The Royal College of Pathologists

Pathology: the science behind the cure

CONSOLIDATION OF PATHOLOGY SERVICES LESSONS LEARNT

Index

Introduction

Pressure on pathology services to consolidate, reconfigure or modernise is nothing new. Lord Carter's first reports, *Independent Review of NHS Pathology Services in England*, published in 2006 and 2008, recommended consolidation of services "to improve quality, patient safety and efficiency."

Lord Carter's most recent report, *Operational Productivity and Performance in English NHS Acute Hospitals: Unwarranted Variations,* published in 2016, reiterated the call for consolidation, and NHS Improvement has called on trusts to draw up business plans to consolidate services to improve productivity.

The College has always argued that there is no single solution for all pathology disciplines and geographical locations. It is important to recognise that pathology is a diverse group of 19 largely separate clinical specialties and what works for one discipline may not work for another. Some pathology services must be located close to the patients and healthcare professionals who rely on them, while others can combine to serve larger areas.

The College supports trusts taking measures to reduce unwarranted variation and encourages departments to consider closer collaboration and networking to ensure optimal provision of pathology services. The focus should be on the value of the services provided, ensuring that the quality remains high while cost savings are sought.

In this digest of articles from *The Bulletin*, The Royal College of Pathologists' quarterly membership publication, we have collated accounts from members and others about their experience of consolidation of pathology services. In particular we asked authors to reflect on what advice they would give to those undergoing a similar process and what they would do differently if they were starting now. We hope that these 'lessons learnt' will help others avoid the same mistakes.

There are some common themes emerging from these accounts, including the need to invest in joined-up IT systems and reliable transport. New laboratory information management systems (LIMS), and the professionals to support them, are expensive and few labs can afford to introduce them. Unless central funding is identified to resource shared LIMS across networks, consolidation plans are likely to fail.

While there are economies of scale in large departments, the workforce remains key to the provision of a high quality service and should not be forgotten or taken for granted. Staff buy-in is essential, as is clinical leadership of the process.

It is clear that consolidation doesn't always save money, at least not in the short term. All the featured successful reconfigurations have required significant investment, often in new buildings.

Despite the challenges, consolidation has been a positive experience for our authors. I hope that you will find these accounts informative and helpful. The College is committed to working to ensure the provision of high quality pathology services across the UK.

Dr Suzy Lishman
President, the Royal College of Pathologists
July 2017

CONSOLIDATION

Chris Fourie

The Carter Report, STPs and beyond

Our section on the theory and practice of consolidation in pathology services around the UK starts with an overview from Chris Fourie on NHS Improvement.

The next step in a 10-year journey for pathology

Since the initial Lord Carter reviews (2005 and 2008), limited value has been realised from pathology consolidation. The vast majority of the 98 NHS pathology providers are still operating as independent trust-based pathology laboratories. Subsequent reviews into direct access commissioning and alternative models for engaging with other public or private parties have also had limited impact. What's more, many of these have created a competitive environment at the cost of effective collaboration.

Ongoing financial pressures meant more radical changes needed to be implemented. This prompted a request to all Sustainability and Transformation Plan (STP) leaders and trust executives. They were required to prioritise the reorganisation of pathology within their STPs and submit outlines plans for transformation by the end of July 2016.

To support these initiatives, NHSI (NHS Improvement) established a team in September 2016 that would analyse the plans, develop operational metrics for assessing current performance and track future improvement. While it is accepted that the relative newness of STPs and the limited time available to develop plans would have had an impact, from analysis of STP two-pager reports as well as discussions with STP leads, it is clear that very few robust consolidation plans were in place at that time.

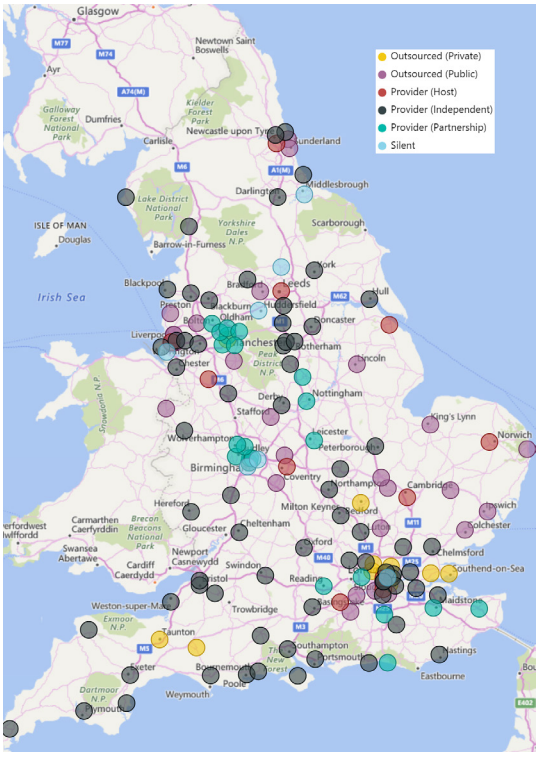


Figure 1: Current pathology provider status

Telling the whole story

Another challenge facing the NHSI programme team was the limited amount of centrally available pathology data. To understand fully the variation that exists and provide performance metrics that would support change, the team requested all trusts to submit department-level detail on workforce, demand and non-pay cost, as well as details on IT and supplier contracts.

Feedback was received from 186 trusts, including 130 of the 136 non-specialist acute trusts that were the focus of Lord Carter's 2016 Operational Productivity review. All responses were collated into a single reporting platform that enabled the NHSI team to assess the current state of pathology on a national scale. It also allowed the team to evaluate and compare the characteristics of individual departments. In addition, the publication of this data on the Model Hospital platform will enable trusts to compare their performance against similar laboratories.

Despite an accepted variation in the reporting of test volumes, this dataset has provided insight into the current distribution of laboratories, staff, volume and cost. As shown in Figures 1 and 2, map-based reporting and analytics were used to gain an understanding of where services are being provided, and by whom.

It was also possible to evaluate the variation in the delivery of pathology, and model the potential advantages of a more rationalised delivery model.

Pathology under the microscope

Lord Carter's 2016 report clearly stated that improvement in quality and savings could be achieved throughout the NHS by eliminating unwarranted variation. For pathology the unwarranted variation was based on differences in expenditure as a percentage of trust turnover.

However, we recognise that much of the variation could be explained by factors such as differ-

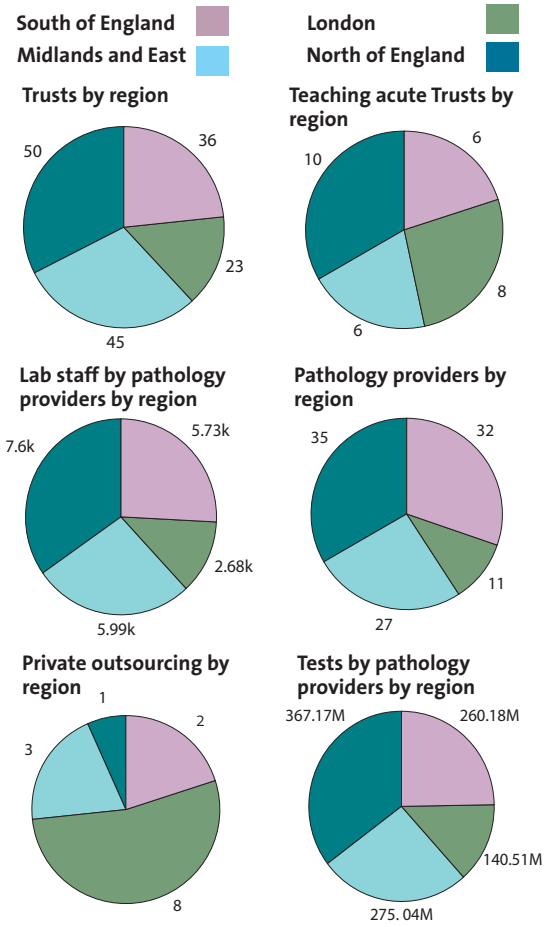


Figure 2: Regional comparison of pathology services

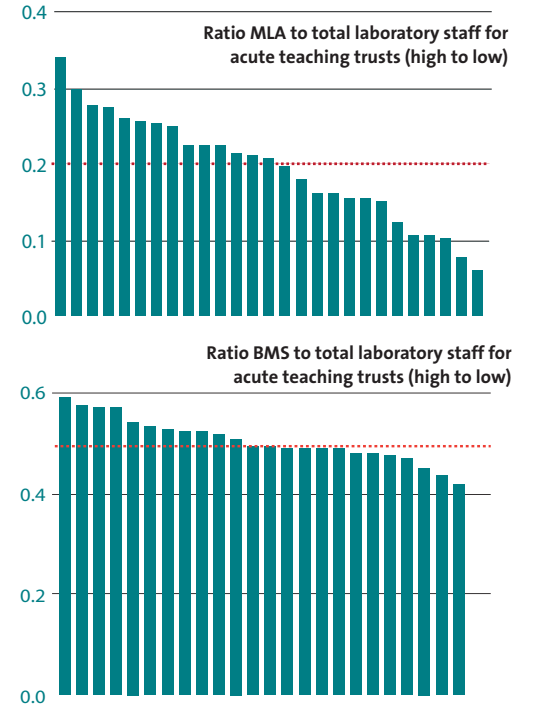


Figure 3: Variation in use of medical laboratory assistant (MLA) and biomedical scientist (BMS) staff in acute teaching trusts

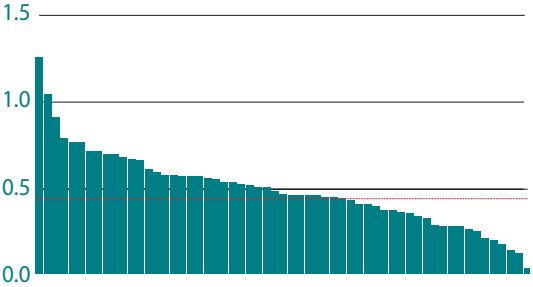


Figure 4: Average non-pay cost per blood sciences test for large and medium acute trusts

ences in demand type, complexity and the service delivery model of a specific pathology service. By contrast, the new dataset aimed to increase comparability by collecting operational and demand data per department. With this data, it has been possible to study variation in more detail. (Two examples are included below in Figures 3 and 4.)

As an example of how this supports savings opportunities within pathology, we considered the variation in staff efficiency across England. When analysing data on a national level, it can be reasonably expected that laboratories that process a similar volume of samples and that operate at a similar level of complexity, should be able to achieve similar staff work rates within each department.

As shown in Table 1 (over leaf), savings opportunities exist just within the staff efficiency ranges from £50 million to £78 million per annum. Further opportunities exist in service rationalisation and reducing variation in non-pay cost, which account for almost 50% of operational expenditure.

From data to information to insight: supporting change at a local level

Bain & Company has the following to say about benchmarking: "The objective of benchmarking is to find examples of superior performance and to understand the processes and practices driving that performance. Companies then improve their performance by tailoring and incorporating these best practices into their own operations – not by imitating, but by innovating."

When reviewing the data with trusts, we have found that broad key performance indicator (KPI) comparisons work well for quickly identifying areas that warrant further investigation. They require us to focus on the similarities rather than the differences in order to identify examples of superior performance. However, once suitable comparisons have been identified, the aim is to understand and learn from specific operational best practices that drive performance.

The organisation must integrate those practices into their own service rather than merely trying to replicate what others do. To maximise the value of this work requires closer collaboration and a willingness to share best practices.

What 'good' looks like

Within the NHSI pathology programme, there has also been a broader engagement with pathology providers to establish the good practices that delivered value through consolidation.

