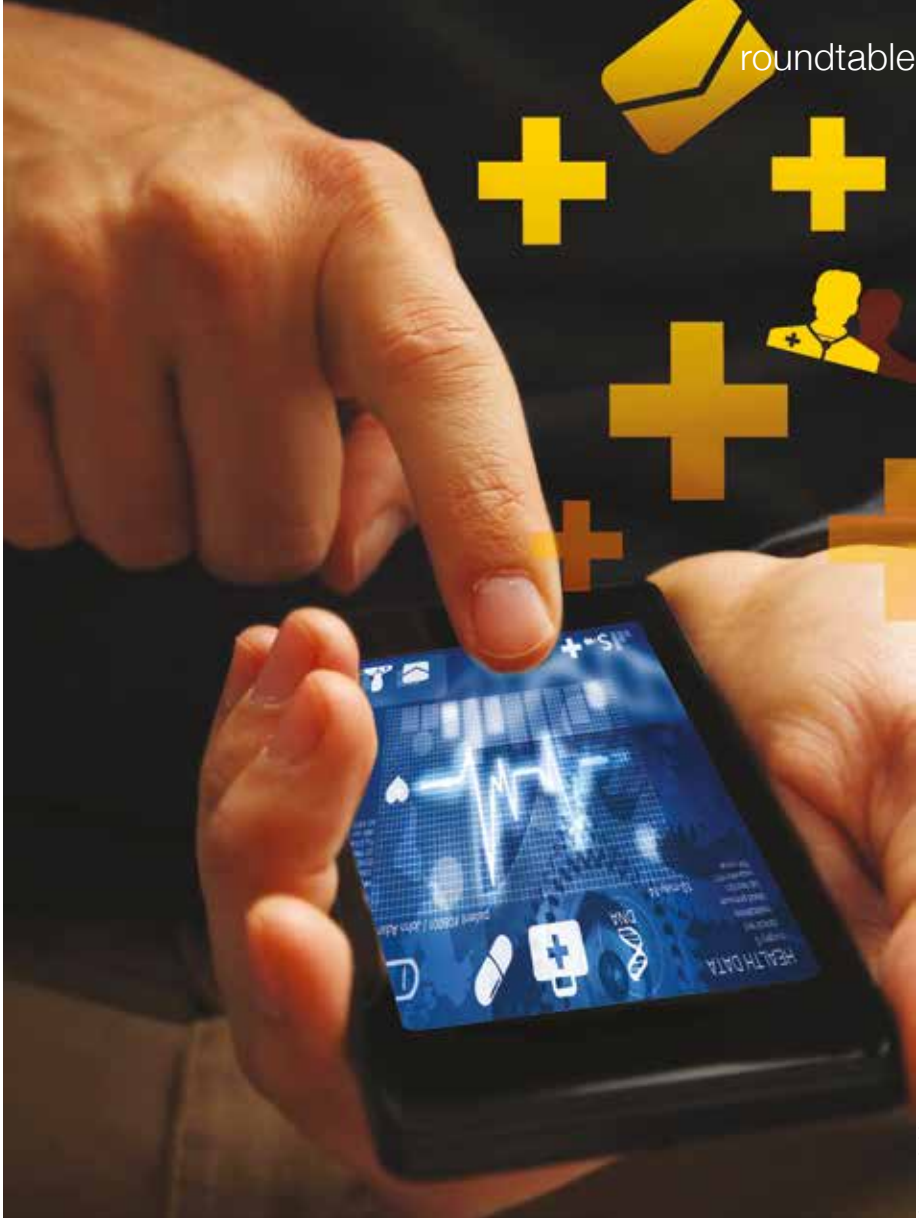

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On the record

Despite broad agreement that electronic patient records are key to transforming healthcare, fully implemented examples are few and far between. An HFMA roundtable explored the issues. Steve Brown reports

HFMA ROUND TABLE

Electronic patient records (EPRs) have the potential to bring huge benefits to patients. This was the conclusion of a Commons Health Committee report. It said EPRs could speed up clinical communication, reduce errors and assist doctors in diagnosis and treatments, while supporting patients to have more control over their healthcare. The trouble is, the committee said this in 2007. Eight years on, progress towards local adoption of EPRs – and towards an ambitious target for going paperless by 2018 – has been slower than anticipated.

