A world-leading pathology laboratory in Gateshead is showing how pathology can contribute to the wider service transformation challenge, improving quality while reducing costs. Steve Brown reports

path to transformation

Nearly a decade ago a national review of pathology services suggested that consolidation of hospital run laboratories could improve service quality, capitalise on diagnostic innovations and save up to £500m a year of total costs of £2.5bn.

Given the potential benefits outlined by two reports from Lord Carter, it is surprising there has been limited movement towards the recommended consolidation. However, one area has definitely taken the advice to heart and centralised the cold pathology services from three large hospital trusts in a single site.

South of the Tyne and Wear Clinical Pathology Services Centre opened in June last year, bringing together pathology services for Gateshead Health, City Hospitals Sunderland and South Tyneside NHS foundation trusts. It is an impressive state-of-the-art facility, located at Gateshead's Queen Elizabeth hospital, that fully exploits modern technology and automation and is on course to be profitable by its third year of operation.

Gateshead chief executive Ian Renwick cites the Carter findings as part of the case for change on pathology. But it was also part of a local joint initiative – 'Accelerating the bigger picture' – under which the three providers targeted £220m of savings over several years, in part by taking a network approach to some services. Stroke, vascular and community services were explored but, with the Carter review in mind, pathology was seen as very practical candidate.

'There was lots of enthusiasm to parachute pathology in as one of our work streams,' Mr Renwick told an HFMA site visit, organised with support from Roche Diagnostics by the HFMA FT Finance Faculty, in May. The starting position was three independent laboratories delivering traditional pathology services – histopathology, haematology, biochemistry and microbiology – to national standards. 'They were doing the same things, but in slightly different ways, with different kit and IT platforms,' Mr Renwick said.

The new model was quickly agreed – consolidation to a single site for the cold labs (non-urgent tests) and hot pathology (tests needed back within 90 minutes) done locally at each hospital. But with 'each pathology team believing it provided the best service to build on', there was less consensus about where to locate the service. The trusts addressed this by parking the issue of location at the outset.

They put together a programme board that had equal representation from the three bodies (not weighted to reflect the different sizes of organisation) and began what was to become a four-phase process.

Renwick: 'We've proved what is possible'

In phase one, the focus was on agreeing what an ideal pathology service would look like. This took about a year and established the single site preference. Phase two took the project to outline business case – establishing 13 different work streams. IT was a particular challenge with the need to communicate with every local GP practice and clinicians wanting to be able to see results whatever site they were at.

Through the process to this point, the project continued to be site-agnostic. But the tricky subject of location was broached in phase three as the organisations moved towards full business case. This was possibly the decision that would have the biggest impact on staff and the project team was keen to ensure there was no suggestion of bias.

In total, 26 options were considered – too many, the project team agreed in hindsight. But the Gateshead site came out on top, both before and after a complex weighted scoring system was reviewed and tweaked.

Perhaps a key factor that made Gateshead the preferred choice was the availability of a suitable building and site at Queen Elizabeth – an old warehouse that had housed a former laundry service. This had several practical advantages over trying to expand existing lab facilities or look at greenfield options.

Steve Jamieson, director of corporate services and estates, said improved quality and supporting transformation remained the key goals. But some 'financial realities had

landed' too and the NHS's deepening financial challenges meant the project was also being relied on to deliver some £3m of savings.

The full business case was approved and signed off by each separate trust board in July 2012 and phase 4 (implementation) could begin, including the difficult process of appointing staff – the new structure needed 36 fewer whole time equivalents.

However, Sarah Kilner, senior human resources manager at Gateshead – recruited specifically to oversee the HR for the pathology service – said the process was more complicated than simply cutting staffing numbers. 'Some departments had insufficient staff, others too many,' she said. 'There were banding differentials for similar posts. And even though staff were on the national Agenda for Change pay structure, there were three different sets of terms and conditions, particularly around issues such as pay protection.'

Limited redundancies

In fact, the process was more successful than expected, with only small numbers of redundancies – incurring 35% of the anticipated costs (including voluntary severance schemes). There were also single-figure numbers of people on pay protection having been recruited to a post at a lower band.

