



**The Association for  
Clinical Biochemistry**

# **Advantages and Disadvantages of Managed Networks**

## **Experiences reported by representatives of current Networks involved in the Carter Pilot Scheme.**

We are exceedingly grateful to those staff in the Carter Pilot centres who attended a meeting at the ACB Offices on September 26<sup>th</sup> 2006 and subsequently provided the following insights into their experiences of running networks of varying sizes and types.

The views are personal and do not necessarily represent the views or recommendations of the ACB itself. They are intended to give a general picture of some of their experiences for comparative purposes with other networks, and to share with others yet to be involved with networks both the network formation process as well as some of the advantages and disadvantages subsequently observed. It is hoped that this may help prepare them for change in the future and to evolve best practice.

The experiences are in no particular order and the script has been anonymised as much as possible.

## **EXPERIENCE 1**

### **Advantages**

1. Greater purchasing power
  - a. Routine / core equipment
  - b. Specialised
  - c. Improved partnership working with diagnostic companies e.g. managed equipment services contract(s)
2. Greater / easier access to specialised services / expert advice
  - a. For users of the service
  - b. Enhanced training opportunities for scientific and medical staff
    - i. Improved career pathways within network
    - ii. Improve recruitment
3. Opportunity to standardise and improve analytical service and overall quality of clinical advice across a greater geographical area
4. Share best practice
5. Ensures no single-handed consultant working
6. Integrate planning of Pathology services across network
7. Able to attract funding owing to size / complexity of network that may not otherwise be available
8. Remove duplication and competition and increase efficiency
9. Greater pool of senior staff to help create policies / protocols in response to demand from:
  - a. DH
    - i. NSFs
    - ii. NICE
    - iii. QOFs
    - iv. Etc
  - b. PCTs
  - c. Clinicians across network
  - d. Other drivers for healthcare reform
10. Learn from successful initiatives within network

### **Disadvantages**

1. Change and decision making may be slower as may need
  - a. Network buy in
    - i. Pathology
    - ii. Host Trusts
  - b. To overcome usual barriers to change e.g. staff at all levels want to protect own patch / working practices
2. Requires greater investment in infrastructure
  - a. IT
  - b. Transport
3. May adversely affect service delivery in the short-term
  - a. Personnel issues must be resolved and can be more complex than in a single institution
    - i. Common terms and conditions for all staff
    - ii. May need to re-locate staff
    - iii. Some staff may feel that they have lost status and power and therefore disengage, at least initially
  - b. Takes time for staff to develop commitment and allegiance to network rather than just to the previous base. This can erode goodwill and therefore adversely affect service delivery in the short-term
4. Financial difficulties in host Trust may affect whole network

## **EXPERIENCE 2 - "EXPERIENCE OF NETWORKS – GOOD AND BAD"**

Carter defines networks as: "an organisational framework that delivers an integrated service to a defined standard to meet the needs of all patients, and their carers, within a prescribed geographical area".

The majority of clinical chemists have ever been eager to meet with their neighbours for professional support, information sharing, practice comparison, and reassurance. During the 1960's, before the formal establishment of National External Quality Assurance Schemes, teaching hospital groups and other hospitals collaborated to produce pooled serum samples and compare analytical performance. These 'quality assurance' groups were maintained in the succeeding decades to compare NEQAS results and discuss differences in practice such as the constituents of organ profiles. Special interests were supported by mutual agreement to refer infrequently performed assays to one site. Single handed practitioners agreed to cover each others' absences whilst on annual leave. Such networks were organised by and for the benefit of the participants; that of the users and patients was implicit if considered at all. Professionalism and peer pressure maintained an efficient and effective consensus. These groups either did not survive the introduction of a competitive internal market in the 1990s, or evolved into non-contentious training and clinical governance fora. Nevertheless, participation in the ACB mail-base illustrates that the spirit of collaboration is still very much alive in clinical chemistry.

The recent resurgence of pathology networks may have had more to do with the difficulties of the single-handed practitioner. This was particularly true of histopathology departments, who were expected to demonstrate anatomical site specialisation within cancer units and centres following the Calman-Hine report. Lead-in times for training and recruitment as well as cost meant that these standards could only be met through collaborative networks. At the same time, expanding workloads created pressure for increased laboratory space in competition with bed-holding specialties. This encouraged the re-examination of 'hub and spoke' arrangements that some in our specialty had been suggesting for many years, and alternative cost-effective and market-tested solutions.

The model adopted in my current working environment is a 'partnership'. One 'lead Trust' takes responsibility for managing the service, including the analytical equipment and IT support, and employing the staff, excepting those in senior medical and scientific positions. This lead Trust then provides all the analytical pathology services under a service level agreement with their 'partner', at an agreed annual price based on notional test costs and monitored volumes. This is paid in equal monthly instalments, buffered so that under or over trading outside agreed limits can be paid for at the end of the year at discounted marginal rates. Advantages of this system included an assured source of income for the lead Trust and predictable expenditure for the partner. However, there was no direct sharing of financial risk or benefit in this system as would be found in a true partnership, and the partner Trust is not involved in managing the service.