In that time, the National Programme for IT has been dismantled – widely seen as yet another example of the public sector's poor handling of major IT projects – and the focus has switched back to local solutions. Some trusts are still working with legacy systems from the national programme, while others look to make their first move away from more traditional patient administration systems.

In June, the HFMA in conjunction with IT services and technology provider HP, brought together trust and foundation trust finance directors to discuss the role of IT – and EPRs in particular – in supporting the transformation of healthcare services.

HFMA director of policy and technical Paul Briddock, who chaired the event, said EPR procurement and implementation was a key NHS issue. An HFMA survey of 70 finance directors, undertaken ahead of the roundtable, found that just over half their organisations had an EPR in place (18%) or partially implemented (35%). More than half of the rest planned to procure a system in the coming two years, while a third of them had procured but not yet implemented. Just 3% had no immediate plans for an EPR.

'The survey also told us that overwhelmingly finance directors see EPRs as vital to the transformation programme,' he said. 'They are key to meeting the current and future service and financial challenges. So we need to find ways to understand how we get the maximum benefits out of these systems. We need to recognise that organisations are all different – and they need to understand how EPRs will deliver benefits locally. But we also need to share good practice and the easy and not-so-easy wins that these systems can facilitate.

'We must also recognise that, whatever the perceived benefits, we need to be able to invest in these systems – and that is getting harder and harder in the current financial environment.'

The directors at the roundtable, whose organisations are at different stages in implementing EPR solutions, were similarly united around the patient benefits of storing and sharing data digitally. They agreed there should be significant financial benefits, but the focus had to be on how the benefits were realised and how these benefits could be used to develop future business cases.

The directors all stressed that EPR was no magic bullet to cost improvement – savings would not appear simply by switching on new systems. Instead savings would flow from redesigning pathways and processes. And this redesign would be enabled by better data flows and new systems.

Realising benefits

Janet Perry is director of finance at Barts Health NHS Trust, which uses the Cerner Millennium EPR across its five hospital sites. She cited the potential patient benefits – reducing avoidable harms and gaining system efficiency more widely – but noted that it is often hard to fully measure and understand these efficiencies. And she questioned whether the financial benefits of EPRs were always realised. 'If someone goes to a high-street bank, it costs £4 for a transaction; if a

Participants

- Paul Briddock, HFMA (chair)
- Mark Axcell, Dudley and Walsall Mental Health Partnership NHS Trust
- David Jago, Liverpool Heart and Chest Hospital NHS FT
- Janet Perry, Barts Health NHS Trust
- Suzanne Tracey, Royal Devon and Exeter NHS FT
- Sarah Truelove, Royal United Hospitals Bath NHS FT
- Tony Whitfield, Leeds Teaching Hospitals NHS Trust
- Clifford Harris, HP
- Mathew Llewellyn, HP
- Peter Thackery, HP

person banks online, it costs just 4p,' she said.

There was consensus that benefits realisation had to be a specific focus for EPR projects, so the potential benefits needed to be identified upfront, the delivery process properly managed and the actual benefits recorded.

The Royal United Hospitals Bath NHS FT implemented its Cerner Millennium system as part of the national programme and is moving steadily towards more comprehensive implementation. It went live with Cerner's maternity system earlier this year, will switch to a new data centre over the summer (after the end of its first contract term) and will upgrade to the new software release in November. Finance director Sarah Truelove said the trust was also on the verge of going paperless in outpatients, with all clinic letters sent electronically to GP systems.

But that alone won't deliver savings. 'We need to challenge ourselves and our services to ensure we maximise the benefits. We've taken out six whole medical secretary posts on the back of the outpatient letters change,' she said. 'But you do need to push the changes through. If you are going to get into the clinical processes, you need to get the staff time out or explicitly agree what other patient benefit that time will deliver.'