Beyond the obvious advantages such as economies of scale, best use of technology and the reduced risk of isolated specialist services, there are numerous key considerations that have helped organisations such as Berkshire & Surrey Pathology Services, Health Services Laboratories, Cov-

Table 1: Variation in staff efficiency by Trust category

	Pathology efficiency savings opportunities when performing in line with upper 25%	
Savings opportunity	**0– 10% efficiency improvement**	**10– 20% efficiency improvement**
Category A	**£ 17,272,320**	**£ 9,018,353**
Category B	**£ 10,217,868**	**£ 5,566,644**
Category C	**£ 3,603,610**	**£ 1,894,442**
Category D	**£ 10,052,573**	**£ 6,831,204**
Category E	**£ 6,678,353**	**£ 4,268,711**
Category F	**£ 2,670,603**	**£ 1,226,182**
	£ 50,495,326	**£ 28,805,535**

entry & Warwickshire Pathology Service, South West London Pathology and PathLinks deliver multi-organisation consolidation. Some of these include:

- **Clinical Leadership**: successful consolidation can only be delivered through a clinically led service. However, this can't be a clinically constrained service. Amongst their other responsibilities, the clinical team must take responsibility for delivering a high quality, appropriate but cost-effective service and manage the relationship between pathology and other clinical disciplines
- **Partnership Model**: market experience has shown that informal networks are unable to agree and deliver change fast enough, and have under-developed management structures for effective clinical governance. By contrast, formal networks have been shown to be the best solution in planning and managing a complex pathology solution
- **Executive Participation**: Board support, coupled with strong, experienced leadership is critical to the success of any consolidation project. Even though it is the responsibility of the management and transition team to ensure that the board has all the relevant information required to make decisions, the board must drive delivery forward and assist in removing any barriers to consolidation
- **Customer Service**: the need for a strong customer focus, supported by the appropriate staff and infrastructure, is essential within any large organisation, including in the pathology sector. Whether you are a public or private organisation, effectively meeting the needs of your customers supports customer loyalty and understanding
- **IT**: a standard LIMS (laboratory information management system) is a key enabler for pathology consolidation. It allows samples to be processed anywhere in the network, without the additional manual intervention that can lead to delays or quality problems. Of equal importance is a dedicated IT team that can manage and optimise the integration and standardisation of the various systems
- **Change Management Support**: consolidation of pathology is a resource-intensive project that requires a dedicated team. It also needs the support from both management and operations teams to deliver a successful outcome.

Engaging with professionals

A key objective of both Lord Carter's reviews and NHSI programme is the delivery of a high quality, clinically led service. To achieve this, NHSI is working closely with The Royal College of Pathologists and other professional bodies to ensure any proposed changes also incorporate what 'good' looks like from a clinical, service delivery and quality perspective. This will be the responsibility of the pathology lead in NHSI's Get It Right First Time (GIRFT) programme.

Looking forward

Crucially, the drive continues for a more efficient pathology service. This should be delivered through the adoption of national and international best practices, as well as through closer collaboration and consolidation of services within, but also beyond the 44 STPs.

To support trusts in achieving their goals, NHSI will continue to work closely with them in analysing comparative performance data, identifying opportunities for improvement, while helping to monitor these through a national performance tracking programme.

To bolster this effort, NHSI is collaborating with NHS Digital, NHS England and Public Health England to develop a centralised data collection framework that will use NHS Digital's standardised test list to minimise the impact of test volume reporting differences.

Chris Fourie
Director
LTS Health

Professor Jo Martin

Professor Roger Feakins

Getting it together: the Barts Health experience

The three articles that follow describe consolidation projects which differ considerably in size, scope and structure, ranging from one of the largest Trusts/Boards in the UK (Barts Health), to a city-wide cellular pathology project in Glasgow, to a whole country approach in Wales.

Getting it together

Barts Health NHS Trust is very large – one of the largest in the UK, with over 16,000 staff across five hospitals. The pathology department has grown as the hospitals have merged, and the cellular pathology department is now a single entity serving a population of approximately 2 million patients across East London. It owes its size to multiple mergers of several smaller departments over a period of more than 15 years.

The scope of the merger

The easiest merger was when the two cellular pathologists from St Andrews Hospital in Bow put their microscopes in the car and moved up the road to Whitechapel. It was many years ago, and St Andrews has now closed, but this was a team of two good professionals and a small number of great scientists. They knew they were working in isolation, and they actively wanted to join colleagues at the Royal London Hospital (RLH). It was made easier because they maintained good relationships with their clinical colleagues, already knew their pathology colleagues at RLH from having a few sessions there, and, perhaps, because they didn't tell too many people what was happening. This was an era where business cases and public consultation were uncommon at department level.

Subsequently, a far more extensive merger occurred, partly reflecting amalgamation of the Trusts themselves. This was the large-scale unification of several departments from both St Bartholomew's Hospital and RLH. It was made more attractive, and much easier, by the construction of a new building, which was helped by a multimillion pound investment from the Barts Charity as an enabling work for the impending PFI hospital. A brand new, purpose-built, five-storey premises dedicated to pathology and pharmacy helped considerably to join 14 disparate departments together. Building a new molecular pathology suite and a flow cytometry facility also helped overcome some of the concerns around centralisation. Indeed, attracting people into the best pathology premises in the UK started to seem easier than asking them to relocate to a space within warrens of small labs in Victorian buildings or in an ugly 1960s block with narrow corridors and asbestos tile ceilings. Therefore, we were fortunate that the context of our major merger was one of a wholescale improvement in our facilities. Some mergers lack that advantage.

Staff considerations

The stage during which the geographical location of the building was debated was interesting, and rehearsed many of the discussions about laboratory and pathologist disposition that we still consider. The balance of clinical input into multidisciplinary team meetings (MDTMs), transfusion laboratory provision, transport time for urgent specimens and cover for frozen sections were discussed enthusiastically. At the time, the two major acute sites were RLH and St Bartholomew's hospital (SBH). Hot lab areas would be needed on both sites, but the enormous new A&E and hospital development at Whitechapel, and the availability of land, made Whitechapel the logical location. Mergers can make some staff very unhappy at the prospect of a move. "I would rather die than go to the Royal London" was one particular view, coming from a colleague who retired early rather than make the transition. Perhaps this reflected the location of SBH, which is in a lovely setting in the City of London, compared to RLH, which is in one of the poorest areas of the UK. Upmarket cafes and restaurants had to be sacrificed for fried chicken shops and low-cost curry houses. But the relocation was to an area of significant clinical need.

The emotional and sentimental connections with a workplace and the fear of change, at least for some staff, should not be underestimated. So much time is spent at work that we do need to make it, as far as possible, a pleasant experience. Colleagues are a major part of this experience, and potential dilution of strong working relationships by expansion of a department can be problematic. The emotional transition from one place of work to another is complicated by a range of other factors. Physical factors such as travelling time can be important. Had the decision been made to base our new department at SBH rather than RLH, it would have reduced many colleagues' journeys to work. As it was, it added 20 minutes' travelling time and a change of train to the journey of a colleague from SBH who, needless to say, was not impressed.

Allocating the new space

The provision of office space is often a difficult area across all disciplines, but especially in cellular pathology which requires a single occupancy quiet space (or dual occupancy if reporting with trainees) in which to concentrate on work. In cellular pathology during the RLH new-build process the consultants formed a task force to try to make office allocation as fair as possible. During yet another merger, this time of the Whipps Cross hospital cellular pathology team (which included six consultants) with that at the expanded RLH, the office allocation was again done as fairly as possible. Although seniority inevitable plays a role if there are no other distinguishing features between members of staff, the selflessness and adaptability of many colleagues was commendable. A recent much-needed increase in consultant staffing, expanding the consultant base to cope with rising demand, has finally proved more difficult than previously because further office space is now limited, as are Trust finances to adapt existing spaces. Lack of such space can be demoralising and create tensions, and every effort should be made to prioritise this issue because the ultimate outcome of short term cost savings can be long term losses in terms of recruitment and morale.

Maintaining clinical links

The loss of proximity and personal interaction with colleagues on one or more sites can often be seen as a key risk factor when looking at mergers, and does have a potential detrimental effect. In practice, most of us will call colleagues with key results, and multidisciplinary meetings will continue. However, when not face-to face, the latter require top-class videolink facilities, and the provision and maintenance of these vital facilities are not always a priority for cash-strapped Trusts or for overworked IT staff. Many large departments already have networks of referral, or have specialists or expertise, that serve departments and patients well beyond their own hospital, often involving communication with clinical teams or other pathologists that they may never meet personally. Also, work is often absorbed from units or whole hospitals that do not have the relevant pathology support. For example, our cellular pathology service deals with all work from the Homerton Hospital, which is not part of our Trust. Our renal pathology team covers our own hospital, but also Basildon, Southend, Brighton and the Royal Free Hospitals. Phone calls and joint meetings can help maintain good working relationships, and the multidisciplinary team environment, even by videoconference, helps with interactions.

The practicalities: IT and specimen transport

The work involved in the preparation for such moves cannot be underestimated. Helpful preparations before we moved into the new building ranged from data and information sharing to visits between groups and secondments. It was useful to share workload data from existing departments, and this helped us to understand that everyone from all sites was working hard. Very hard! Also, trying to make as many process changes as possible prior to the physical move was a policy that was based on good evidence and one which worked well in practice. For example, immunoassay platforms and many common operating procedures were changed prior to the major move. Having lots of run-up time with 'dump the junk' skips and good routes for disposal of documents, old equipment and reagents was important. Having the medical physics team on hand to investigate and advise on potential radioactivity issues was also helpful. Clearance processes and certification (and sealing) of cleared areas was essential for handover. This all minimised potential confusion at the time of physical relocation. Similarly, managing expectations, with regular staff briefings and the acknowledgement that not everything was going to run smoothly, but that everyone would do their best to deal with problems as soon as possible, was useful.

Other practicalities included double running of platforms in blood sciences and other departments where new equipment was being commissioned in the new building, for validation of all platforms, testing of IT links, retesting of IT links and fall over protocols. The latter can always come in handy, not least when the pharmacy fork lift operator drove through the IT cable hub in the basement corridor. A single point of weakness had been identified and then reinforced, literally.

One process that might have worked more smoothly, and which caused some issues, was ensuring that the numerous routes of specimen transport were all reliably redirected to the new location. Transport and portering are key parts of the end-to-end processes for pathology, and are often not under the direct control of the pathology service. Making sure that every porter and every collection point team knew of the changes might have saved considerable time in specimen chasing. Maintaining a degree of healthy caution and testing end-to-end specimen-to-result pathways is also important during times of change. There is much value in reviewing single adverse incidents carefully to ensure that they are not herald events of a wider problem. If one primary care microbiology report has missed off a text comment that is present on the LIMS system, then there is a high probability that it is a system problem rather than a single rogue event.

Having a go-to set of individuals who could help get things sorted was a real success. Commercial organisations spend large amounts on project management and on change agents and planning. Generally the health services have very meagre

resources for such mergers, and at departmental level tend to, and often need to, rely on existing staff with technical expertise who know the departments and who are able (and willing) to deal with practical problems as they arise. Giving some degree of dedicated time to such individuals is key.

