of working.



I want to say **thank you** to all our informatics teams and colleagues who are with us on this permanent journey to improve Barts Health. We want to be enablers of the care that takes place here every day and we thank the teams who help make it happen, as well as the ones who help support it.

Sarah Jensen,
Chief Information Officer



Charles and Sarah



Digital care **really matters to our patients.** It is the way that patients and their families can use hospital information for looking after their health. It is everyone's responsibility to make great use of clinical IT systems.

Charles Gutteridge,
Chief Clinical Information Officer



The Barts Health group:

Our vision is to be a high-performing group of NHS hospitals, renowned for excellence and innovation, and providing safe and compassionate care to our patients in east London and beyond. We aspire to achieve this in everything we do, by living our **We Care values** of being welcoming, engaging, collaborative, accountable, respectful and equitable.

As medicine advances, health needs change, and society develops, the NHS has responded with an ambitious national programme to future-proof our health care system over the next decade. The Barts Health group of hospitals is playing a major part in that long-term transformation by working with local partners.

We are guided by the five principles outlined in our clinical and organisational strategy for 2017-21, Sustaining Safe and Compassionate Care. As we evolve our group operating model, and its network of advisory clinical boards, we are constantly reviewing our strategy for developing services and sites to sustain high standards. The outcome is an emerging suite of strategic delivery plans setting out our medium-term goals in eight areas that are critical to the provision of modern healthcare – quality, people, finance, transformation, informatics, estates, inclusion, and research. Each of these documents acts as a bridge between our over-arching group strategy and our annual integrated operating plan.



*Alwen Williams,
Group Chief Executive
Officer, Sarah Jensen,
Chief Information
Officer and Ralph
Coulbeck, Group
Director of Strategy*

Contact the ICT Service Desk:

For anything urgent, please call
020 7377 7680

For non-urgent issues and change requests please email
ICTServiceDesk@bartshealth.nhs.uk

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