Suzanne Tracey, finance and business development director at the Royal Devon and Exeter NHS Foundation Trust, agreed that while there is an almost inevitable preoccupation with the system, the focus had to be on the redesign of clinical processes. Then the issue becomes how the system can support the delivery of these new models. Her trust has recently approved a full business case to implement an EPIC EPR. 'The system itself won't realise the benefits and savings. It is how you use the information to support a change in process,' she said.

But with hospital costs dominated by staff budgets, reducing costs (rather than increasing income) is likely to mean staffing reductions or skill mix changes. Ms Tracey says this can be difficult to realise at the micro level – in individual wards, say – as other factors (such as nurse-patient ratios and junior doctor rotas) can be a constraint. But it can be achieved at scale.

The Royal Devon business case is in part built on realising efficiencies equivalent to two whole wards. 'This will be driven by reduced length of stay on the back of improving patient flow,' she said. 'The benefits realisation is crucial, because without it all you've got is increased cost. And it needs to be tracked really closely.'

Janet Perry

Sarah Truelove

Liverpool Heart and Chest Hospital NHS Foundation Trust runs the Allscripts Sunrise EPR system across its 218-bed specialist hospital. Finance director David Jago stressed that an EPR was just a starting point in the journey towards better value, not the destination. 'An EPR won't reduce length of stay – that will be delivered by rules and alerts,' he said.

A classic reason for patients staying longer than necessary in hospital is that their take-home drugs aren't ready on discharge. But patient flow modules can provide alerts to doctors in advance to ensure the medications are lined up.

Again, compliance is key and organisations must ensure that departments and wards don't develop ways to work around system features.

Mr Jago said the value of EPRs came from using them to support revised workflows, rather than digitising existing ones. For example, there can be quick wins from developing predefined order sets for areas such as diagnostics and pathology tests.

'From some simple service lines, where you've got compliance – which is really important – we've taken out £300,000,' he said. The trust can also now run reports on compliance by different doctors to create dialogue and push for greater consistency on ordering where appropriate.

There was agreement that capturing the opportunities for improved processes and reduced costs would be helpful across the NHS, although not all the benefits could be captured in financial terms. An article in the US HFMA's magazine *HFM* recently underlined that this is a global issue. *Determining the return on investment of clinical care improvement* called for organisations to consider 'softer' returns when considering clinical care technology investment. 'Many of the benefits generated by clinical

technology are difficult to measure, with bottom-line numbers rarely reflecting the real value that is being delivered,' it said.

Ms Truelove said Bath was working with Cerner on benefits realisation – in part for its own purposes, to inform business cases going forward, and in part to support the development of business cases by other organisations. The trust has identified a member of staff responsible for each benefit – a step that hadn't been taken under the national programme – to provide greater assurance around delivery.

The directors said there would be benefits from a wider sharing of business cases among NHS bodies. Ms Truelove said business cases had been shared locally as part of the process of leaving the national programme. 'But the NHS is not generally good at this,' she said.

System vendors can be another good source of potential benefits to help establish business cases, drawing on practical experience of implementing systems elsewhere in the NHS and internationally. Tony Whitfield, director of finance at The Leeds Teaching Hospitals NHS Trust, said this had been the case at his former organisation, Salford Royal NHS Foundation Trust, when it implemented its new EPR. After a thorough competitive process, Allscripts emerged as the preferred supplier.

'US vendors initially identified lots of income generation benefits, which aren't necessarily directly relevant to the NHS system,' he said. But he added there was lots to learn on pathways. 'In the main we looked at how we could make processes quicker and minimise the time when patients are simply waiting for things to happen.'

Mark Axcell is finance director of Dudley and Walsall Mental Health Partnership NHS Trust, which also runs the Allscripts EPR. Reinforcing the need to work at delivering improvements post implementation, he said the EPR has been really successful with community teams, but is yet to be fully rolled out in other areas.