Conclusions

The impact on pathology is often underestimated in the massive changes to process, technology and location that are made by all disciplines regularly. Examples of such change include: the introduction of new LIMS systems and paperless working; electronic transmission of results; integration with primary care systems; the wholescale change of cytology methodology with retraining of the entire workforce; migration to molecular testing in infection; creation of blood sciences facilities; adoption of mass spectroscopy; point-of-care and one-stop testing; extensive implementation of multidisciplinary team meetings; adoption of molecular pathology; and integrated reporting in cancer testing. These were large-scale changes in working practices whose implementation should be celebrated as evidence of the ability of pathology staff to support a real and continuing dedication to improvement and advancement, and of the great skills that exist in change management in our profession. Mergers like the ones that we have experienced are disruptive at the time, but they are one part of the continuing reorganisation that is an inevitable feature of pathology services and of the wider health service in a modern, highly developed healthcare system. Mergers can allow pathologists to specialise, to become more focused, opt for more flexible working, or develop academic or management roles that might not otherwise have been possible. There is also a resilience, both in workforce and in equipment, in larger departments or networks, that comes with having more of both, but do keep an eye on workload, since having staff who can cope with extra work in a crisis can turn into a sustained pressure that cannot be maintained. Ultimately, small can be beautiful, but there is strength in numbers, and this gradually becomes apparent once the dust has settled after a merger.

Professor Jo Martin
Professor of Pathology
Queen Mary University of London
Director of Academic Health Sciences
Barts Health NHS Trust
President-elect
Royal College of Pathologists

Professor Roger Feakins,
Consultant Histopathologist
Barts Health NHS Trust

Dr Gareth Bryson

Consolidation of cellular pathology in Glasgow

Background and drivers for change

At the turn of the century, pathology services within the city of Glasgow were provided on seven acute sites. By 2006, this had reduced to five sites, including two large university departments (the Western Infirmary and Glasgow Royal Infirmary), a single department of general pathology for South Glasgow at the Southern General Hospital, an independent neuropathology department also at the Southern General Hospital, and the paediatric pathology department at Yorkhill Hospital.

From 2006 there was a single management structure for these departments within the Greater Glasgow Health Board. This included overall budgetary control. In 2008, the Argyll and Clyde Health Board was merged with Glasgow to form Greater Glasgow and Clyde. This brought in an additional three small pathology departments, which were run with a general reporting style.

The buildings that host the two university departments were at the end of their life. The Western Infirmary site was due to close (and has now been handed over to the University of Glasgow), while the Royal Infirmary department was in a Victorian building that was in a poor state of repair and was unsuited to a modern hospital laboratory.

During this time, there were plans for a new 1000-bed hospital (including a children's hospital) on the Southern General Hospital site, with some centralisation of clinical services. Unfortunately, this development was on a different site, 3 miles away from the regional cancer centre, but the city council was against more development on that site.

Opportunities

The pre-existing departments had developed varying degrees of specialisation. Each of the university departments was staffed by approximately 10–12 consultants and operated around a specialist reporting model. However, this had caused some problems as no single site had the critical mass to maintain a fully specialised service. They were dependent on small teams, which were insecure during periods of staff absence or when people left

New laboratory and facilities management building at South Glasgow Hospital

or retired. The general pathology department at the Southern General Hospital had approximately seven whole-time equivalent consultants and reported in a predominantly general manner, as did the departments from Clyde. Some of the consultants on these sites desired further sub-specialisation, but that view was not universal.

There was the opportunity for a modern, purpose-built laboratory building adjacent to the new hospital site. We had input into the design process and the building was capital funded to a value of £85 million (for all disciplines, of which the cellular pathology component was about a third) as part of a £1 billion campus redevelopment. Building started in 2010 and all cellular pathology departments had migrated to the new building by June 2012. We now provide a comprehensive cellular pathology service, including key regional and national services. We receive over 100,000 requests per annum and have a consultant pathology workforce of 44 whole-time equivalents.

Key advantages

While not without challenges, overall I would consider our reorganisation to have been a success. On reviewing the reasons for this for this article, I have come to consider that we had several key advantages, some of which would be difficult to replicate.

First, the departments that were merging were part of the same health board structure with a shared budget. This allowed for sensible planning without having to consider competing financial interests. We were also given time to plan, with a lead time of approximately four years from the start of the building design until commencing the unified service. I think it was also advantageous that this was a merger of multiple departments into a new facility, which required a complete redesign of the service. A merger of fewer sites, particularly into an existing infrastructure, could result in more of an 'us and them' mentality.

Our second key advantage was our staff. Overall, we were in a strong medical staffing position, with only one of the smaller departments having significant consultant vacancies. The medical staff were generally cooperative and open to the move. This can be explained by the fact that all the departments had something to gain, whether it was a new building, new equipment, an opportunity for increasing specialisation or a solution to a localised staffing issue.

Challenges and how we met them

Although I have indicated that there was a general willingness to work towards integration, it was not universal. Our experience was that, among both technical and medical staff, senior staff were more resistant to change and found it harder to deal with new ways of working and new structures. Because of this, in the period just before and just after the merger, several of this cohort took the opportunity of early retirement.

On the medical side, we inherited several vacant posts and when the early retirements added to this it resulted in a 15–20% medical staffing shortfall. This exerted pressure on to the remaining medical staff and had a negative impact on job satisfaction and turnaround times. Despite best efforts, it took approximately three years to fill these vacant posts.

From a technical perspective, things were more complicated. One of the savings identified was a streamlining of the technical management, with loss of senior technical posts. So, while the early retirements suited the organisation, there was significant loss of experience at a time of major reorganisation and change. Furthermore, because of redesigning the technical staffing structure, some senior staff were displaced. The outcome was a small group of staff who did not feel fully engaged with the process. There has been rapid recruitment of young technical staff, mostly new graduates. While these are extremely talented individuals, there was a significant loss of experience which, I believe, has had a negative impact on efficiency. Fortunately, this group are reaching higher levels of experience and maturity, and we are beginning to see improved performance.

Another significant challenge that we have not yet overcome is dependence on an ageing IT infrastructure. This was highlighted at the time of the proposed merger and although a new LIMS was promised, it was not delivered. Failure to provide adequate laboratory IT has had a significant negative impact on efficiency. Hopefully, this is something we will overcome in the coming years.

Our final major challenge was determining our model of working and systems to ensure a fair distribution of work within a large, complicated department. We wanted to design a system that allowed individual consultants to work in a manner that suited their skills and experience. As mentioned above, we had a mixture of specialist and general pathologists. We decided to split all specimens into specialist teams. However, consultants could choose to work in as many teams as they wanted. Although initially some individuals

desired to work more generally, there has been a general reductionist move, with most consultants now participating in two or three specialist teams.

We were also keen to have a system that ensured a fair distribution of work. We designed a workload allocation system that takes into account all DCC (direct clinical care) activities and provides agreed fixed times for dissection and multidisciplinary team meetings, and ensures fair distribution of reporting. We use a scoring system that is a modification of RCPath Micro workload points. Overall, although hard pressed, there is a feeling that the system is fair and that all colleagues are contributing equally for each contracted session.

Conclusion

Centralisation and integration of multiple cellular pathology departments is a challenging undertaking. Although we have had to make some compromises and the results are not perfect, our experience in Glasgow has been generally positive. I believe our success is partly down to the pre-existing positive relationships that we were fortunate to have. However, it has also depended on the way the process was handled. Throughout the transition, there was an attempt to engage with all the stakeholders and design a way of working that was fair and flexible for those with different expectations. We were also keen to breakdown existing geographical boundaries and set up an entirely new system. Despite these efforts, we still lost a number of staff who were near retirement. We were able to survive this as we were in relatively good staffing prior to the merger, but undertaking a merger when already short staffed would be perilous.

Centralisation is most likely to be a success when there is 'buy in' from the key stakeholders (primarily the cellular pathology medical and technical staff) and when it is done for the correct reasons, these being to build a strong and resilient specialist service, and for service development and quality improvement. There may be some small financial savings (mostly from staff group realignment), but merging for financial reasons alone is unlikely to result in long-term stability and success.

Dr Gareth Bryson
Head of Service for Pathology
Consultant Pathologist
Queen Elizabeth University Hospital

Dr Esther Youd

Consolidation: the Wales experience

Background

In 2008 a report commissioned by Welsh Government, *Future Delivery of Pathology Services in Wales*,[1] examined the current state of pathology services in Wales and made recommendations for the future. Several of these recommendations concerned consolidation in one form or another. Perhaps the most visible was the creation of a national pathology forum for Wales, now known as the National Pathology Programme Board (NPPB), a vehicle that brings together clinical directors and directorate managers from each Health Board, professional leads from The Royal College of Pathologists and Institute of Biomedical Science, and a representative from Welsh Government (the Chief Scientific Advisor – Health), providing space for taking a national view of pathology services. The Board is chaired by Fiona Jenkins, Director of Therapies and Health Science, Cardiff & Vale Health Board.

Wales is a small country in population – just over 3 million – and a devolved government with responsibility for health provides opportunity to take a 'once for Wales' approach, 'do once and share' being a philosophy of the *Future Delivery* paper.[1] Wales is hugely varied geographically, with cosmopolitan cities in the south and south east; beaches and popular holiday areas in the west and north; remote, rural areas in the mid and west, and areas of high deprivation in the post-industrial regions of the south Wales valleys. This provides many challenges when providing healthcare services across Health Boards, regions and nationally.

At the time of writing *Future Delivery*,[1] pathology services were delivered very much on a hospital-by-hospital basis, with the exception of some national services. Hospital networks became a reality even before the paper was published, with a radical shake-up of health organisations. Twenty-two Local Health Boards and seven NHS Trusts were replaced by seven new Health Boards, switching from an internal market purchaser-provider model to a streamlined provider of primary care, secondary care and community services. These Health Board structures have allowed services, including pathology, to be redesigned to best serve the local population. For example, non-acute services such as cellular pathology and microbiology have largely been consolidated onto one site per Health Board.

The current situation: what is going well and less well

Consolidation success looks different in different specialties. There is no one model which fits all. Some pathology disciplines are best suited to a single service nationwide, which is achievable in Wales through the strong network relationships

between Health Boards, and the central commissioning ability from Welsh Government. For example, medical genetics is provided as a single service for all of Wales, centralised in Cardiff. Challenges still exist around the equitable access to tests, but centralisation allows this strong service to remain at the forefront of research and development as the future of pathology becomes more and more dependent on molecular genetics.

Blood sciences continues to be delivered at each acute hospital site and there is little appetite for consolidation, even of less urgent blood testing, due to the ongoing need to provide blood sciences services including blood transfusion at every acute hospital, and Welsh Government commitment not to close any. With the drivers to treat patients as locally as possible, and prevent unnecessary admission to hospital, even the traditionally non-urgent testing by GPs is now often required within a few hours, or at least before surgeries close so that GPs can make decisions about the need to admit someone to hospital or treat them at home.

Other regional/national projects in the last seven or eight years have looked at the service models for microbiology, cellular pathology and, more recently, andrology and immunology – with varying outcomes. Andrology is a small service, well suited to a national approach. A model has been agreed by the service, signed off by chief executives, and, although implementation has been delayed, is now under way. Immunology is on the brink of a networked approach rather than a centralised one.

Projects in microbiology and cellular pathology have been less successful to date, reaching the stage of option appraisals but progressing no further, becoming stuck in financial assessments, project management or derailed by technological/clinical progress which makes the appraised options outdated. The cellular pathology project has an example of both the first and last of these: currently awaiting financial assessment, since cellular pathology is a manually intensive process, centralisation is not likely to make the desired savings in workforce so often sought by finance directors. In terms of technological progress, a preferred option of centralisation of the whole service is likely to be reconsidered, with the introduction of digital whole slide imaging (WSI) through a Welsh Government Efficiency Through Technology funding project. When you consider the benefits of digital histology for sharing images, gaining second opinions, specialist referral, MDT review and managing workload, the question is raised: 'why centralise if you digitise?' and 'why digitise if you centralise?'

