

During the meetings, site visits and various tasks which the Project Team have undertaken to date, a degree of consensus in respect of the key challenges to be addressed within the regional strategy has emerged. This chapter summarises the initial findings of the Review taking account of the sentiments expressed during the various forums to date.

With the exception of number one the challenges listed are not arranged in any order of priority:

1. Information Technology

Information technology has been the major recurring theme throughout the consultation process to date. With some 70% of all diagnosis and treatment within the HPSS being dependent on pathology information this issue is fundamental to the future shape of all health care systems throughout the Province. The modernisation of diagnostic information systems is a fundamental building block in the future development of both primary and secondary care services.

The major deficiencies in the current systems must be addressed as quickly as possible. These deficiencies include inability to undertake longitudinal monitoring of patient care, restrictions on the provision of interpretive services, safety surrounding blood transfusion, and loss of valuable epidemiological data for development of public health services.

The vision in any proposed regional strategy should aim to develop integrated information systems, where the quality of care and the safety of the patient journey are central, test results are timely and accessible and optimum use is made of the rich database available.

Essential pathology services in the Province must be given the opportunity to take full advantage of recent and future developments in information technology (including a robust integrated IT system which would provide the core platform to support: electronic patient records, picture archiving and communication, electronic transmission of requests for investigation and results, bar coding of specimens) and telemedicine. Telepathology has a potential key role in obtaining specialist opinion from distant centres, for multidisciplinary team meetings, reducing staff travel and may also influence the physical location of services.

It is imperative that the current Pathology ICT projects move forward as quickly as possible.

In other countries and to an extent in the UK the process of modernisation of pathology has been supported by the development and use of modern laboratory information management systems. The rationale for developing quickly down this route involves:

- **Economics** – It has potential to be the best and most efficient way of absorbing the large increases in pathology testing estimated over the next ten years.
- **Clinical Benefits** – The clinical benefits of a single pathology system would include a significant reduction in turnaround time for results, standardisation of reports and reference ranges, the seamless linking of patient records, irrespective of hospital or primary care setting and the availability of a true cumulative history for every patient.
- **Reduction in errors** – Errors in laboratories, which are a continuous source of concern, are mainly due to human factors. Many errors relate to incorrect data entry and would be minimised by appropriate ICT.
- **Epidemiology** - Significant information could be made available for improved understanding of public health.

- **Improved Quality** – One factor determining the quality of pathology service is the timeliness of results. If the results can be produced at the right time and place it will have a significant improvement in health care as well as being more efficient in total systems terms. From the patient's point of view the avoidance of duplication of tests arising from lack of integration, availability and interpretation of all results throughout the total system is not only desirable but also safer.
- **Clinical Governance / Audit** - At present the lack of integrated systems diminishes the opportunity for peer group audit and the ability to use information to support public health policy and epidemiology.
- **Management** - other potential benefits include comprehensive and accurate workload information, and the ability to complement financial and procurement information systems etc.

Telepathology has also been identified as offering new opportunities for providing better local services. This impacts not only on diagnostic capability but also on teaching and research and possibly the location of staff and services. Again developments in this area need to be planned and controlled.

2. Potential for Networking / Cross Trust Working

It is worth highlighting that there has in recent years been a significant shift away from a competitive ethos in relationships between major pathology providers within Northern Ireland as some mergers have taken place, and Trusts are no longer in competition for 'the market'.

Given the size and distribution of the NI population and the relatively even spread of clinical services as outlined in "*Developing Better Services*" service providers have expressed the view that a single or uniform network / model for the provision of pathology services is desirable. It is recognised that there is a need to strike an appropriate balance between local site-specific needs (which in some instances will entail the underpinning of specialised regional or sub-regional clinical services) and the regional imperative of developing maximally efficient support services. While some degree of compromise is inevitable, it should still be possible to develop cost effective and efficient support services based on a network of centrally and locally provided services. Any resulting model seems likely to depend upon having a more integrated management structure to take responsibility for service co-ordination and development.

The NIAO report identified the potential in many areas for pathology services to work together to maximise the opportunities to plan and manage the delivery of services to achieve better utilisation of scarce resources whether these be capital goods, skilled staff or management skills.

There are already positive steps being taken towards a more collaborative model in Northern Ireland including the work of the Laboratory Medicine Directors Forum, pathology partnerships, and informal network groups. At the same time there are negative pressures forcing the pace of change: some laboratories find it difficult to achieve accreditation, to attract scarce staffing resources or to afford to modernise services to take advantage of new technologies.

3. The Workforce

During the course of the next decade it is predicted that the profile of the workforce will change to accommodate the demands of information technology and new technological advances including the use of molecular biological techniques.