Community teams are keen to take the EPR to the next level – supporting agile working with wifi-enabled handheld devices and using more applications to release more time for patient care. But with new mental health waiting time targets and cluster-based commissioning, the trust is keen to get the benefits rolled out across all services to start using the system's capabilities to change pathways and improve care and costs.

Mr Axcell said there were also differences between teams delivering the same or similar services using the same system. 'Some are allocating caseload to people using the system, taking account of different factors including location. Others are using other methods to assign the next service user to a caseload,' he said. 'So it is important we take the best practice from our teams alongside the system's capability and roll this out to drive improvements in performance.'

There were a couple of warnings over business cases. Mr Jago said he had read board papers where IT directors had overegged the benefits to justify funding, which was potentially setting programmes up to fail. Realism is needed.


Suzanne Tracey


David Jago


Peter Thackery

HFMA ROUND TABLE

'It has to be clinically driven, but if you redesign the clinical processes you'll get savings,' he said, underlining the importance of having clinicians involved in the procurement decision. 'Just don't expect the savings on day one. You will feel pain in the first six to 12 months, you will lose productivity and you will lose efficiency.'

Mr Whitfield said that changing pathways would also bring organisations up against issues with the payment system. Organisations would have to deal with some payment system and financing challenges if they wanted to get costs out while keeping services sustainable. National tariff approaches won't necessarily be available to support the replacement of outpatient appointments with technology-enabled solutions, for example.

And if community practice nurses are able to reduce three house visits to one because technology enables them to do some of the paperwork and create care plans on site, rather than back at the office, then commissioners may start expecting changes in what they pay. He said these issues needed to be tackled head on if full benefits were to be realised.

Ms Tracey added that changes to the payment system could help encourage faster redesign of services. For example, a capitation funding model could encourage providers to make greater use of Skype-like video consultations.

All the directors agreed that the NHS was only scratching the surface of the potential benefits of EPRs. Mr Axcell said Dudley and Walsall expected agile working, supported by mobile technology, to increase (potentially significantly) some community teams' patient facing time.

Patient interactions – enabling online booking of appointments or the ability to take an appointment at short notice – could also have a massive impact on productivity. And decision support for clinicians could improve patient safety, expose unnecessary variation in care and provide vital support to junior doctors without direct consultant presence.

Ms Truelove said decision support could also have a role in primary care. It should help underpin GP decisions around the most relevant services for onward referral, but also help explain to patients why a referral in a specific case isn't appropriate.

Mr Jago said clinicians clearly needed to have the ability to make patient-specific decisions and that some variation was always appropriate, but

that EPRs should reinforce a default position of 'explain or comply'. Referring again to test ordering, he said that predefined order sets helped clinicians steer a course between too few tests (potentially unsafe) and too many (wasteful). EPRs should also provide a tool for the executive team to gain assurance that they are delivering safe services, he said.

HFMA ROUND TABLE

There was recognition that all business cases had to be localised and take account of local context. However the directors all agreed with HP's UK practice lead for health and life sciences Peter Thackery. 'Executives of trusts could benefit from examples of best practice to help build business cases,' he said.

Choice and costs

All the trusts at the event had an EPR solution. Some had had one in place for years, others were just starting to implement. But, based on their experience, the directors offered thoughts on the procurement approach and system choice.

Ms Tracey said the Royal Devon was moving away from a 27-year-old PAS system that desperately needed replacing. 'We needed something to get us into the next generation of systems to enable not only acute pathway transformation but end-to-end, health economy-wide pathway change,' she said.

Its EPIC system, for which a business plan was recently agreed, provides a fully integrated, comprehensive EPR, as opposed to a core system that interfaces with existing departmental modules. 'We couldn't demonstrate how we could drive sufficient benefits with a modular/interface approach,' she said. 'EPIC looks like it will streamline the whole process.'

But the fully integrated approach will require the trust to make significant investments – just when the whole service faces significant financial pressures. However, if organisations are starting to fail financially, then this investment may prove to be part of the solution to financial failure, which in itself would require cash support.