In microbiology, project management within Public Health Wales (PHW) has been the rate-limiting step. PHW's ambition is to have a single microbiology service for Wales. However, observers note that existing local services run by PHW show variation in the service provided (lab +/- clinical, infection control in or out) and no clear national vision. The challenge is demonstrating what the benefits of single management are for microbiology.

Within the pathology community in Wales there has been a call for a single managed pathology service for all of Wales. This is thought to be the best way to progress national projects and provide a truly equitable service for all patients in Wales. If this concept is to become reality, the service will need to take into account what makes national services such as genetics and cervical screening successful, and what makes others such as microbiology less so.

So what should we learn from our experience of consolidation over the last eight years?

1. A national forum (the National Pathology Programme Board) for sharing pathology expertise allows cross-boundary collaboration. The future challenge for the NPPB is how to remain effective and retain/regain engagement.
2. There is no 'one size fits all' model.
3. Direct access and established accountability to decision-makers is vital for taking a service-supported concept through to implemented change.
4. Repeated projects examining consolidation but not progressing are time consuming and wasteful, potentially compromising delivery of patient care.
5. Don't underestimate the benefit of disruptive technology and don't commit to a rigid service

Members of the NPPB (l-r): David Heyburn, Tariq El-Shanawany, Jason Shannon, Suzie Howarth, Esther Youd, Dave Fletcher (on screen), Sally Buckland Jones, Carol Evans, Wayne Lewis, Mike Redman, Craig Roberts

that doesn't allow disruptive technology to challenge the model.
6. A single managed pathology service for Wales appears to be the next logical step to provide equitable care and good use of resources.

Wales LIMS: the importance of a single LIMS in delivering consolidation

In 2010 a single laboratory information management system (LIMS) for all of Wales had its inception. Any consolidation, local, regional or national, physical or virtual, requires a functioning single LIMS. This was a bold idea and beset with very real challenges including significant patient safety issues, some of which still require addressing. It is still incomplete in its implementation in cellular pathology and blood transfusion. However, there have been some rather extraordinary achievements as a result of this project, which are unrivalled elsewhere in the UK. These include the following:

a) **The National Pathology Handbook**
In order to have a single LIMS, pathology services had to start speaking the same 'language'. In each discipline, project groups were set up to discuss how to implement a single LIMS. A National Pathology Handbook was developed (akin to the proposed National Laboratory Medicine Catalogue, still floundering somewhere in the English Department of Health). Agreed test names, normal ranges and guidance on when to test mean greater clarity for interpreting pathology test reports, and for junior doctors rotating through different hospitals in Wales – a big step forward for patient safety.

b) **Electronic requesting and demand optimisation**
Through the National Pathology Handbook and Wales LIMS, rules for minimum retesting intervals were agreed across all services in Wales. For example, thyroid function tests should not be repeated within 28 days. Combined with electronic requesting, the requesting clinician is presented with a pop-up message that informs them that the test has been performed already within the agreed period. The LIMS presents them with the results of that test and prevents unnecessary additional testing. This is good for laboratories and good for patients.

c) **Welsh Clinical Portal (results reporting)**
A single Wales LIMS now paves the way for a single results reporting system, the Welsh Clinical Portal, including the ability to access patients' pathology reports across all of Wales, regardless of where the test was performed. The future of the Welsh Clinical Portal will likely be the evolution into the electronic patient record.

A single IT service, NHS Wales Information Service (NWIS), has been the essential vehicle for progressing all-Wales IT solutions. However, the biggest challenge has been resourcing. The Wales LIMS has been supported by insufficient IT resource, requests for central resourcing from Welsh Government having been declined, leaving a significant burden on Health Boards to provide both IT support and laboratory staff resource for development and implementation. Given the length of time between conception and implementation (seven years and counting), this has inevitably had a direct effect on the provision of services within pathology. As we approach the end of the contract and re-procurement of the Wales LIMS, lessons must be learned.

1. Sufficient IT support for development and implementation must be provided centrally. Pathology services and local IT services cannot continue to compromise delivery of patient care to provide staff to develop a national product.
2. The desire to have a unique system designed and built specifically for Wales has backfired. TrakCareLab was already in place in Scotland but was rebuilt from scratch for Wales. Where systems exist elsewhere and are functional and safe, adoption of an existing system should be the preferred approach. Let's not reinvent the wheel.
3. In order to deliver the expected benefits, resourcing of allied projects must be supported in parallel, for example electronic requesting in primary care, electronic notification of available results and functional business intelligence.

Conclusion

Wales has achieved a lot over the last eight years since the publication of the *Future Delivery of Pathology Services in Wales*. Strong networks across the country, good links to Welsh Government and development of an all-Wales LIMS have enabled services to respond to the changing needs of users, on a Wales-wide basis. The central importance to any consolidation of having a single LIMS is exemplified in Wales, but must be properly resourced going forward. The move towards a single pathology service for Wales is the next logical step for the pathology community in Wales.

Dr Esther Youd
Chair, RCPath Wales Regional Council
Consultant Histopathologist
Clinical Director of Pathology
Cwm Taf University Health Board

Reference

1. Welsh Assembly Government. *Future Delivery of Pathology Services in Wales*. www.weds.wales.nhs.uk/sitesplus/documents/1076/Future%20Delivery%20Pathology.pdf (accessed 24 Dec 2016).

These five articles continue our theme of consolidation, demonstrating the range of diversity of pathology networks in urban and rural locations.

Professor Jonathan Edgeworth

Creating a joint venture model for pathology services consolidation

This article provides a narrative of the creation of a joint venture partnership model over a period of 10 years.

Background

This is a personal account from my experience since taking up the post of Clinical Director of Pathology in 2006 at Guy's and St Thomas' Hospital to now being Medical Director at Viapath.

Drivers for change

Initial discussions with clinical leads around 2006 led to a collective view that we needed to make our pathology service better through a step change, in addition to continuous incremental improvement: we wanted patients and frontline clinical colleagues to notice a real difference. The fortuitously-timed first Carter report said the UK was behind other countries and there was much to be gained from formation of pathology networks and laboratory consolidation. The current system was inefficient and would not support the necessary investment in new IT infrastructure or laboratory technology platforms linked with the molecular, genetic and genomics revolution. We looked across our 27 laboratories employing over 500 staff at three hospital sites in three management divisions, and concluded we were not in good shape for transformation in comparison with other London hospitals, let alone national or international benchmarks. We could see no obvious source of internal or external funding for a similar-scale investment.

We therefore felt compelled to take a different approach. We visited laboratories in France, Germany, India, the US and Canada and noted that the UK does not have national pathology reference centres, which are able to act as high quality cost-effective providers for all send-away tests. Experience with our own dispersed specialist labs indicated that these had most to benefit from consolidation while also facing the most challenges, i.e. investment to keep pace with scientific advances, increasing accreditation and quality expectations, often supporting separate specimen receptions, logistics and IT requirements, responding to commissioning processes or tenders, and even recruiting to senior positions when staff leave or retire. For us, that was the core opportunity for pathology reorganisation at the start, and it aligned with our mission as a nascent Academic Health Science Centre. We undertook a strategic review to determine the best route to create an organisation capable of providing quality cost-effective services beyond our natural catchment area. We concluded we needed a long-term partner with real skin in the game, rather than a short-term project management resource. The advice was that was best done through formation of a Joint Venture limited liability partnership (JV-LLP). If our main objective had been consolidation of core services in our health authority or STP we would not have chosen a JV model: it was because we felt the need to take a national perspective for our specialist laboratories that we viewed an NHS-alone model to be insufficient.

Size of the challenge – getting to the starting line

We first brought all laboratories together under a single management structure and then went out to tender to do two things: identify a commercial partner for the JV and award that new JV a ten-year pan-pathology contract providing services to Guy's and St Thomas' Hospital. Serco won with an impressive bid. I think the main factors that persuaded the Trust Board to support a JV model was having a capable Trust commercial directorate, the general acceptance that the status quo was not an option, minimal university involvement in pathology service delivery (concerns about the potential effect of a commercial strategy on R&D and intellectual property would have likely brought too many academic leaders to the table with disparate views), and our willingness to knock on doors and talk to people about what we wanted to do and why. The main challenge was creating a bespoke workforce model, a modified TUPE (retention of employment) contract for over 500 scientific staff, which enabled staff to be seconded into the JV longterm while retaining their NHS pension. It required spe-

cial dispensation from Number 10. Once agreed we chose a name – GSTS Pathology – and started on 1 February 2009.

Size of the challenge – defining who we are

The first few years of GSTS Pathology were difficult. We had put all our energy into the setting up of GSTS, with 1 February feeling like the finish line, whereas it was of course only the start. Everything had changed (organisational structure, name, leaders) but nothing had changed (same scientists and clinicians, labs, tests and IT system), which created uncertainty along the new inter-organisational boundary between pathology and the hospital. It is also hard to appreciate what strength one gets from being in the NHS – its heritage and clarity of purpose – until you change that relationship. GSTS Pathology was an unknown entity at the start that needed filling with a new vision, identity, culture and purpose. This took time and required real leadership that initially came mostly from managers and scientists, but over time an increasing number of clinicians.

Initially, the new management team began to articulate a national strategy of GSTS delivering pathology services up and down the country. This understandably raised antibodies from the pathology community, and has taken a long time to overcome. It was disappointing, because our initial vision was to be a valued specialist service partner for other laboratories, not to be seen as a threat to their core services. We also needed to get on with modernising our own laboratories before looking outwards, and we under-appreciated the size and complexity of that task, such that within two years we had a failed LIMS investment, the finances had deteriorated, and we had to endure adverse publicity in a variety of publications. There was a complete change of the executive team with appointment of a new CEO and we began to navigate a turnaround phase with refinancing.

Nevertheless, in those first two years we won the pathology contract for Bedford Hospital and our academic partner King's College Hospital joined GSTS Pathology to create a majority NHS-owned tripartite JV with about 1,000 staff and turnover of £90m. The entry of King's College Hospital shortly after – rather than at the same time as – Guy's and St Thomas' Hospital Trust (GSTT) caused branding issues. GSTS sounded like GSTT and King's had their own successful branded pathology labs (KingsPath). Thus, on the ground in London we remained two organisations with persisting inter-site competition, fuelled by traditional inter-hospital rivalry. Consequently, when changes to pension rules were announced in mid-2014, ending use of bespoke 'retention of employment' models but allowing TUPE-transferred staff to retain their NHS pensions, we used that as an opportunity to consult staff on a restructure and rebrand. We named the new organisation Viapath and removed all reference to GSTS and KingsPath, to help bring staff together as one organisation, going live on 1 January 2015. The next year we used the same staffing model to welcome pathology staff at the Princess Royal University Hospital (PRUH) into Viapath to make five hospital sites where we now have laboratories. Time spent building a strong relationship with Bedford Hospital over many years and now with the PRUH does help us understand the needs of a busy district general hospital as well as academic hospital sites.

Assessing progress – have we made that difference?

Writing this article is a good opportunity to take stock of what has been achieved with organisational consolidation. We have not made the progress we had hoped at the start, but, with hindsight we were overambitious, perhaps understandably so in our efforts to get everyone over the starting line. On the other hand, compared with comparable pathology strategies around the UK we have not fallen behind. What we have done is turn five pathology departments comprising over 1,000 staff into a single pathology organisation, with solid structures and processes, that remains embedded in the NHS retaining that patient-priority focus. For essentially the same price paid by NHS customers for pathology, we deliver and develop those services, while supporting a

Viapath was the name given to the organisation created by the merger of two labs

commercial team, funding our own capital investment, developing a strategy and investing in innovation and staff training. All 'profits' have thus far been ploughed back into Viapath. When asked why we have not done more, in part I think it's because many essential projects prioritised by our hospital owner/customers have been relatively invisible to the clinical eye. For example, we introduced price per test rather than a bulk contract providing monthly itemised invoices to hospitals, and a price is agreed for every new test we develop (of which there have been over 250 in the past five years). That helps hospital directorates plan, set targets for demand management and make sensible decisions on what tests they want. Moving from a block contract was a huge piece of work and presumably has health-economic benefits for the Trusts, but that is hard to measure.