An immediate effect of the agreement was the reduction of the partner laboratory to a provider of core services only, with loss of staff and equipment to benefit the whole laboratory community. Whilst a wide range of almost completely automated tests remains 'in-house', the pressure on staff is unremitting, without the relief of rotation through the challenging but lower workload sections of 'special tests'. Senior staff became unhappy to

the point of bitterness at the losses of these special interests and autonomy of decision making, and a lowered sense of worth compared to their colleagues in the lead Trust within which all the power was now invested. The technically and clinically demanding low volume analyses continued in other centralised locations, in some cases in a free-standing facility somewhat remote from any of the hospitals involved. Whilst these laboratories were furnished and equipped to a high standard, communication between these services diminished and seemed to lose the sense of clinical imperative.

The situation deteriorated following the merger of the lead Trust with another large neighbour, creating additional management problems that distracted attention away from the original partner. The difficulties of managing an increased number of separate locations with conflicting cultures and their own agenda encouraged a centralised and authoritarian approach, in which decisions were made only by those at the centre. Longer lines of communication meant that decisions once taken by the local Head of Department now had to be presented and debated through an extended organisational structure and at times another Trust's management. Attitudes became polarised and have really only improved after a number of retirements.

A major disadvantage of this model has been that the whole service, including that provided to the partner, became the management prerogative of the lead Trust. Thus when financial pressures on that Trust led to the usual short-term expediencies of vacancy freezes and universal cost-improvement targets, these directly affected the partner laboratory. Negotiations and decisions made between the partner and lead laboratories were vitiated by the financial and political imperatives of the lead Trust, leading to frustration of all in the partnership. After recent management changes in the partner Trust, the arrangement has come under more rigorous scrutiny than was applied by the complacent former administration that approved the scheme initially. This has helped to empower the partners acting within the structure.

One must acknowledge that there have been benefits of the arrangements. The ready availability of professional support, advice and cover; standardisation of laboratory services within an area where patients may move between hospitals; the economic buying power of a large organisation; integrated information systems; and the availability of an assured alternative source of analytical capacity in times of system failure are all welcome. And, it must be admitted as head of the partner department, is the ability to choose to disavow any responsibility for any deficiency in the service that I do not directly provide. But these benefits do not require that the partner should surrender power to the extent I have described, and their choice has been more influenced by the preferences of the lead than the partner.

My preferred network model would be one in which the participants, who might include Trusts and the independent sector, may contribute equally to the management of the service at strategic, tactical and operational levels. Within this structure, decision making would be delegated to the lowest competent level. Evidence-based standards agreed with the users and commissioners would be monitored within an overall quality framework. This should be an organisation with which staff might identify instead of remaining within the silos of 'us' and 'them'.

If this exercise should identify such that exists, I would be pleased to learn from it!

## **EXPERIENCE 3**

### **NHS Foundation Trust Pilot Site Experience**

There's very little clarity on how the pilot site process will work. We met with Chris Price and Edmond Waterhouse from the Review Team at the end of September to discuss possible options. The meeting included our Chief Executive and the Clinical Lead for the Pathology Network.

Since the publication of the Review, circumstances have changed within the pathology Network with three out of the four trusts preparing a tender for their pathology services. There's a high degree of uncertainty as to whether the Network can submit an in-house bid for pathology and also what the best configuration for the service might be. It has also stopped plans for a Network-wide IT solution.

The trust not in the tender process may bid for parts of the tender and use the Pilot Site process to explore changing working practices, commissioning arrangements and the optimum size for clinical networks. We're a Trust that is exploring lean methodology in some areas and there's a need to move this into pathology.

Next Steps – waiting to hear from the review team on moving forward, setting up a national steering group etc.

## **EXPERIENCE 4**

### **1998 “managed network”**

*(Population 700,000 with 4 million tests per annum)*

- Single integrated management structure and budget
- Joint ownership by the Trusts through Pathology Board (CEO & Finance Directors from both Trusts with network Director and Medical Advisor)
- Radical redesign of service between sites, planned to play to each site’s strengths as a complementary use of skills and experience
- Single integrated governance structure
- Single clinical leadership and accountability
- Integrated IM&T
- Integrated transport managed by PPS
- Cash release saving over 5 years £1.5 million
- Re-investment >£1.5 million
- New Consultant staff appointed on joint contracts with clinical sessions at each Trust
- Rationalisation of disciplines and testing across sites

#### **What does work?**

- Rapid decision making within Pathology
- Ability to respond swiftly and collectively to initiatives from the PCT, SHA or Government bodies
- Single company procurement for major analytical systems across pathology disciplines
- Movement of resources to fund new initiatives (molecular pathology)
- Rationalisation of testing services across sites
- Some rationalisation of instrumentation across sites
- Enhances clinical governance arrangements (some disciplines)
- Improved career opportunities for BMS staff willing to work across site

#### **What doesn’t work?**

- IT – no ‘end to end’ connectivity
- Joint working of Trusts in the network is problematic below the level of executives - HR, IT, etc. Very difficult to engage and commit either Trust to owning and solving IT problems
- No merger of Trusts therefore staff have different employers and terms & conditions. AFC banding conducted separately for same grades!
- Time taken (5 years) to adjust to the new network culture
- Introduction of pre-analytical robotic automation to cope with reconfigured workload led to significant staff turnover at BMS1 level