Mr Thackery underlined that different solutions would suit different organisations. 'Every trust is so different,' he said. 'They have different starting points and different challenges.' The challenge facing suppliers was to provide the relevant support to match an organisation's circumstances. This could involve IT outsourcing, IT enablement, infrastructure, integrating with best of breed systems or full system replacement. For example, HP offers its own EPR solution, developed and used widely in the Spanish healthcare system, but now being marketed in the UK. But it also works with NHS trusts to provide technology and services that support other vendors' EPR systems.

Mathew Llewellyn

Tony Whitfield

"An EPR should be like piped oxygen, an intrinsic part of care. If we don't have good systems, integration of services will struggle to get past warm words"
Tony Whitfield

Directors agreed that while the system and its features are important, the supplier is important too – and good relationships with the supplier can lead to faster realisation of the maximum benefits and the avoidance of common pitfalls.

Mr Jago said that while suppliers may be trying to sell services and add-ons, trusts also had to be 'intelligent clients' and take advantage of suppliers' broad experience implementing and using these systems across the globe. 'We wanted to do things like greater use of free text – against our supplier's advice – and we are paying for that now,' he said. 'They have good experience and the whole NHS should understand the value of using structured data sets as much as possible.'

Ms Perry highlighted the implementation knowledge already in the NHS, and the potential system-wide benefits from experienced trusts sharing their knowledge with those planning on implementing an EPR system. The earlier this collaboration took place, the greater the potential benefits for all trusts involved.

Mr Axcell said there was a specific challenge facing mental health trusts. 'In our experience, there are only a small number of main suppliers who see mental health as a priority. You will struggle to find a large supplier focusing solely on mental health, but it is important you have someone who understands your service well and how it is delivered. For example, as part of a recent upgrade, we had lost some functionality that was needed for clinicians – this has now been rectified. But suppliers need to understand a service's specific needs,' he said.

Leeds Teaching Hospitals was the only trust at the event that had built its own system. Mr Whitfield said some of the work done locally had been 'stellar', but he was conscious that there was a trade-off in that 'we are in a user group of one.' (In fact, hospitals across West Yorkshire also use the system to support their cancer patients.)

However, he suggested that there could be benefits in multiple hospitals across a health economy choosing the same system. 'This could have major benefits in terms of junior doctors not having to learn and remember how to operate different systems,' he said, adding that the same was true for agency nurses with potential productivity and safety benefits.

Mr Jago endorsed this, pointing out that Liverpool Heart and Chest was now training a cohort of agency critical care staff to use its EPR so that if/when they take a shift at the trust, they are familiar with the system.

Returning to costs, Ms Tracey said that about a third of Royal Devon's total costs would be spent on implementation. Mr Jago added: 'The ongoing revenue consequences of EPRs should not be under-estimated … We implemented successfully and raised expectations, but then realised we had a work programme that would take years to deliver.'

Training was not a one-off activity, he said. As well as new staff, staff would need refresher courses. For example, there was an initial tendency for consultants to rely on junior doctors to use the e-prescribing system. But as the juniors moved on, it was realised the consultants needed retraining to be able to use

the system. And while generic training was a basic requirement, tailored training programmes were needed to get the most out of the system in different areas. 'Don't undersell the training costs in your business case,' Mr Jago advised.

HP health sector sales director Clifford Harris said that with the new style of IT, the NHS procurement process appeared 'antiquated, even compared with the rest of the public sector'. The process was fragmented – across the whole system and within individual organisations – often with individual solutions for different service areas. Mr Whitfield suggested that sometimes the finance community had contributed to the fragmented approach to IT investment – making small amounts of funding available several times, rather than taking a more holistic or integrated approach.

'If the hospital generator packed up, the board wouldn't hesitate to replace it tomorrow, but I don't think we have the same attitude towards IT systems and their need for reliability,' he said.

Good practice

Mr Briddock asked the directors to identify good practice to ensure organisations got the most out of their systems. There was consensus that even for basic operation, EPRs had to be built on good core IT infrastructure, including good hardwired and wireless systems – even more so if trusts wanted to maximise the functionality of the new systems. However, directors repeated the over-riding message was to ensure the technology was used to support the way trusts wanted to work, not current processes. 'You have to start with the processes you want,' said Ms Tracey.