Any restructuring and service demands imply the need for staff to embrace new and flexible working practices to provide 24 hour service which will include the wider application of

automated technology, development of multiskilling of staff, and acceptance of the need for some staff (especially senior medical and scientific staff) to work on more than one site. The value of continued close liaison between the staff of pathology services, especially those with responsibility for direct patient care, and their other clinical colleagues is accepted although this may not necessarily mean that a diagnostic laboratory, for example, has to be located on every patient treatment site.

Key areas of concern identified to date include:

- The vulnerability of the existing out of hours services – which are based on a series of voluntary “on call” agreements
- The lack of compliance with the European Working Time Directive.
- Regional / National shortages of consultant medical and clinical scientist staff in some specialties.

There is a continuing need to monitor and plan the HPSS's requirements for all trained professionals and ensure their continuing education and professional development. The Postgraduate Council and the Royal Colleges will continue to have a central role in this area for medicine, but there would appear to be a need to develop similar mechanisms for other health care professionals such as Clinical and Biomedical Scientists.

Throughout the review to date a number of particular anxieties have emerged regarding training of BMS staff. These include:

- The uncertainty over the future of the Post Graduate Certificate provided by the University of Ulster.
- The fact that there is only one locally provided scientific degree approved by the Institute of Biomedical Science.
- Multi-disciplinary working during out of hours.
- Recruitment is not co-ordinated regionally. The existence of trainee positions within Trusts is largely dependent upon opportunistic vacancies and the availability of applicants and trainers.
- The need for wider rotation of medical and scientific trainees.

4. Locations and Access to Pathology Services

The HPSS regional strategy highlights the need for fast efficient services for patients. To enable GPs and hospital consultants to achieve this, pathology services must also provide fast and efficient services. This includes providing timely and accurate reports and advice to the full range of service users, including GPs, emergency services, elective services and outpatients.

In line with the strategy outlined in “Developing Better Services” the Review project must provide a plan for future delivery of pathology for its constituent Acute Hospitals and Primary Care services. This plan should entail a combination of centrally and locally provided services targeted at sites of major clinical activity or where there is strong clinical justification for on-site services to provide satisfactory patient centred outcomes.

For each discipline it will be necessary to define what constitutes essential core activity to be provided locally and what may be more efficiently or economically provided at another location because of its complexity or low volume/high cost nature. Wherever possible, full advantage should be taken of new technology and automated facilities, maximising the use of expensive equipment and resources through concentration of activity in fewer locations. In addition effective use of point of care testing (with appropriate laboratory support as regards quality monitoring) will also be a major consideration. Unnecessary duplication of equipment and replacement of expensive equipment has particular significance in pathology services. In some circumstances, concentration of activities will have implications for patient access and for transportation of specimens and data. Emphasis must be placed on developing the most acceptable local solution, and, plans would have to comply with national guidelines relating to benchmarking standards, cost efficiency and quality.

Any restructuring of pathology services will require an appropriate regional mechanism to ensure equity and consistency of provision and approved benchmarking standards, quality and cost-effectiveness. It will also require an efficient transport network.

Whatever strategy is developed must not be allowed to stifle individual or regional initiatives.

5. The Development of Integrated Purchasing and Supply Processes

Providers have suggested that pathology service improvement cannot be successfully achieved without modernisation of its supply networks and the strategic management of procurement processes.

Drivers for change, which have been identified within pathology as having impact upon purchasing and supply are:

- Fragmented purchasing usually on a site basis.
- Under-investment and lack of capital resources.
- A need to demonstrate value for money.
- Quality standardisation.
- The opportunity to co-ordinate the purchase of consumables and maximise potential of reagent rental arrangements for equipment.
- Technological developments based on the potential of IT and diagnostic systems.
- Infrastructures of the pathology services impacted by primary care practitioners and point of care testing.
- Logistics arrangements.

There could be great merit in a regional co-ordination mechanism to oversee the procurement of expensive equipment to ensure value for money and avoid inappropriate purchase and/or unnecessary duplication. Strategic use of capital would also need to take account of recurring and replacement costs and would concentrate on developing a hierarchy of priorities rather than serving as a 'wish list' for the disciplines concerned.

6. Standards and Accreditation

The move towards accreditation has had an impact on the way that pathology services are organised. The accreditation scheme established by Clinical Pathology Accreditation (UK) Ltd has been in formal operation since 1992 and many pathology services throughout NI have continually improved upon their accreditation status throughout this time. However, a number of laboratories have not applied for CPA accreditation and others have failed accreditation. This is an area of major concern to be addressed in the regional strategic plan. Despite the move towards accreditation in hospital laboratories, quality control of point of care testing is variable and is particularly limited in primary care.