## **EXPERIENCE 5**

### **Advantages**

- Organisation of pathology into a county-wide network set within a single Trust (the host Trust) has produced stand-alone directorates for each discipline. This appears in most ways to be directly in accord with the main principles of the Carter report
- The discipline-specific directorate structure is arguably an easier way to manage staff and resources, with far less inter-discipline wrangling
- This in turn, streamlines professional organisation of staff and budgets by having a single finance office & human resources department, with all staff employed by a single employer
- Team working, giving better and broader experience to consultant teams with better provision for covering annual and study leave
- It follows from this that the networking of the pathology computer across our geographical area allows consultant staff to access the authorisation queues of colleagues from their home site when covering annual or study leave of colleagues on other sites
- Electronic reporting of results to both primary & secondary care is effected by a single IT facility run from the host trust
- Regular site visits to other laboratories within the network promotes good working relations with other BMS staff and also better liaison with clinical staff
- Promotes harmonisation of all major areas of routine working, with commonality of computer system, analyser platforms, methods, reference ranges, clinical investigation protocols, and reference sites for “sendaway” tests
- Larger critical mass has enabled significant savings from county-wide equipment/reagent procurements
- Major tender exercises are a cooperative venture from start to finish with less work per site as a result – delegation of work associated with the tender process lessens the individual burden of work. Evaluation of analysers and methods, including reference range checking / determination is made easier by the same principle. Availability of patient samples from multiple sites allows for a larger pool of data with less individual effort than would otherwise be the case
- The use of identical analytical platforms across the county ensures greater service resilience and also minimises risk of reagent supply problems
- Membership of a network provides better audit opportunities
- Co-operation within a Pathology network has also encouraged networking in non-pathology areas – e.g. Diabetes networks, Point of Care testing
- Rationalisation and centralisation options for low volume work allows better organisation of the analytical repertoire. The increased work-load of low volume assays across the network has allowed more opportunity to repatriate work and increase diversity of work locally. This is also of significant turnaround time and financial benefit
- Centralisation of Histopathology has enabled sub-specialisation and help minimise recruitment problems at Consultant level

- Centralisation of Immunology has enabled appointment of a Consultant Immunologist with subsequent development of local/network Clinical Immunology services and provides greater research opportunities
- The network straddles 2 SHA's which allows access to 2 sources of pathology modernisation money when initiatives arise

### **Disadvantages**

- The formation of single large directorates inevitably increases the “turning circle” of the decision-making processes involved in day-to-day routine working
- The structure of the network has engendered a larger number of senior staff meetings. Directorate meetings are monthly, which on occasion is inadequate
- Meetings are invariably held on the most geographically central site involving substantial travel by senior staff. This has not yet been convincingly addressed by the universal installation of workable video conferencing facilities
- The global NHS IT network covers 2 NHS trust which can slow down processes such as agreement on LAN networks within the trusts, access to trust intra-net sites for some staff working in the non-host trust

## **EXPERIENCE 6**

We are not part of a managed network; we work together with other local providers on a mutual benefit basis.

There are two main acute trusts in our area, and we share our Chemistry Consultant On-Call rota, between two staff here the Consultant at the other Trust who in addition he works two days with us whilst a Principal Biochemist works two days there. This has many advantages, especially strengthening both services, and as far as we know no disadvantages. In addition we do all of the other sites Consultant Clinical Authorisation remotely as well as dealing with GP enquiries etc, we all share some of the medical student teaching load at this centre.

We are in the process of further developing other practices, specialised tests etc. The arrangements form part of a SLA. Similarly we do this centre does the other site's cervical cytology work as well another adjacent Trust with whom we are also establishing further links, such as sharing our POCT arrangements, Down's Screening etc.

The situation works with the two Trusts because of the personalities involved. We are pragmatic people who get on with each other. Nobody is trying to take the other person over, neither trust suffers, and the SLA's ensure the service is maintained. We are trying to make best use of our resources so that both Trusts and GP services benefit. To me this is the ideal solution.

However..... I am well aware that everyone does not get on well with everyone else, having been Clinical Chemistry lead in a non-managed network for a couple of years, and having seen so many clashes of personalities in many years of doing CPA inspections. Most non-managed networks fall down because of clashes in personalities. People will not back down, compromise or change their way of working, for the good of the whole network. Rationalisation of work becomes difficult etc, so the only option appears to be a managed network. Does that work? Well actually no, not always. There are several managed networks about the country, some occupying the areas to the East of us, but I don't think they are more efficient, better, reliable etc than we are. This scenario is repeated throughout the UK. In fact in some managed networks the same personality clashes persist and inefficient practices continue. In addition when there is a Host Trust, the other trusts quite frequently have a poorer service than the Host Trust. Just ask the users of any laboratory service which does not have an on-call service on site.

It all depends on the driving factors behind wanting to set up a managed network. Is the process simply about saving money? Yes. Well then set up a central core laboratory, shifts,

making use of AfC 4 and below staff, a couple of shift managers, a laboratory director, basic EQA, no interpretation etc. Each Trust then pays for the level of service it requires, if it wants interpretation, on site services etc it pays extra for it. Somehow I can't see many Trusts/PCTs paying for very much. If the primary function is to improve the quality of service then you need to weigh up the advantage of a managed network versus informal network with SLA's. At the moment our two Chief Executives see no advantages of a managed network between our two sites, we are achieving improvements in service (and cost-savings) by working together. Perhaps we are in the minority; I would be interested in finding out.

