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 differences 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.)

Figure 2: Regional comparison of pathology services

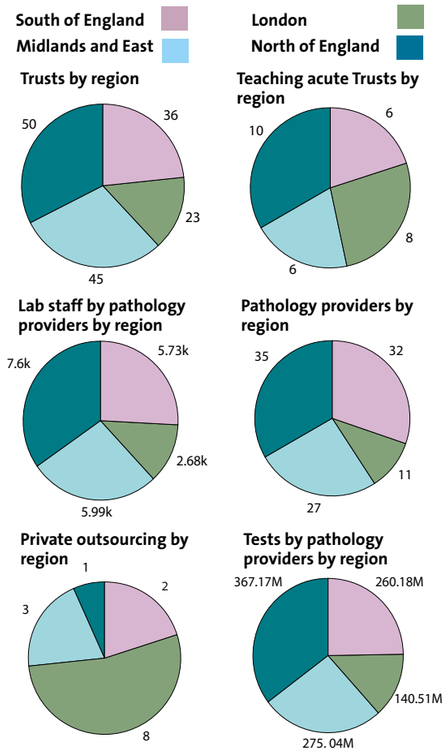


Figure 3: Variation in use of medical laboratory assistant (MLA) and biomedical scientist (BMS) staff in acute teaching trusts

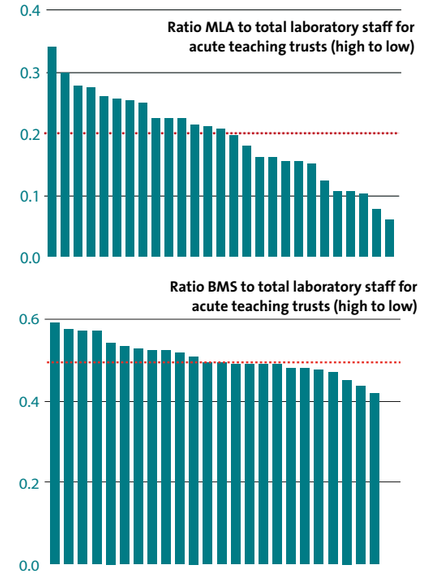
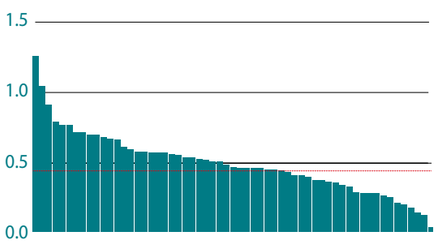


Figure 4: Average non-pay cost per blood sciences test for large and medium acute trusts



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.

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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.

Professor Jo Martin

Professor Roger Feakins

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.

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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.

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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 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.

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

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.

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Reference

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