Probably the best way to identify clinical progress is to look through our annual Quality Accounts (available on viapath.co.uk). For example, we placed a particular priority on improving phlebotomy, with average patient wait times reducing from about 30 minutes pre-contract to consistently 11 and 19 minutes (within contractually agreed targets requested by different hospital sites) and positive feedback from patients. We set up an accredited phlebotomy training scheme offering 90 hours of clinically supervised practice. We train 144 people a year and the course is booked up until January 2018. Applicants come from a wide range of previous employers, with a steady number moving on into the laboratories. In 2016 we bled 526,821 patients, which is more patient contacts than many hospitals and we see that as an opportunity to demonstrate our patient focus and professionalism.

There is also the freedom that comes with pathology being our sole focus. We are not competing for resources with other hospital departments. There have been benefits in procurement, financial and operational performance and resilience. For example, when the category-III facility at St Thomas' was out of action for over two years, Bedford Hospital microbiology department stepped in to provide the TB service). We have also placed a strong focus on science, scientists and scientific career development. We have a learning & development fund with about 15% of staff now being supported to do training courses from NVQs to PhDs and the FRCPath. There are site-based Scientific Directors and we are soon to appoint a Chief Scientific Officer to join the executive team. The Innovation Academy, set up by the Scientific Directors, invests £100k per annum in diagnostic development projects, and won the Academy for Healthcare Science Award for Innovation in 2016. The Innovation Academy hosts annual symposia where scientists and clinicians give talks on newly developed diagnostics and the future of pathology in healthcare. These examples demonstrate our commitment to being a valued service and academic partner to the NHS – attributes that as a public-private partnership we know we can't take for granted.

In the Viapath lab

Looking to the future – from organisational to laboratory consolidation

Although organisational consolidation has benefits, we also recognise the continued need to make that step-change of major laboratory consolidation, and so have been bringing clinical and scientific leaders together from across pathology laboratories to explore the benefits of laboratory consolidation. We asked clinicians and scientists to look ahead to consider the pathology capabilities and healthcare requirements over the next five to ten years.

These discussions highlighted major changes in care pathways, patients with multiple chronic diseases being managed more in the community, advances in molecular and genetic diagnostics, and the need to ensure equitable delivery of these advances to patients wherever they go to access services. From a pathology perspective, examples cited included inpatients and outpatients requiring a broader range of urgent tests – both routine and specialist – for rapid management decisions. This includes one-stop outpatient visits where patients can have treatment plans made and started that same visit; rapid molecular testing for pathogens to guide infection-control decisions and targeted sepsis treatment; and traditional histological analysis of formalin-fixed tissue moving to pathological dissection of fresh tissue for a wide range of morphological, genome sequencing and 'omics' analysis linked to tissue banking for research. They described personalised medicine, where diagnosis, prognosis and treatment decisions are made from whole genome or exome sequencing with results required in shorter and shorter time periods. Pathology is increasingly described as an information business with the laboratories one step in a pathway, with cloud-based computing required to support clinicians working closely with scientists in a 'dry lab' area matching clinical phenotypes with genome data. Some of these advances are now

being translated into practice, but the impression is we are just at the start of this technological and healthcare revolution, which will have fundamental implications for laboratory organisation. Recognising that pathology strategy must follow healthcare strategy and changing customer needs, we are including these requirements in our consolidation strategy for the laboratory network.

At the same time we must not lose sight of the need to fund this modernisation programme. Given the financial constraints across the healthcare sector, we cannot rely on that funding coming from outside pathology. We need to release the efficiencies that come from laboratory consolidation to invest in laboratory modernisation and the underpinning IT and logistics support. We also need to implement a strategy that brings scientists and clinicians together from many disciplines to reach critical mass, so that people learn from each other and, ideally, expensive new technologies can be introduced in one place rather than multiple locations. We must also recognise that hospital customers want to pay less for a better pathology service. We recognise the challenge, therefore, is to get consolidation right such that it releases the investment to provide better, faster more efficient services.

Looking to the future – the role of clinical and scientific leaders

There are still questions about why we didn't TUPE-transfer clinical pathologists into the JV. The reason seemed clear from our local perspective, although we recognise there is likely to be huge variation around the country. Haematologists, microbiologists/virologists (now increasingly infection doctors with joint training in infectious diseases) and biochemists spend the majority of their time outside the laboratory, seeing patients on the wards and in clinics, and are often based in other Directorates (not pathology). They also have academic roles within the University, so they could not be TUPE-transferred into an organisation where they only do a minority of their work. Histopathologists spend an increasing amount of time in multidisciplinary meetings, teaching, training and contributing to translational research or biobanking, so their core identity remains with the hospital.

We did not, however, pay sufficient attention to that clinical relationship during the first few years. We retained clinical leads, but, in practice, the laboratory manager took financial control and the relationship with clinicians deteriorated. We therefore consulted clinical staff on all sites to create a tripartite leadership model of clinical lead, manager and lead scientist for all sites and laboratories, with joint accountability between clinical lead and manager as Laboratory Director. The addition of a scientific lead was made in recognition of the need to place science at the heart of pathology. We actively supported partnership working for the tripartite team, which has had some benefits and worked well in some laboratories but has not yet been universally embraced. All recognise the importance of clinical, management and scientific skills, but working together and valuing the skills each member bring to the table takes time to get right. Implementing this new model has reinforced the fundamental importance of people and their commitment to the team for success.

Consequently, looking ahead there seems to be real benefit in investing more in development of clinical and scientific leaders for each of the main specialities (perhaps a Chief of Service) to provide the drive and direction required for major pathology reorganisation; individuals with core leadership skills and understanding of laboratory management, finance, business development, customer service, diagnostic development, quality and clinical governance. Most pathology departments have one or two people who either are or might be willing to take on such roles, but more will be required as pathology laboratories consolidate into a smaller number of large organisations. Future leaders, many of whom may already be in our pathology organisations, will need support to take on those roles and make them successful and attractive career propositions.

Conclusion

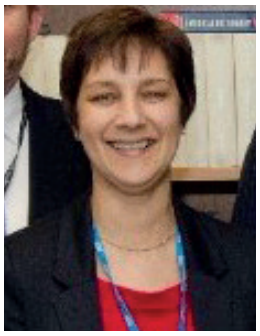
Having created a separate pathology organisation, completed organisational consolidation, and undertaken laboratory consolidation in a few services, we are now ready to begin wider laboratory consolidation. Given the pace of scientific advance, particularly in genomics, alongside dramatic healthcare reform and unprecedented financial challenges, we want to create a sustainable structure that delivers cost-effective services for clinicians and patients now and in the future. One lesson from international visits is that successful pathology models have closely followed the economic and clinical drivers of their healthcare system and we must do the same. It is still too early to know what role public-private partnerships will have in UK pathology while it is still in the process of undergoing consolidation. Nevertheless, the creation of GSTS was a disruptive entrant that challenged traditional ways of thinking and probably helped progress the modernisation agenda. We have overcome many early hurdles and have been around long enough to hopefully allay any fears that a JV would put profit before patients or lose its focus on quality, scientific innovation and training.

Professor Jonathan David Edgeworth
Consultant Microbiologist and Professor of Clinical Infectious Diseases
Medical Director, Viapath

Pathology transformation in the 21st century: the East Midlands experience

Dr Angus McGregor

Neil Callow



Rhiannon Griffiths

This article provides a 'lessons learned' account of the creation of the Empath joint venture covering pathology services for Nottingham and Leicester, and demonstrates that the first model tried doesn't always deliver as planned.

Pathology Transformation in the 21st Century

Pathology transformation should be very easy. Lord Carter has now produced three reports over the last decade that have set out a clear and consistent approach to effective transformation. We would interpret the Carter approach as follows :

- Put a single team in charge with control of all resources
- Design and implement the right infrastructure
- Consolidate what can be consolidated
- Deliver locally what must be delivered locally
- Focus on quality
- Save money

What Carter provided is a recipe for success. But of course, as all Bake Off fans will know, a recipe only works if you follow all the steps in the right order. Unfortunately, many of us around the country have chosen to use the Carter approach as a menu – picking and choosing rather than doing it all – and have therefore not transformed.

We are the senior leadership team of Empath, a pathology joint venture between Nottingham University Hospitals NHS Trust and University Hospitals of Leicester NHS Trust that was established in 2012. Our vision is to be one of the UK's leading pathology providers in the NHS. Our target operating model includes hospital-based services and a consolidated laboratory. However, we have just written a second business case for pathology transformation – recognising that the original approach to transformation had been flawed and that we have to think again.

So what have we learned, in no particular order?

- The NHS has changed over the last three years as financial pressures have increased and capital has become increasingly difficult to access.
- Pathology trends have not changed – growth in pathology testing by number and complexity is well described and likely to continue.
- Doing nothing is not an option. We all have responsibility to ensure that public money is spent wisely.
- Services should be designed according to what is best for the population and local health community – not the interests of individual organisations. This is one of the hardest challenges to overcome.
- We need to understand our customers properly. Focusing on the needs of patients is crucial to deliver pathology services that offer value in improving clinical outcomes. However, we also provide services for clinicians, trusts, commissioners, the wider NHS and private organisations. It is important to recognise those relationships are essential in order to deliver what they require.
- In some areas, investment in pathology services will deliver bigger savings elsewhere in clinical pathways. Therefore pathologists may be able to have a greater impact by focusing outside their service and developing gain-share arrangements than they can by just focusing internally.
- Good leadership is essential. It is almost impossible to deliver a sustainable transformation unless staff are fully brought into it, are involved in developing it and then share in delivery. People are our most precious resource and should be treated as such.
- The right vision must run through everything. Pathology is about much more than just the reporting of pathology tests. It includes clinical services embedded within trusts, education and training, research, and innovation and new test development. For us, these elements are core business and so must be part of the vision.
- A single team must be in charge. Empath was established under a joint venture agreement with a full board including managing director, which might seem to tick that box. However, that board and leadership team did not have full decision rights to manage resources and deliver change.
- Clear separation of transformation from routine operations. It is difficult enough to run a

pathology operation from day to day without trying to transform it at the same time. Ring-fencing the resource required to transform the service is crucial.

- Much of the infrastructure required to deliver current pathology services is not fit for purpose (e.g. IT services, information, supply-chain management, financial services). In order to operate across organisations the infrastructure must be well designed, road-tested and fully implemented before integrated working or consolidation is possible.

- Significant savings can be made without consolidation and consolidation is not the first step. Carter has always been clear about the opportunity for significant savings by professionalising the operating infrastructure including well-connected IT, excellent supply chain, procurement and contract management and high quality finance business partnering to support service managers. But consolidation is still important as a means to drive operational and financial efficiency.

- A wide range of pathology services can never be consolidated, usually because they are best delivered in close patient proximity or proximity to the clinical pathology team based in a hospital. As much planning is required to deliver those services well as is essential to develop a consolidated laboratory.

- Focus on quality is important. There is abundant evidence that high-quality pathology services are a prerequisite for effective clinical care and also that delivering high quality is financially efficient. Cutting corners costs money.

- The Sustainability and Transformation Plans (STP) represent an opportunity for pathology to engage in transformation of service on a regional basis.