## EXPERIENCE 7

### RE: PILOT SITES-CARTER REVIEW

Over 3 years ago, we made a strategic choice to invest in Pathology as a result of several factors: as a commissioned review of laboratory services in Europe, CPA and a need to develop diagnostic services in line with the Trust and Medical School. Consequently, an £8 million refurbishment for a Blood Sciences Laboratory was approved and implemented and will become a reality this year when both routine biochemistry and haematology will be run on Bayer instruments using a single automated track. The technology will provide a comprehensive array and higher capacity, for a 'routine' testing repertoire on whole blood and serum, to include tests conventionally run separately in Immunology, Microbiology and Virology Departments.

Included in **Phase I** is a re-siting and a reconfiguration of 'specialist biochemistry' services which in addition to Bayer analysers are a selection of other instruments to provide alternate methods of analysis, including HPLC, GC-MS and MS-MS. The aim has been to repatriate as many as possible of the specialised assays that were sent away to other centres. As a result the biochemistry service will, apart from a few very specialised assays, have a very comprehensive diagnostic capability on the one site. We have also invested in our SAAS services, so that the Urinary Steroid profiling service has a new GC-MS facility, the Trace Elements a new ICPMS and Porphyria section, new HPLC. The last has been reconfigured with a new clinical service to fast-track symptomatic patients into wards experienced with managing the acute porphyrias.

In **Phase 2** of this development and starting from now, is a refurbishment of vacated space to accommodate a new TDM and Toxicology service, which started as a network arrangement with a neighbouring Trust and ended as an SLA. Towards this, a new consultant scientist appointment has been made to lead on the TDM services and enable us to develop services including training programmes for this speciality to develop in the future.

In **Phase 3**, a refurbishment is to commence, to create a new molecular diagnostic laboratory. This will provide a central facility for providing a range of clinical diagnostic services for the hospital.

These changes have become reality after years of detailed planning and coincided with the Carter Review. Staff in Pathology support this review and many of its recommendations have already been put in place:

- The strengths of having a dynamic and comprehensive service, staffed by NHS staff who are highly motivated and energised by these changes, gives us the advantage of being able to implement planned changes. Additionally, the strength overall is that there is capacity which can be utilised by both the private and public sector for accessing routine as well as specialised laboratory services.
- The weaknesses is that this whole development is looked on with great suspicion by our colleagues in neighbouring Trusts, calling it predatory and expansionist developments. One weakness is that although there has been an extensive and robust bottom-up costing of laboratory services, this may be more expensive in any national tariff. In which case we will need to make even more efficiencies to make

our services economical and this will stretch our capabilities. We have integrated our non-specialised (routine) services with specialised, developed training programmes for staff, involving them in audit, research and development, reporting of results and management based on qualifications and ability rather than previously jealously protected 'professional' boundaries.

- There are opportunities to enhance our services, depending on whether our strategy of building capacity and capability for routine and specialised work materialises. There is little need for us to utilise the private sector for contracting out work but the converse is true, and there are private laboratories already contracting to us. Towards this we have added our information to Assay Finder, created a website and enabled customers with nhs-e mails to access their results using a secure web-link. I have had several discussions with neighbouring colleagues to create a local network of expertise for specialised tests, rather than sending these tests all over the country and to rationalise on routine test repertoire, test protocols and reference ranges. Although there is tacit agreement on some of these, nothing has happened as there are no drivers for change.
- Our threats are if we cannot deliver what we have started, our costs are too high and suspicion by our colleagues may mean that we cannot build on our capabilities and capacity. Towards addressing this, we have an on-going support from the Trust executive, strong clinical and managerial leadership, a committed work-force whose jobs are not at risk in implementing the new initiative, and a new laboratory environment. Costing of tests will be worked out in more detail in the pilot work for the Carter Review which will enable us to determine which services will expand and which will not.

But approaching our colleagues in surrounding hospitals to enter into networking discussions is going to be a big problem and not going to be successful to be initiated by us as a large teaching hospital with large secondary and tertiary services and about a third of our workload from primary care.

In summary, my view and in consultation with local colleagues, we are supportive of the Carter recommendations and indeed intend to implement the concepts within. Several models of delivery of services have been mentioned in the report, and I believe a hub and spoke model will work out for us. If the 'spoke' sites could engage with us as the hub to develop sound, efficient, cost-effective diagnostic services, link this with effective pre- and post-analytical services, then I am confident there will be a better and equitable service for patients in the whole patch.

## **EXPERIENCE 8**

### **Advantages and Disadvantages of being a Federated Pathology Network**

#### **Summary:**

A Federated Network can achieve many things. The problem is that this change can take a long period of time and there is a limit as to what a Federated Network can change due to lack of executive power.

#### **Advantages**

- A Federated Network provides a framework where Trusts retain their autonomy yet gain from the joint efforts of a Network.
- A Federated Network provides a single contact for other agencies such as other Clinical Networks, SHA, PCT, DH, Independent sector etc.
- A Federated Network is a forum where pathologists can meet and plan developments.
- A Federated Network can be more successful in applying for new funds and implementing the related initiatives. E.g. Chlamydia, LBC etc.
- A Federated Network can develop areas of common interest. E.g. Transport, IT, Telepathology etc.
- A Federated Network is the first step where Chief Executives can discuss the Pathology service in a less parochial way.
- A Federated Network can be a comfort zone between individuality and a managed Network.
- A Federated Network can deliver many changes with new money.
- A Federated Network can facilitate reconfiguration of certain activities, e.g. send away testing, training etc.
- A federated Network can set governance standards and other targets for the members of the Network.
- A Federated Network can facilitate the rationalisation of specialist tests within the Network, but only if everyone agrees. Change of existing practices cannot be imposed in a Federated Network.
- A Federated Network is sympathetic to local issues.