Ms Kilner said the success owed a lot to putting the focus on HR issues – hence the dedicated post – and good working relationships with the three relevant unions.

Flexibility was also important. For example, staff were transferred under TUPE arrangements with their existing terms and conditions but were/are able to choose to move to Gateshead contracts.

The consultant workforce was treated differently to reflect different starting positions and working practices. In some services, such as histopathology, consolidation had already taken place. Planned retirements of clinical consultant scientists in biochemistry also meant recruitment to the new service was needed, rather than transfer.

But in other cases, transfer didn't make sense. Consultant microbiologists, for example, are more tied to the clinical aspects of their host organisations than the laboratories and so have remained with their original trusts.

While the project was always quality-driven, finance was also vital. This meant:

- Understanding existing costs (recognising all three labs' budgets overspent in 2011/12)
- Taking out costs
- Ensuring an equitable split of future costs between the three providers.

Julia Pattison, finance director and deputy chief executive at City Hospitals Sunderland,

"We want the equipment to be self-diagnosing and fault tolerant. This will reduce maintenance time and help us predict problems across sites"

Chris Charlton

was the lead finance director for the project. She told the HFMA group the final savings would be £2.4m by the end of the process, allowing for the significant investment in automation.

Costs, in fact, go up for the first two years, with the service moving into delivering the savings in year three. Securing £12m of public dividend capital funding has helped support the capital costs.

Block contracts are in place, with the costs shared on the basis of test activity at the start of the project. Sharing covers all aspects of expenditure – so redundancy and pay protection costs have been shared regardless of the original employer. However, the plan is to move services onto a tariff basis with tests as the currency – 70,000 tests take place per day, so getting the price right will be important.

Alison Blake, divisional finance manager at Gateshead has led the cost modelling work to inform that tariff development. She said the trusts wanted the most granular currency possible, but this meant full understanding of activity and current costs, recognising that there were different ways of counting and defining tests across the three sites.

A weighting system has been developed to reflect the relative costs of different tests, although Ms Blake said that in future the trusts hoped 'to be able to pinpoint consumables to specific tests using Roche data'.

These weightings have been refined after looking at the impact of applying the test prices to activity in 2012/13 and 2013/14. Shadow prices will be released this October ahead of a full tariff implementation in 2016/17.

The big opportunities for savings, according to Ms Pattison, come from areas such as licence costs, standard ways of working and elimination of waste – the whole lab has been set up on Lean principles.

These benefits will step up this year as the staffing model is fully implemented, some one-off costs end – a delay to the introduction of a single laboratory information system has meant some duplicate processes in the central lab – and further opportunities are taken for consolidation around non-pay.

The technology is key to transformation. The equipment and support comes via the Optimall managed service from Roche Diagnostics. Roche provided services across the sites beforehand, so it helped equip the lab while also running the former services.

However, the efficiency and technology challenge does not stop with the opening of the ground-breaking facility. Pathology services manager Chris Charlton, who has been a key figure in all strands of the project from day one, said that – like other service areas – pathology needs to keep contributing to the delivery of better outcomes and lower costs. 'This just gets us to the start line,' he said, adding that the service was challenging its suppliers for further improvements.

These are likely to include more real-time monitoring of workflow, enabling the service to respond to avoid breaches of key performance indicators and better match capacity to work. A 'live view' dashboard is being developed by Roche showing what different test lines are doing and what is coming in from GPs and other sites.

24/7 working

More 24/7 working would also improve productivity and support patient care, and there are plans to review pack size, auto-loading and reagent stability. 'We also want the equipment to be self-diagnosing and fault tolerant,' said Mr Charlton. 'This will reduce maintenance time and help us predict problems across sites.'

The South of the Tyne and Wear service has built on existing partnership arrangements and exploits the proximity of the providers. Its model will not be appropriate for all organisations and health economies. But it has shown that enhanced pathology is deliverable and can contribute to service and cost improvement.

Or as Gateshead's Mr Renwick put it: 'We've proved what is possible, that Carter was right and that you can get cash out and improve quality and safety for patients.'