- NHS Improvement is developing increasing grip and pace in its desire to drive pathology transformation where it has not happened already. We believe that consolidation of pathology services within each STP region will not be the whole answer. Working across STPs unlocks a whole additional set of opportunities.

- Some pathology organisations have managed to deliver genuine transformational change and we need to work with them and learn from them.

We have developed a new blueprint to transform pathology that we believe is realistic yet ambitious, gets the right balance of top-down strategy and bottom-up service-planning, balances local and consolidated operations and, most importantly of all, is actually deliverable.

Our blueprint is a five-step plan – but not necessarily happening one step at a time – to deliver transformation of pathology.

A. Clear and compelling vision

There are three reasons why this is so important:

- The vision provides clarity of purpose that is helpful in making decisions, e.g. the approach to develop a sustainable service may be different to the approach to reducing cost in the same service.

- A clear statement of core business versus what is optional: core business for our pathology service is much more than just providing an excellent pathology service but includes education, research and innovation.

- The right vision enables rather than inhibits the ability to work with other services in a positive way.

B. Design and implement an effective operating infrastructure

- This is a crucial step that takes time, effort and expertise from outside most pathology services to deliver. It's a big task within one organisation, and harder across organisations and STPs.

C. The right organisational form

- Requires the right governance framework to allow effective decision-making including control of resources.

- Delivers the operational flexibility to integrate and consolidate services (noting the Dalton Review, which indicated the need for healthcare leaders to think across traditional organisational boundaries and the wider health system).

- Defines employment of staff and legal framework for contracting.

- Defines the relationship with the private sector.

D. A strong local focus

- It is important that staff have their own service in which they can invest time and effort and be proud.

- Each service must contribute to planning within its STP footprint, including primary care.
- Each service must provide effective integration into trusts to be responsive to trust priorities.

E. Cross-regional focus

- Working collaboratively across STP footprints is important in terms of delivering maximum value to pathology services regionally.
- The end-point will be an integrated pathology service that delivers on local priorities and delivers regional value and efficiency.

So what are we doing next?

We are just at the starting line again but this time have a plan that seems to be a good balance of addressing current pressures and building for the future. We are building an operating infrastructure and organisation that will be able to operate effectively and deliver the required financial efficiencies while still delivering high-quality pathology to all our customers and therefore improving patient care.

Dr Angus McGregor, Clinical Director
Neil Callow, Finance Director
Rhiannon Griffiths, Commercial and Operations Director

Dr David Clark

Path Links – 20 years on

Path Links, covering Greater Lincolnshire, was an early pathology network, going back to 1998. This article gives a fascinating picture of how such a network evolves over time.

In the summer of 1997, the Chief Executives of the then five district general hospital (D NHS trusts in Lincolnshire (see figure 1) agreed to explore options for collaboration in the delivery of pathology services. Professor Roger Dyson from Keele University facilitated a series of meetings at which the clinical directors and laboratory managers developed the terms of an agreement. There was an 'open book' approach and all financial, staffing and workload data was shared. During these initial meetings it became apparent that the laboratories were paying significantly different prices for the same services and consumables, and that large cost savings could be achieved simply by standardising equipment and consumables and joint purchasing across the five hospitals.

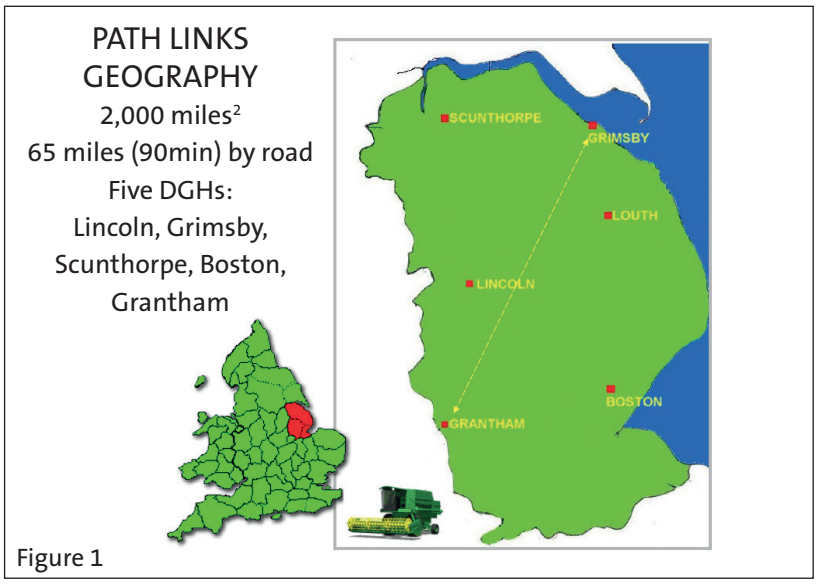


Figure 1

The foundation of the agreement that underpinned the formation of Path Links was a shared purpose: "The delivery of a sustainable, high quality, cost-effective, affordable pathology service to five acute hospitals and a million patients in Greater Lincolnshire."

The simplicity and clarity of the Path Links' organisational purpose allowed the status quo and options for change to be tested against it. Did each option meet the needs of service users? Was it sustainable, high quality, cost effective, and was it affordable?

The initial agreement created a federated network which committed each of the five trusts to move to standardisation of equipment, consumables and protocols (through a purchasing mechanism), and to develop a comprehensive five-year clinical strategy for the integrated delivery of pathology services across Lincolnshire. It was also agreed that the overall management costs would not increase and the existing pathology management teams would provide the leadership for the new organisation.

Path Links became an entity in February 1998. Pete Wisher, the Grimsby Pathology Services Manager, was appointed Path Links General Manager and I was appointed (Clinical) Director. A management structure that crossed existing organisational boundaries was put in place to manage the project. The Path Links Management Board (PLMB) was formed with a membership of the clinical directors and laboratory service managers from the five trusts. Clinical directorates (Cellular Pathology, Clinical Biochemistry, Haematology and Microbiology) were set up, Clinical Directors and Direc-

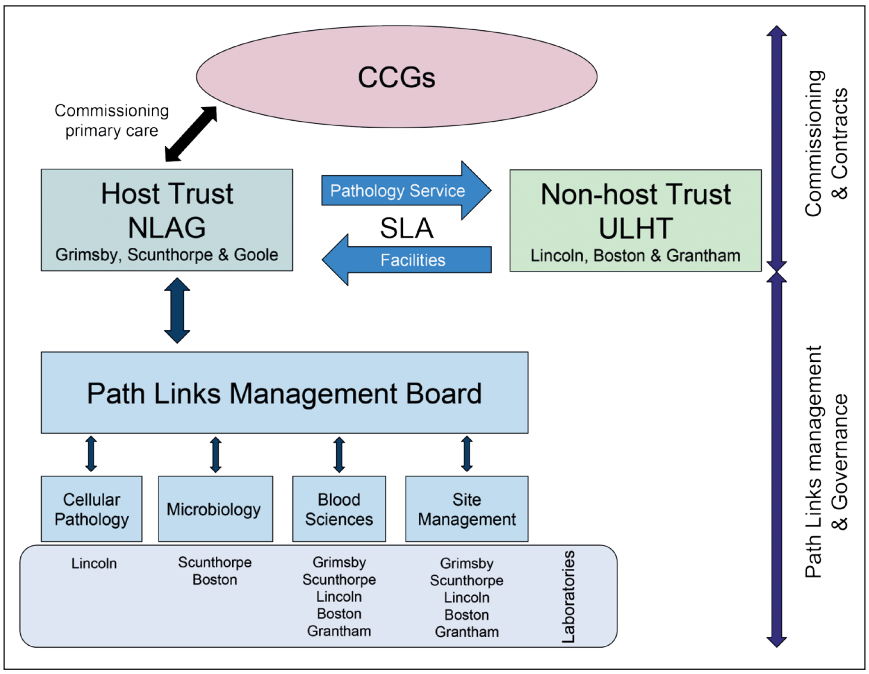


Figure 2. Path Links management, governance and commissioning arrangements. (Simplified) abbreviations: CCGs = Clinical Commissioning Groups, SLA = service-level agreement, ULHT = United Lincolnshire Hospitals NHS Trust, NLAG = North Lincolnshire and Goole Hospitals NHS Foundation Trust

torate Operational Managers were appointed and joined the PLMB. The role of the PLMB was to lead the development of the clinical strategy and supervise the creation of the new organisation. An operational managers group, chaired by the Path Links General Manager and made up of the site managers and directorate managed the implementation. The Path Links Director chaired the PLMB and with the Path Links General Manager was accountable to a board made up of the five trust Chief Executives who met on a quarterly basis to agree objectives and monitor progress.

The PLMB asked each clinical directorate to develop a comprehensive five-year service strategy and to develop three options: the status quo, service centralisation and service rationalisation. Each option was tested in a standardised process against non-financial benefit criteria (sustainability, quality, manageability, etc.) and a rigorous financial analysis (cost effectiveness and affordability). The process was set up to be open, transparent, inclusive and challenging. The process was managed internally by the staff who would have to implement the changes and no external consultancy was involved. The option appraisals from each clinical directorate were reviewed and approved by the PLMB.

The final clinical strategy was agreed in late 1998 and, following formal staff consultation, implementation started in 1999. Somewhat surprisingly, the Cellular Pathology directorate agreed to the most radical centralisation strategy. At that time there was a national staffing crisis in histopathology, and there were six unfilled vacant consultant posts across the five laboratories in Lincolnshire. The Cellular Pathology directorate agreed that creating a single consultant team served by a single laboratory (in Lincoln) was the most sustainable long-term option. Consolidation of the Cellular Pathology service started in late 1999 and was completed in early 2003. The Cellular Pathology laboratory in Lincoln more than quadrupled its workload to become one of the largest in the UK. The Haematology, Clinical Biochemistry and Microbiology Directorates opted for a strategy of rationalising low-volume specialised testing to a smaller number of sites and moving towards standardisation of all equipment, consumables and procedures. Immunology testing had previously been conducted within three of the existing haematology and clinical biochemistry laboratories with support from external consultant immunologists. It was agreed that all immunology testing would be consolidated within a new laboratory service (in Scunthorpe) with the creation of a new consultant immunologist post and, for the first time, a clinical immunology service within Lincolnshire.

Large cost savings were delivered as a result of standardisation of purchasing equipment and consumables and rationalisation of low-volume complex testing. This allowed Path Links a considerable degree of managerial autonomy as the Chief Executives gained confidence while the strategy was implemented according to plan, on time and on budget.

There was a successful bid for pathology modernisation funding for a single integrated IT system (laboratory information system) to support the delivery of the strategy. The new IT system was fully implemented across all directorates and all five hospitals by 2003-2004. A second modernisation fund bid to support the centralisation of cellular pathology services was also successful.

By early 2000 it was becoming obvious that the clinical strategy could not be adequately supported by the governance arrangements within the original Path Links agreement. During this period the five NHS trusts within Lincolnshire had merged into two organisations, Northern Lincolnshire and Goole NHS Foundation Trust (NLAG) and United Lincolnshire Hospitals NHS Trust (ULHT). The trusts undertook a review of management and governance arrangements and agreed that the management of Path Links should move to a host trust (NLAG). All staff (on all hospital sites) transferred employment to NLAG in April 2001. A service level agreement (SLA) was developed between NLAG and ULHT to ensure neither trust was disadvantaged by the new arrangements (see figure 2).