#### **Disadvantages**

- A Federated Network is hampered by local issues.
- A Federated lacks authority and power. Leadership needs to be backed by authority. Leaders within a Federated Network can only go so far.
- A Federated Network relies on goodwill and trust of members. Difficult decisions can take a very long time, which often creates tensions. Many difficult decisions are not taken.
- Federated Networks rely on members to be willing to debate a subject. If a member refuses to discuss a “local issue” then it is very difficult to tackle that local issue, e.g. laboratory configuration.

- Federated Networks have little managerial control. Even when decisions are made and agreed, members can withdraw, change their minds or set up alternative strategies in secret. This destabilises the Network and any strategy.
- Members of a Federated Network can easily block debates and block decisions.
- A Federated Network needs to take on board the global politics of a trust. Simple Pathology issues can get caught up in the wider context of how a pathology laboratory has to operate within their own local environment. Simple debates get convoluted and it is very difficult to get a “decision maker” around the table.
- Many decisions made by a Federated Network are blocked and delayed by middle managers in local trusts. The Federated Network cannot often deliver what it has decided.
- The Federated Network would find it very difficult to control non-pathology areas. For example the Federated Network may decide upon a phlebotomy or transport policy, yet translating those plans into reality is difficult because “someone else” is in charge of those services and will not give up control resources etc.
- Federated Networks often find themselves pissing in the wind.
- Trusts see pathology as an asset and a tool to help the Trust. Pathology gets squeezed in different ways and to a different extent in different trusts. This makes Network planning difficult.
- Members of a Federated Network tend to distrust everyone else, and see hidden agendas everywhere. There is often the suspicion that the larger trust wants to take them all over. In reality it is the larger trusts that have the capacity and leadership to get things done.
- A Federated Network cannot make the obvious decisions, e.g. down size lab A, invest in lab B or build Lab C. The Lab As see the debate as a threat and block it.
- A Federated Network cannot stop local procurement exercises. E.g. another large equipment procurement for 10-year contract may be daft within a Network but may be seen as an insurance policy by a laboratory.
- A Federated Network can only go so far. It can control and manage new developments but changing existing models hits all of the issues above.
- A Federated Network is not a Managed Network and therefore cannot manage all the issues that need managing.

## **EXPERIENCE 9**

### **Carter report response, our baseline.**

We have a fairly loose federated network involving trust laboratories between five towns. There are monthly network meetings attended by the clinical director and pathology manager (or deputies) from each site. Others are invited to attend as appropriate when topics concerning their discipline are being discussed. The pathology network group was given the task of identifying, working up business cases and allocating monies from the central government pathology modernisation scheme among these trusts to facilitate network working. Unfortunately, despite identifying valid projects and items of equipment which were thought worthy of funding, the monies have been held centrally at the SHA and so far not a penny has been released to the network, despite all the appropriate sign of it having been obtained. This has led to some contracts being cancelled and others arranged within the network on the assumption that the infrastructure would be in place to fulfil these contracts (the equipment being bought from modernisation funds) but as the funds have not been released, there is now a distinct possibility that some of these contracts will not be able to be fulfilled.

The lack of significant progress by the pathology network group despite months of hard work has led to a considerable degree of cynicism among the members as to whether networking can be achieved or even if there is really a central will to achieve it. Failure to release funding has affected all pathology disciplines with the exception of histopathology, where the potential for networking as opposed to establishing a centralised large facility are more limited. It has however also prevented the appointment of a dedicated network clinical lead, network manager and network facilitators on the trust sites.

Despite this doom and gloom, we have had some successes, although whether these will happen in reality if funding does not appear is open to question. We have rationalised the molecular haematopathology for the peninsula with services confined to two sites specialising in certain tests in addition to the basic core function. The biochemistry departments have done a lot of work on send away testing and are now in a position to negotiate more advantageous contracts with external providers for the whole peninsula. Immunology testing on one external site has been repatriated to the largest centre of the

network (this is seriously under threat from the withholding of funding). The main advantage however, seems to be that the five sites are now regularly talking to each other in an amicable manner and there is much less complicated behaviour than previously.

As regards how Carter will affect us, until we see exactly what is required when the templates are released, I cannot be sure. There are many attractions to a local pathology network outside the framework of NHS acute trusts where, as Carter states, innovation is frequently stifled due to financial pressures on the trust. There are also many risks, particularly in the southwest where a new emerging private pathology player has arrived. Our major problem in forming a much closer network is the IT infrastructure locally. Where once there was considerable communality of IT in the region with many sites using a common system, there is now more fragmentation and this system no longer has a long-term future. Our cluster has opted for the Cerner system with no consultation with any pathology department. Many departments feel this does not have the functionality required but are now hamstrung by the cluster decision in obtaining any other system. While there would undoubtedly be benefits to a common system throughout the region, if sites are being railroaded into accepting a system which those at the coalface and do not feel is adequate, and if this is a prelude to how managed networking would be implemented, then I fear going down this road may be a retrograde step.