Mr Whitfield said fast implementation of the EPR at Salford had encountered a few teething problems. 'But in most cases, this was pushing out some of the weaknesses in our other systems, rather than being problems with the new EPR.'

The directors also stressed the importance of clinical engagement, both to procurement and implementation. 'At Salford, the final decision [between different systems] was effectively made by the clinical leaders,' said Mr Whitfield. 'We treated it like we would if they were buying an operating table or some other healthcare-related asset to help them deliver care. And although it was an IT project, there was a real focus on how the system would make clinicians' jobs easier, rather than on the technical aspect.'

At Royal Devon, clinicians of all disciplines were heavily involved in a nine-month due diligence exercise to finalise the EPR decision. 'Again, the point was: how do we change the pathway and how will the system support that? The board didn't want to approve the EPR and then find that clinicians were not bought into either the pathway change or the system that would support it,' said Ms Tracey. 'In fact, the clinical engagement and support has given the board confidence to proceed.'

Mr Jago added that Liverpool had undertaken an exercise to ask clinicians how an EPR could help them perform better and these were then captured and used to set the workflows as part of the technical implementation.

The directors also stressed the importance of capitalising on any clinical IT champions. A clinician leading by example, using the EPR's functionality to improve care and visibility, is likely to have more impact than management calls for clinicians to adopt new processes.

But 'non-zealots' – those not interested in IT – were also important. Mr Whitfield said that if you can convert these staff to the new approaches, you can really 'start to win hearts and minds'. 'They don't have to be interested in how it is done, but if you can demonstrate that it is safer for patients or makes their job easier, they can broaden adoption.'

There was agreement that expectations should be managed. Again, this linked back to being able to resource the implementation stage so staff had confidence the benefits would be realised.


Mark Axcell


Clifford Harris

Partial functionality could also raise expectations for further transformation and investment. Ms Truelove said Bath's system upgrade at the end of this year would need more investment in infrastructure to realise the added functionality, particularly use of mobile devices (the current system largely relies on traditional PC interfaces based on nurse stations).

Ms Perry said organisations should ensure they future-proofed their investments, so that systems weren't out of date by the time they were implemented. 'Given the constantly changing context in which these systems work, it is important we use agile development techniques to allow organisations to remain flexible.'

Towards the end of the debate, the directors turned attention again to the difficult subject of funding. Ms Tracey suggested Royal Devon's EPIC implementation would require significant levels of borrowing, for both capital and revenue purposes, over the next seven years. This was yet to be finalised and the current worsening financial position facing most trusts made funding and borrowing more complicated.

Mr Whitfield insisted EPRs were the foundations for transformation of healthcare delivery – enhancing safety, providing better visibility of activity and facilitating decision-support. And without transformation, the £22bn efficiencies being targeted by the NHS over the next five years would be impossible to deliver. 'An EPR should be like piped oxygen; an intrinsic part of care delivery,' he said. 'If we don't have good systems, integration of services will struggle to get past warm words.'

Mathew Llewellyn, director of sales at HP Financial Services, said many trusts appear to be struggling with the migration to 'paperless delivery of healthcare'. Challenges include significant upfront investment, long payback and management of end-of-life legacy systems. 'Trusts may benefit from partners who can help them build investment strategies and solutions to enable them to smooth the investment bubble, deliver flexibility to benefit from latest technological developments and securely and environmentally dispose of legacy systems, possibly even realise value from them,' he said.

Ms Tracey said loans via the Independent Trust Financing Facility were likely to remain the cheapest form of raising finance, but that access was less straightforward as organisations' finances deteriorated.

Mr Jago added that commissioners must be involved in supporting health economy-wide transformation, including discussion on how transformation funds are best used. 'This is not just a provider challenge – it is for the whole health economy – and they need to be at the table in discussing funding decisions,' he said.