Annual business plans and objectives were aligned to the overall five-year strategy and a major

Table 1. How laboratory services were reconfigured across Path Links

	1997	2010
Cellular Pathology	**Five labs separate lab services based at each site**	**Single integrated service. Single laboratory (Lincoln)**
Haematology	**Five labs separate lab services based at each site**	**Integrated blood sciences service. Laboratories on each site. GP workload mainly in large "capacity" laboratory in Grimsby**
Biochemistry	**Five labs separate lab services based at each site**	
Microbiology	**Five labs separate lab services based at each site**	**Single integrated service. Two laboratories (Boston and Scunthorpe)**
Immunology	**Service delivered from three sites (haematology and biochemistry labs) and out-of-county referral of specimens**	**Single integrated service. Single laboratory (Scunthorpe). Consultant-led clinical immunology service**

strategic review was carried out every four to five years to ensure Path Links was able to deliver a service that met the needs of the two Lincolnshire acute trusts and primary care, and took account of changes in technology and other advances in the delivery of pathology services.

Over the next 10 years further consolidation occurred. Haematology and Clinical Biochemistry labs were merged to form Blood Sciences laboratories within a new Blood Sciences clinical directorate. Lean Management was introduced in 2006 leading to improvements in both quality and efficiency, particularly within Histopathology. The Blood Sciences laboratory in Grimsby was redesigned using lean principles and this became the principal site at which GP samples were analysed. Microbiology laboratories were consolidated from five to two laboratories. All disciplines became fully integrated county-wide services (table 1).

The consolidation of services was facilitated by the development of an integrated in-house transport network between the hospitals and primary care facilities. Our in-house IT team developed middleware to support the Lean Management processes. The team went on to produce results-reporting and order-comms software that was deployed across primary and secondary care allowing clinicians access to all of an individual patient's test results.

Reflections on change

By the time the Carter report was published in 2007 Path Links had already implemented all of the key recommendations. We were one of the 12 Carter pilot sites and benchmarking showed our costs were significantly lower than the level Lord Carter suggested would release 20% of the national pathology budgets for reinvestment (the infamous £500m saving). However, this did not prevent our management team being invited to a meeting at the strategic health authority to explain how we were going to deliver the 20% reduction in our costs required by Lord Carter.

Not everything we tried worked. Several attempts at wider collaboration with both public and private sector organisations failed to develop. The reasons were diverse, although the lack of a clear, shared purpose probably contributed. There is probably a sweet spot in laboratory consolidation – beyond this point the diminishing returns from consolidation/centralisation of services are outweighed by the costs of the increased complexity of the larger service. Moreover, the greater the number of Trusts involved, the more difficult it will be to reach an agreement that enables all parties to feel their interests are protected.

This is a personal, insider's view of almost 20 years of change. It is by necessity abbreviated, and undoubtedly biased by my own views on managing change. I have deliberately spent the bulk of

this article describing how we developed the management system and processes that enabled us to build consensus and deliver change. The reconfiguration of services that occurred was an outcome of that process. The strategic outcomes were designed to deal with our particular situation and were implemented by the managers who developed them. They were locally owned.

I believe local ownership and professional leadership of change is vital. In table 2, I have outlined the things that are within the control of local leadership teams that increase the chances of success of any large scale change. However, these are not sufficient in themselves. We were lucky: I had the privilege of working with a team of professionals who took on leadership roles in every discipline across the entire service and committed themselves to a shared purpose; Chief Executives who gave us autonomy, support and long-term objectives instead of short-term imperatives; and access to capital to support key developments. If there is any lesson to be learned from our experiences I suspect it is from understanding how we navigated the journey rather than studying our destination after we arrived.

Dr David Clark
Consultant Cellular Pathologist at Path Links
Consultant Haematopathologist at Nottingham University Hospitals
(Path Links Director 1998-2014)

Table 2

1. Start with 'why'. A meaningful shared purpose is the core of any successful organisation. Purpose is enduring – it should shape goals and be the standard against which plans for change are evaluated.
2. An inclusive local leadership team (professional and managerial) committed to the core purpose and prepared to challenge the status quo is essential.
3. There should be open, objective and inclusive processes for developing and evaluating options for change.
4. A strategic vision and plans for implementation need to be explicitly linked to the purpose of the organisation.
5. Two-way communications with staff is essential. It is rarely perfect and often problematic. Do your best to be open and honest, accept you will make mistakes and be prepared to acknowledge them.
6. Plan carefully, in order to implement quickly and incrementally. Ensure there are quick wins. Create momentum – it is possible to travel a long way in a series of small steps.
7. Avoid creating a grand vision dependent upon a single large business case – it risks stagnation and loss of focus.
8. Seek advice and learn from other people's experiences, but avoid transplanting other people's plans or outsourcing strategy to outsiders or consultants – such plans are rarely implemented.
9. Create management structures that are not dependent on individuals. People move on.
10. Never lose sight of your purpose

Moving cellular pathology from 'bricks' to 'clicks'

Dr Branko Perunovic

Dr David Hughes

This article from Sheffield gives an excellent picture of how the use of digital pathology can facilitate provision of streamlined services in cellular pathology.

This article describes a novel approach to consolidation of cellular pathology, following conventional rationalisation of diagnostic services across two hospitals within a single trust in Sheffield.

We would like to share our experiences of two very different forms of consolidation of cellular pathology services: a 'traditional' merger of two departments, which we lived through in the past, and a completely different process of sharing work across a region, which we believe may be a future model of how consolidation could be achieved in a constructive, collaborative and forward-looking way. We do not tend to see this as two disconnected stories, but rather as two stages of our journey, united by a constancy of purpose to future-proof equitable access to subspecialist cellular pathology for all NHS patients.

Physical consolidation of all pathology services

Our first experience involved bringing together two separate laboratories within one organisation. Shortly after the millennium, all of the adult hospitals in the City of Sheffield merged to form Sheffield Teaching Hospitals NHS Foundation Trust. At the time of the merger, there were three separate histopathology laboratories, the largest at the Royal Hallamshire Hospital (RHH), a smaller general histopathology laboratory at the Northern General Hospital (NGH) and a very small specialist oral and maxillofacial pathology laboratory hosted by Sheffield University Dental School. Apart from a gross asymmetry of size, the laboratories at RHH and NGH had very different operational models and disparate cultures. The NGH unit also had a significant longstanding challenge to recruit and retain consultants.

Laboratory medicine as a whole was quite dispersed across our sites and some elements of it were in ageing and suboptimal accommodation. As a result of this, a plan was developed for the consolidation of the majority of blood sciences and microbiology at the NGH in a new building, with a reciprocal consolidation of cellular pathology at the RHH site. The logic of this was to consolidate the laboratory services at the site where most of their work originated. The Dental School's lab was 'set to one side' and has only very recently been incorporated into this process.

The intended benefits of the cellular pathology merger were to give a more resilient critical mass on one site in terms of staff and equipment, and to modernise and harmonise practice. In reality, given the significant differences between the two units, it was very difficult for this to be seen by a proportion of NGH staff in any other way than that they were being closed down, taken over by the RHH and forced to adopt an alien service model and culture. However, this changed with time as it became clear that the development was definitely happening as part of a strategy aimed to safeguard longterm sustainability of the service, and that change was equally affecting staff at both units across the city.

Workforce development

The physical merger of two labs was only a part of the comprehensive programme, which was also looking into virtually all other clinical, operational and financial aspects of the service. Its key element was end-to-end workforce development with full subspecialisation of the consultant workforce and a skill-shift of the scientists, including the roll-out of advanced scientific roles.

A novel model deployed for subspecialisation comprised the introduction of Self-directed Subspecialist Diagnostic Teams (SSDT). The teams were tasked with 'ownership' of reporting resources, expressed as Direct Clinical Care Programmed Activity units in job plans of individual members, and responsibility for service delivery within their clinical domain. In line with our philosophy of devolved leadership, SSDTs were encouraged to take responsibility for their own performance and team-building. Real-time software dashboards were developed by our own IT team to help facilitate teams' self-governance and performance management.

With the exception of a few monospecialists, the majority of consultants remained oligospecialists, with two or – exceptionally – three subspecialties in their portfolio. We have put a lot of effort into accommodating flexibility and facilitating various profiles of part-time clinical work. More recently, we have further refined this setup by aligning it to the recommendations from the Royal College of Pathologists' Guidelines on Staffing and Workload, which, through the introduction of the 'activity currency', added clarity and interoperability for the core and '*ad hoc*' activities, related job planning and pay. As predicted, these interventions improved productivity and job-attrac-

tiveness, and successfully addressed consultant recruitment and retention: the department currently does not carry any long-term vacancies in medical staff. Our focus on subspecialisation was not only guided by expected positive effects on quality or the bottom-line. Largely due to the proximity of the regional Haemato-oncology Diagnostic Service hosted by Laboratory Medicine, we concluded that the subspecialist cellular pathology model was the only viable model for successful integration and mainstreaming of the rapidly evolving advances in molecular pathology and genomics.

The introduction of advanced scientific roles was also a principal element of our workforce strategy. We have rolled it out for specimen dissection and our current team is comprised of three Advanced Practitioners. Training was facilitated by the Specimen Dissection Course, co-founded with Leeds and Airedale, and hosted since 2010 by the North of England Pathology and Screening Education Centre, a strategic partnership between Sheffield and Manchester. We were the first to introduce Advanced Practitioners in Ophthalmic Pathology.

The key role of digital pathology

The final touch to our programme was the introduction of a digital pathology solution for the support of intraoperative frozen sections at NGH. The use of intraoperative frozen sections in our organisation has very much reduced over the past decade, but one area of practice in which it is still frequently used is thoracic surgery, which is based at NGH. We considered various options including having a pathologist presence at a small satellite lab at NGH. However, this had two distinct disadvantages. Firstly, it was a disruptive and inefficient use of consultant pathologists' time. Secondly, there was no opportunity for getting an immediate second opinion on difficult cases. This has led us to develop a system that exploits what is now well-established digital technology. A biomedical scientist prepares the specimen on receipt with supervision via a videolink, scans the frozen section slides, and the digital images are then viewed by the pathologist at the RHH site. One of the authors can say from his personal experience that it is slightly scary the first time you do this for real, and it is important to prepare well if you are not used to using digital images in your day-to-day practice. However, four years down the line, this system is now thoroughly embedded and has opened our eyes to the possibilities of digital pathology for cross-site working and 'virtual consolidation'.

So are we better off now? There are clear operational and financial benefits to the consolidation of laboratories, both in regards to specimen processing and reporting. Clinically, having every cellular pathology discipline on one site facilitates the development of subspecialist teams, support for the full range of multidisciplinary teams and allows easy access to internal expert opinions. Scientific staffing is generally not problematic – some members of staff have left, largely to pursue career progression. We experience a relatively high turnover of BMS staff, but that reflects the low average age. The size of the staffing pool is sufficient to absorb this and maintain business continuity. We have managed to go through the whole change process with a consistently healthy bottom line. We have not succeeded in embedding all the best elements of both laboratories across the board, but have done well with a significant number, focusing on those that are stepping stones for future developments. Perhaps the greatest measure of the value of this consolidation is that no reasonable argument could now be made to reverse it. We may not yet have achieved all of the benefits that we would have liked, but it is difficult to see any benefits that could come from a return to the past model. And perhaps, in the longer term, the greatest benefit of the merger has come from the insight we have gained from solving a significant practical problem that we encountered in carrying out the merger of the NGH and RHH laboratories.