The Carter report is I think a good, balanced document which very well portrays the deficiencies in English pathology and the reasons for that, which are largely outside the control of pathology departments. The lack of insight into pathology by service commissioners (particularly in our area the SHA) is however frightening if the effective financial control of pathology is to be given over to them. It is also frightening that the government want pathology to be patient led as opposed to it patient centred. We must use the Carter pilot sites to show that we can organise pathology in an efficient, clinically relevant and patient friendly manner to decrease the overall costs of clinical services, although this may paradoxically result in slightly increased spending on pathology.

## EXPERIENCE 10

Some rambling, last minute, personal observations and thoughts on the Carter review. By no means is this a list of advantages and disadvantages

Our Department of Clinical Chemistry is a medium sized laboratory within a Foundation Trust. On site there is also one of the campuses for the Medical School opened to students in 1992. We are part of an informal (but not Managed) network of 5 Clinical Chemistry / Chemical Pathology laboratories, providing NHS analytical and advisory services to the whole geographical area.

In the past couple of years we have successfully implemented a commonality of major analysers (Roche) on all 5 sites with the assistance of single site contract negotiation (and hence realised bulk purchase and savings). Similarly, near patient glucose testing technology has been standardised across the network via the same mechanism.

The issue of differing reference ranges (despite all using the same equipment) is one of which we are well aware and are actively trying to sort. This is not necessarily as easy as it should be since user views can impact on what the laboratory personnel would agree as "correct" e.g. it took considerable time and effort and ultimately the consensus guidance of the Cardiac Network before the local Troponin reference range could be changed in line with other sites, and PSA remains unsorted depending on which of the various guidelines the local Urologists wish to work around.

Our laboratory moved to working shifts instead of on-call years ago. The staffing structure consists of a single Laboratory Manager and Deputy Laboratory Manager with 3 Seniors (BMS2's), otherwise all BMS1's or trainees supported by 2 MTO's, 1 ATO and a group of 12.5 wte MLA's under her control providing combined reception services for the specialities of Haematology and Immunology as well as Chemistry. I.e. this is not viewed as "top heavy". The MTO role has been evolved to also include mainframe analyser sample loading and unloading. There are also a Medical Consultant, (WDC funded) Specialist Registrar, Consultant Clinical Scientist, Senior (training) Clinical Scientist, (WDC funded) Trainee Clinical Scientist and a departmental Secretary.

There has been over many years an active process of workload control to try to limit unnecessary test repetition. With success.

We are currently working with Trust Management and others locally on a Financial Recovery Plan for Diagnostics based around the principals of Lean Thinking with anticipation of hopefully stopping significant amounts of additional non-contributory testing, which is accepted by all as occurring. It would be far preferable to stop this at the level of requesting source by use and development of IT (Order Coms) rather than at the stage of request and sample receipt by the laboratory.

The perceived barrier to such implementation is that it almost certainly needs to be pump primed with upfront financial investment to recoup the net benefits several years hence in terms of test and cost savings but the NHS, to date, has not shown any great inclination to work with such a business-like approach, despite noises being made that that is the way to go. Foundation trusts are said to have the freedom to work in such fashion but locally there

has been no sign of wanting to do so, at least in relation to Pathology.

IT connectivity falls within the same category of being obviously desirable and advantageous to those working within the Pathology disciplines, and probably those outside it also. It features largely within the Carter report but one fears may not be viewed by the DH as sufficiently high up the priority list for Government funding for implementation.

Lack of IT connectivity and a poor sample transport system have been major barriers to larger bulk transfer of requests and samples for lower / medium volume tests between the sites. The geographical spread of this particular area is perceived as a limiting factor.

However we have initiated a process of standardising send-away locations for low volume and / or specialised investigations, variably using one of the five laboratories within the network or are just now collating workload figures to invite tenders for bulk provision to all 5 if sending outside of the network.

There is a new Independent Sector provider based within our area whose circulated price list initially appears potentially favourable (on cost grounds!) for many of these specialised tests and they will be tested for quality and timeliness and invited to tender.

Sample pick-up and transport of GP samples is a weakness and a source of significant analytical delay because of the non-responsiveness of those organising it who do not, or choose not to, see the benefits which would accrue to laboratories, surgeries and patients of upgrading / reorganisation. That said, basic biochemistries including endocrine work is all completed for GP's by the morning after receipt at the latest as a consequence of the technologies (form scanners, interlinked analytical platforms, sample handling equipment) and working practices (extension of the working day and a shift system), with electronic transmission of results, adopted over recent years, and is therefore no different from what any IS provider would be likely to be able to offer.

The concept of functioning outside of immediate host Trust control is an attractive one, to be allowed to bid for and develop new services to then provide and cross charge on a cost and volume basis to requestors free from local restrictions.

It is not clear how such is envisaged could be coordinated, and by whom. The SHA has been suggested as one possibility – this would probably cause significant angst at present as possibly representing a step out of the frying pan into the fire given current experience of the Pathology Network Group (all disciplines) that having agreed a number of improvement developments they have been unable to access any of the previously agreed Pathology Modernisation monies (£1.8 million in total I believe) sat with that organisation, to implement, and actually have currently been unable to get confirmation that this fund still exists.

Most of the talk about networks relates to within disciplines, across sites. We should also take the opportunity to look at cross-discipline networking within sites. To some extent this already occurs (locally) for Biochemistry / Haematology / Immunology but could probably be beneficially extended to include consideration of such as Antibiotic assays on chemistry platforms for Microbiology validation and use. I can't recollect that this featured as a suggestion or recommendation in the report or any of the presentations. It may have done, but I missed it.

## **EXPERIENCE 11**

### **Network Structure Established**

#### **Mission statement and terms of reference agreed** (attached)

The Pathology Board is a clinically led group. Key stakeholders (number of reps in brackets may vary due to organisational reform) are:

- SHA –Clinical Director, Pathology Modernisation Manager, Service Improvement manager, Workforce Manager (3)
- Trusts- Clinical leads and Service Managers from five acute trusts all are Foundation status (10)
- PCT's (2)
- Universities (2)
- HPA (1)
- Commissioning bodies (1)
- Pharmacy representatives (1)
- Adjacent Network (1)

#### **Clinical sub groups**

- Clinical Chemistry
- Haematology/Blood Transfusion Science
- Histopathology/Cytology
- Microbiology
- Immunology
- Genetics
- Point of Care Testing

#### **Projects implemented using modernisation funding include:**

- Region wide stone analysis service
- Networked microscopes for diagnosis and second opinion.
- Digital dictation equipment for use by histopathology.
- Spectroscopy service for CSF analysis
- Provision of standardised document audit software. (Q Pulse)

### **Conferences held in 2005 and 2006 to establish work themes**

1. Service Configuration
2. Information Technology
3. Workforce, Education and Training
4. Transport and logistics

### **Working groups established 2006**

- 1) Service Configuration. - Designated a pilot site for National project on 'Carter' implementation
- 2) IT - Developing specs for submitted projects- adverts out for expression of interest.
- 3) Workforce - Working with SHA workforce team, Centre of Vocational Excellence established for Health with Pathology as a named thread.
- 4) Transport - Consultants appointed to pilot work on Pathology transport systems across Network

### **Communications established**

- Regular conferences and workshops held
- Web site developed
- Registered with NHS Network for Networks [www.networks.nhs.uk](http://www.networks.nhs.uk)

## **EXPERIENCE 12**

### **NETWORK VISION**

General function of group:

- The Network represents Pathology services, and other relevant stakeholders, across the patch.
- The group represents all Pathology players as equals, within a federated, consensual network

The overall vision of Pathology across the Network is:

- To ensure Pathology services are delivered to the highest quality, in a co-ordinated, seamless integrated manner using best practice
- To ensure Pathology, in collaboration with other stakeholders, delivers a Pathology service, what ever the setting and context, in line with national and local policy and commissioning plans with a patient focussed approach
- To ensure the Pathology services are modernised and are used to their maximum effectiveness both in delivery and usage
- To develop a vision, with relevant stakeholders, of Pathology services and delivery and to work to implement such plans with stakeholders

## **EXPERIENCE 13**

### **PATHOLOGY NETWORK - TERMS OF REFERENCE**

#### **1. Introduction**

The network was formed as a direct response to the DH document *Modernising Pathology Services*. Work on the SHA capacity plan and subsequent work as part of the capacity partnership group highlighted the need for a coherent strategy which provides direction for PCOs and trusts to develop local plans to reduce diagnostic waiting times and improve diagnostic pathways.

The broad diagnostic heading includes the need for several inputs (see 4 below) one of which is from the Path network.

#### **2. Path Steering Committee**

The Path network has been formed with the following remit building on and co-ordinating work which is already underway:

- Develop and agree a SHA – wide Pathology strategy for the improvement of Pathology services which is coherent with the vision for health and health care both locally, and nationally
- Promote good practice, models of working and ideas across the SHA
- Monitor implementation of the strategy at local level
- Agree investment in line with strategic plans of funds made available to the PMSC
- Help co-ordinate and oversee the development of independent sector involvement in Pathology services
- Provide links in to existing diagnostic groups
- Provide advice and guidance to the Chief Executives group relating to Pathology aspects of diagnostic services
- Link into national Pathology and independent sector networks

#### **3. Membership**

- Chair (chosen by Group)
- Pathology Director and Service Manager from each Acute Trust within SHA
- Chairs of each of the Pathology specialty sub-groups (Biochemistry, Cellular Pathology, Genetics, Haematology, Immunology, Microbiology, Point of Care)
- Chair of SHA Diagnostics Group
- Workforce Team representation
- Pathology Project Manager
- NCN representation
- SHA Service Improvement Manager
- SHA Medical Director
- Ad Hoc membership for specific issues, e.g. commissioner, finance, IT, professional users, patients, Private Sector, etc

#### **4. Governance and Reporting Mechanisms**

The Path network will report to the chief executives' group, via the SHA Diagnostics Group, with input from endoscopy and radiology groups, as well as a recently formed diagnostics information group. A physiological measurement group will also need to be established to represent / seek input from these services.

#### **5. Working Groups**

The role of the Path steering group will be to oversee progress with the Pathology strategy. Specific elements of work may require the formation of a working group to develop proposals and deliver actions relevant to that work stream. The number of such groups should be minimised and their remit be time limited to achieving their goal. They will be performance managed, with agreed timeframes and aims and objectives before commencement.