Further developments

With the aim to further build on the learning from this experience, we had started to explore alternative models for collaboration and integration, this time across organisational boundaries. An opportunity emerged with Hull and East Yorkshire NHS Trust. Many of us are familiar with the problems that a sparse cellular pathology workforce brings – laboratories in Yorkshire and Humber are not an exception. Recently, our colleagues in Hull have had to deal with staffing shortages and the combination of this practical problem and an imaginative collaborative approach that has developed between the Neuropathology teams in Hull and Sheffield sowed the seeds for the EASY Path development. EASY (East and South Yorkshire) Path is a collaboration based on the transferability of work through digital pathology enabled by the Philips IntelliSite digital pathology platform. Traffic of patient demographic and clinical information, macroscopic descriptions and digital microscopic images, requests for additional laboratory work and reports can all now be established in a robust and straightforward way. So far, we have primarily used this approach for gastrointestinal pathology where the large volumes of small biopsy work represent a good starting point to gain competence with the use of digital images and accompanying technology, but we believe this model should be equally applicable in all areas. This approach can simply be used as a means of meeting a capacity shortage in a similar way to 'traditional' remote reporting, having the advantages of greater speed

Sheffield Teaching Hospitals EASY Path founding team (2015) (L to R): Dr Branko Perunovic, Clinical Director of Laboratory Medicine, Dr Jonathan Bury, Clinical Lead for Histopathology, Louise Dunk, former Directorate Manager, (currently Head of Cervical Screening for Public Health Wales) and Emma Colgan, former Lead Lab Manager for Histopathology (currently Directorate Manager of Laboratory Medicine)

of reporting turnaround and the service being provided by a team working within a single clinical governance system.

What did we learn?

We feel that it is important to share here three important lessons that we've learned on this journey. The process of consolidating laboratories – from the start of planning, through building works, to the final move – took five years. Consolidations or organisational development initiatives are easy to talk about, but, no matter how straightforward they look, they inevitably represent massive change management programmes and take time, even within a single organisation. Individual laboratories develop their own internal cultures, ways of working and sense of identity. Dealing with these is far more difficult than dealing with redeveloping estate.

Secondly, there is no unlimited pool of organisational energy for driving the change and, at the same time, ensuring business continuity of existing services, addressing *ad-hoc* problems, meeting organisations' cost improvement targets and keeping the books in balance. However, it is very easy to bite off more than one can chew. At the end of the day, service improvement projects are fun to plan and easy to initiate. Unfortunately, it proves to be even easier to let them imperceptibly wither away. The NHS is, indeed, a graveyard of innovative and promising pilots. We had to learn to use an incremental approach with a healthy and honest attitude to risk and failure. This approach gives us confidence to 'fail fast' and with minimal adverse effects if something does not work, then pivot to test and refine other solutions.

Thirdly, this type of change is never about technology, even when it was about digital pathology. Technology can obviously be important and can pose significant financial and implementation challenges. However, in our case, its main purpose was to shrink geography and, ultimately, to enable us to focus on the innovation of the service model. New service models may indeed require change of tools and processes, but where the rubber meets the road it is mainly about a change of norms and behaviours. Therefore, implementation did not pose a technical challenge, as much as an adaptive one. With an adaptive challenge, people are part of both the problem and the solution, so the leadership required is the one that activates and empowers people to get on and solve problems.

In summary, our journey was not linear. It was long and challenging, but it was also a very rewarding learning experience which gave us impetus to a transform a traditional organisation into a modern and agile one. Also, it will provide opportunities to join up existing skills and resources across the region as the part a wider group within the South Yorkshire and Bassetlaw STP and the Working Together Partnership Vanguard, and to transform the way in which Cellular Pathology services will be delivered in the future.

Dr David Hughes
Consultant Histopathologist
Deputy Medical Director
Sheffield Teaching Hospitals NHS FT

Dr Branko Perunovic
Consultant Histopathologist
Clinical Director of Laboratory Medicine
Sheffield Teaching Hospitals NHS FT

Simon Knowles

Southwest Pathology Services: a joint venture with an NHS majority

This final article in the series provides an account of the establishment of Southwest Pathology Services, illustrating that being open-minded to new approaches to management can deliver excellent results for patients.

Caveat: *This short piece is an entirely personal recollection of the events that led up to the establishment of Southwest Pathology Services (SPS), a joint venture between the NHS and a private company in 2012. I have no residual links to the service, either personal or financial, having retired from clinical practice the following year. I am not in a position to judge the longer-term performance of the organisation.*

Background

The acute hospitals in Yeovil and Taunton serve a local population of 500,000 people in Somerset and West Dorset. They have a history of laboratory cooperation that dates back to the first pathology modernisation initiative of the late 1990s. At that time, the two laboratories were functionally merged into Somerset Pathology Services (SPS) with the tagline "a single service on two sites". Underpinning the change sat a £1m new laboratory information system (LIS), funded through the Pathology Modernisation Programme, that held the demographic details of everyone in Somerset. Microbiology was moved wholesale to the Musgrove Park Hospital site in Taunton. The remaining services remained relatively independently, but with the chemistry and haematology services merged as a blood sciences service. At a consultant level, only cellular pathology remained site-specific.

The original vision of a unified single service failed to be completely implemented, but not through lack of clinical vision or will. It foundered largely due to corporate departmental cultural obstacles: it proved impossible to get consensus between the two Foundation Trust (FT) finance departments over accounting and the two HR departments over who would employ the staff and on what terms and conditions. This was compounded by several years of instability at Chief Executive level at one of the trusts, making it difficult to find the political will. Other issues included in-patient phlebotomy which was provided by the lab at Yeovil but not at Musgrove Park; and courier services, which were hospital based. So that, despite an early move towards rationalisation, by the time of the Carter review in 2008, little further progress had been made towards a fully integrated service.

On the positive side, the single LIS provided an excellent foundation for the introduction of electronic test requesting and, at the time of the decision to put the service up for tender, over 85% of GP requests were coming in via Order Communications. On the negative side, the estate situation in Taunton was a major and pressing problem. Musgrove Park was originally a USAF hospital from the early 1940s. A microbiology laboratory had been built on the grounds in the days of the Public Health Laboratory Service, but the bulk of the laboratory estate was based around aged, single-storey units. The entire footprint was designated for future clinical use so there were multiple reasons to exhume the plans for a broader integration of laboratory services.

The process

The combination of the estate pressures, the Carter review of pathology services, willing chief executives and two senior consultant pathologists with extensive experience of large-scale, corporate laboratory medicine (in Australia and Europe), led to the decision to take the vision further forward. A project board was put together that included the Chief Executives, Directors of Finance, Non-Executive Director and Senior Pathologist from both the FTs along with the General Manager of SPS and, intermittently, a representative from HR. Because the trusts were faced with a wide range of possibilities, it was decided to seek expressions of interest for a competitive dialogue, allowing any option to be tabled. Although the first conversations revolved around a conventional managed contract, the preferred option would have been an arm's length organisation along the lines of an 'NHS Diagnostic Foundation Trust', a suggestion made by a variety of individuals to the Carter review. This was an option not favoured by Lord Carter.

Aside from clinical considerations, one factor dominated: the need to invest significant funds into a new build. One of the original reasons for the creation of Foundation Trusts was to provide hospitals with the ability to behave in a more commercial fashion, with the ability to borrow funds for investment. At the start of the planning process this might have been an option. However, with an increasingly hostile financial landscape and with the major risk-aversion of most NHS organisations, FT or otherwise, this never gained real traction.

The early field in the competitive dialogue process included all the usual suspects, from major equipment providers through to a range of inde

SPS Hub Lab, Taunton, Somerset

pendent laboratories, some with and some without UK and NHS experience. There were essentially three models: managed contract, outsourcing and joint venture. Ultimately, the preferred model was a three-way joint venture: the two FTs and an independent provider, with the NHS partners maintaining a majority stake. The really attractive aspect of this model was that it allowed for growth: any commissioner or service could join the organisation, either as a client or as an additional partner in the JV. This is the model which prevailed, but only after a very protracted dialogue with our preferred provider, Integrated Pathology Partnerships (iPP), where it was made very clear that the status of preferred partner did not guarantee a contract if the deal was unfavourable or stood to jeopardise clinical care.

Rebadged as Southwest Pathology Services, the joint venture between iPP and the two Foundation Trusts was launched in 2012 and the main services moved into a refurbished, off-site facility in May 2013, opened by Lord Carter. The process of 'TUPE-ing' NHS staff across to iPP concluded at roughly the same time.

The learning

Without going into the details of the occasionally bumpy road to realisation of the vision, I think there are some useful pointers that might help other services contemplating consolidation. In brief: Get a good project board and include individuals with non-NHS experience (and listen to them). The NHS is profoundly risk-averse. As we got nearer to a contractual decision, progress slowed dramatically. The intervention of a recent non-executive recruit to the programme board – someone with a background in venture capital – re-energised the process by identifying that the point had been reached where we needed full disclosure in order to advance the conversation with our potential partner.

While negotiations are proceeding, don't put laboratory development on hold. The process is lengthy and the better the state of the service at the time of transition the smoother the process will be.

Communicate constantly with your staff and service users, even when there isn't anything new

to say. Change is scary, TUPE doubly so: any conversation with the independent sector is privatisation until proved otherwise.

Communicate constantly with your potential partners. Even within the NHS, different organisations see things differently. One of the reasons the SPS process was successful was that we spent a great deal of time getting to know each other and making sure we talked the same language. Festina very, very lente.

When working towards economies of scale, don't try to downsize until you've actually made the infrastructural changes. SPS made a conscious decision to cut staffing numbers (by closing vacant positions and through the use of voluntary schemes) prior to moving to the new facility at the hub on the grounds that it would be more unpleasant to downsize later. However, trying to manage the HR issues at the same time as a geographic move, the introduction of major changes in testing platform, modified working hours and the introduction of two hot labs while managing the workload of two acute hospitals and over 100 surgeries? Not such a good idea on the back of a smaller workforce. This risk was flagged early on by a non-executive director, but without effect.

Underpin every test of change with meaningful data. It is likely that some of this will be unavailable through the LIS or hospital systems. There is nothing wrong with using paper. Good data is a powerful tool for winning round change-averse individuals (the 'laggards' in the change bell curve).

Above all, make sure your general manager is the best person for the job. The specifications are exacting: they need to understand processes and flow; they need to be competent in change management; they need to have the respect of the project board, senior clinicians and – crucially – all laboratory staff. Many laboratory managers are technically excellent. But what is needed here is organisational competence and high-level people skills. If these are in relatively short supply, buy in a temporary transition manager with the skills and experience.

Final comments

In my opinion, the joint venture model has a great deal to commend itself. A JV need not, of course, include a commercial partner, but there are real strengths in using commercial expertise and in finding ways to escape the constraints of NHS bureaucracy in areas such as procurement, while preserving the underlying values of a public service. For example, the final platform chosen by iPP for HPV testing was by no means the cheapest. It was purchased after the cytology staff had undertaken a rigorous analysis of the competing systems and had provided a compelling case for one platform in particular. It is important to overcome the usual public sector prejudices about private sector behaviour. Interestingly, our commercial partner made no attempt to shoehorn all histopathology services on to a single site, preferring to explore the telepathology option, leaving consultants at their clinical 'point of care'.

The SPS joint venture model does not equate to outsourcing, although there is no reason why a new client shouldn't outsource their work to the venture if that is seen to be the most sensible route to protecting quality and cost. On the other hand, a substantial hospital trust might wish to become a major stakeholder in the JV, helping to forge policy and strategy. Whatever contractual model is finally chosen, there are clear potential benefits.

On balance, I found the SPS experience both exciting and positive. We could most certainly have done things differently in hindsight and I know that the current leadership will use the learning constructively, as SPS takes on more clients and more partner organisations. My single take-home message would be that it's all about the people: it doesn't matter how good the business model is – without the right personalities in place it will be a very bumpy ride.

Simon Knowles
Retired cellular pathologist
Improvement coach and consultant

The Royal College of Pathologists

Pathology: the science behind the cure

The Royal College of Pathologists
21 Prescot Street
London E1 8BB
Tel: 020 7451 6700
www.rcpath.org
@RCPath

July 2017