#### **6. Constitution**

- Meetings to be held at quarterly, with agreed dates in advance
- Professional sub-groups to meet and report at least yearly
- Deputies are permitted, when standing members are unable to attend
- Chair to be decided upon by the Path Network
- Decisions will be by consensus wherever possible

## **EXPERIENCE 14**

### **SHA PILOT SITE :**

- History:** Clinical Laboratory Services was created in 1992 as an amalgamation of Pathology Services from four hospitals. It provides Laboratory Medicine to the community and the secondary and tertiary services of the Trust, as well as Regional and Supraregional assay services.
- Current Disposition:** The Trust is comprised of two hospital sites, two miles apart. Space and accommodation restrictions do not permit the full service to be on a single site, although the individual disciplines are each rationalised to one site with satellite services as appropriate.
- Future Plans:** A PFI new hospital build to replace both hospitals is underway. Within this, a single laboratory facility is planned, with multidisciplinary working for automation and specimen reception as well as shared technology.

### **LABORATORY MEDICINE**

#### **There are 5 centres**

- 1** Comprehensive services provided for Trust comprising two hospitals. One is a small satellite service laboratory.
- 2** DGH laboratory services are provided from a Hospital which is to merge with **1** above.
- 3** DGH laboratory services are provided from two Hospitals. Some specialist services at one.
- 4** Local, Regional and Supraregional children's services and neonatal screening are provided. The laboratory is part of the national metabolic network.
- 5** Services to Women's Hospital and Down's & NED Screening. The Regional Genetics department is located in the hospital.

#### **Political Issues :**

- A. The two major laboratory services in the city are both in Foundation Trusts.
- B. The Women's Hospital is sited immediately adjacent to one of these.
- C. **1 & 2** are merging, with anticipated rationalisation of laboratory services.
- D. Rationalisation of laboratory services within **3** is underway at present.
- E. There are laboratories in Trusts outside the city boundaries which are closer to the major laboratories than to other laboratories in their own Trusts.
- F. Transport of specimens within the city is currently a major problem.
- G. History suggests there will be reluctance to lose identity within a larger organisation. Previous attempts to establish a network have been viewed as predatory.

## **EXPERIENCE 15**

### **Opportunities**

- (i) Economy of scale, increase in critical mass. The NHS sector will increasingly have to demonstrate cost effectiveness, and will be compared more closely with the apparent efficiencies of the independent sector. The ability to provide a call service capacity within an interactive network will enable operational modes to be analogous to those seen in the private sector, whilst retaining management and control fully within the NHS.
- (ii) The formation of Trusts has had many benefits, but the operational independence has made it difficult sometimes for intra-discipline collaboration and cooperation to provide a regional cost-effective service. There are opportunities for close networking through Carter Pilots, and if inter-Trust barriers can be reduced, then a common model professional service can be developed.
- (iii) A single IT/communication strategy of new networks would ensure common standards of turnaround, reporting, reference ranges and delivery of data – the latter being of particular importance given the greater level of specialist service provision to the primary care sector.
- (iv) A unified presentation to multiply Trusts of service needs and standards will improve the influence of Pathology on clinical service development, particularly with the latter evolving more rapidly to e.g. reduce bed occupancy, waiting times and post-treatment surveillance.

### **Specific opportunities**

- (i) Labs with unused capacity could potentially bid for work from other hospitals, providing that they can offer the cheapest service (compared to private labs as well as NHS labs).
- (ii) Payment by results or by request would solve the longstanding problem of inadequate funding for new initiatives.
- (iii) Large laboratories (driven by economies of scale) may be the best places for innovation.
- (iv) Potential involvement by laboratory staff in the development of testing protocols, care plans and best practice guidelines could lead to a reduction in inappropriate testing

### **Challenges**

- (i) Dealing with local level connectivity of laboratory services to the point of need. A large central lab, which increases its own workload with reduction of activity at other network sites, could lead to loss of gearing to local needs.
- (ii) Remoteness of a core pilot lab could lead to loss of clinical feedback and sharing of service development with clinical end-users. Breakdown in the partnership activity between the laboratory and local primary/secondary care clinicians.
- (iii) Focus of new and specialist assays on a single site leading to loss of diversity in other parts of a network, with possible problems on training, recruitment and professional development.
- (iv) An efficient business model operation at a central site, with its network could make it attractive for privatisation.

### **Specific Challenge**

- (i) Financial systems and IT need to be robust enough to support collection of historical workload figures and cost, together with future monitoring of workload and income.
- (ii) The information required by commissioners will include performance indicators such as cost per test, turnaround times etc. Such readily available benchmarking data may threaten the existence of poorly performing labs.
- (iii) Competition with private sector is almost certain to require redesign of systems, particularly in the pre- and post-analytical phases to ensure that turnaround times are minimised.
- (iv) A new competitive environment is likely to require shift working, staff restructuring and expansion of roles. In the long term, alteration to training of BMS and clinical scientist staff with possible merging of the two professional groups may be required.
- (v) Training may suffer in a much more competitive environment, unless resources are protected.
- (vi) Provision of care nearer the patient may require support for POCT to ensure that clinical governance is adequately addressed.
- (vii) The existence of Foundation Trusts may inhibit local inter-hospital co-operation and "more joined up services".
- (viii) Ensuring that reference ranges are consistent across a range of service providers for a patient may be problematic - this requires a top-down or co-operative rather than a competitive approach.