Future accreditation standards are likely to have a significant influence on the nature / shape of future services and/or network developments.

7. The Needs of Primary Care

Throughout the Province, GP laboratory work accounts for 45% of the average district general hospital's pathology services and around 20-25% of the university teaching hospital's pathology services.

GP requirements of their pathology services that have been identified to date are summarised as follows:

- Point of Care Testing
- Chronic Disease Management
- Guidance on requests for less common tests
- Speedy turnaround
- Accurate results
- Prompt and clear reporting
- A more patient centred service
- Value-added interpretative services
- Funding for increasing service demands from primary care.

To meet these requirements, pathology services need efficient collection systems, IT links and reporting.

During the work of the Review providers have highlighted the likely increase in demands for laboratory tests as a result of the implementation of the new GP contracts.

Pathology services have a major role to play in developing clinical services and promoting seamless clinical care and GP access. The development of new services such as 'one-stop' clinics, out of hours diagnostic and treatment centres etc. have significant implications for laboratory services (in terms of equipment and staff resources) and account needs to be taken of this before such services are introduced.

To this end the Project Team is developing mechanisms to engage primary care practitioners in the development of a strategic plan.

8. Buildings

At present there is a wide variation in the standard of the built environment across the HPSS. Limitations imposed by the building fabric are a major constraint to further realignment of services. A number of hospitals have plans in process for laboratory redevelopment. It is important that any development is flexible in nature and maximises the opportunities afforded by building design and developments in automation and common analytical platforms.

9. Molecular Biological Technology

Molecular biological analyses are unlikely to replace many current laboratory techniques in the short term and conventional laboratory analysis will continue to be performed alongside any developing molecular biological techniques.

However molecular techniques are already being used in all branches of laboratory medicine in Northern Ireland to improve accuracy of diagnosis, to indicate prognosis and response to treatment and to shorten turnaround times for reports e.g. Cancer, clotting disorders, bacteriology, and virology.

The use of common analytical techniques across different pathology disciplines may be a driver towards consolidation of the technical aspects of this service.

The project team plans to convene a cross-discipline focus group to consider these issues.

10. Teaching, Research & Development

Pathology services play a key role in underpinning teaching and R&D activities within the HPSS and universities. University departments also provide services to the HPSS. In addition, HPSS pathologists have a key role in teaching in their own and other clinical specialities as well as maintaining their own skills and knowledge through continuing professional development. These functions must be developed in any regional strategy.

There is also a need to clarify the future provision of teaching and research including the situation in respect of joint appointments

11. Point of Care Testing (POCT)

There are many developments in point of care testing. This is a major clinical governance issues for all health care sectors. POCT is usually implemented where there needs to be rapid feedback to clinicians and patients on their condition. It is likely that a well-organised pathology department can provide these services more economically and that user-operated point of care testing would only be justified in a minority of circumstances. Other issues, which must be addressed, include quality assurance including user training and collation of results and the avoidance of duplicate testing.

12. Mortuaries

With regards to Hospital mortuaries there is also a wide variation in standards of buildings / facilities. Professionals have expressed some concern about the implications of a falling autopsy rate for an evidence-based HPSS, with a potential for de-skilling, and the potential need for a centralised morbid anatomy team.

In light of this Trusts may need to develop appropriate body storage / viewing facilities.

13. Transport

At present there are variations in transport systems available to the laboratories for the receipt of samples and distribution of reports. The frequency of collections varies across the Province, as do the management arrangements and efficiency of service delivery. The development of efficient transport systems is seen as fundamental to the implementation of any regional strategy.

This document details the outcome of the initial phase of the Regional Review. The next phases of the project will seek to develop the thoughts outlined in this report to determine the optimal manner of providing pathology services for at least the next decade. The Government's modernisation strategy and the regional plans for both hospitals and primary care provide significant impetus and opportunity for the development of pathology services. This is an opportunity that all stakeholders must seize.

The Review Team wishes to thank all the stakeholders for their time and input into the project to date and looks forward to continuing co-operation to develop these initial challenges into a valuable framework for the development of a 21st century pathology service.

APPENDIX 1 - ACCROYMS & ABBREVIATIONS USED

AHP	Acute Hospitals Portfolio
BCH	Belfast City Hospital
BLL	Belfast Link Laboratories
CEO	Chief Executive Officer
CPA	Clinical Pathology Accreditation
CPD	Continuous Professional Development
DBS	"Developing Better Services" - document
DHSSPS	Department of Health, Social Services and Public Safety
DoH	Department of Health, London
DIS	Department of Information Systems
EWTD	European Working Time Directive
GP	General Practitioner
HR	Human Resources
HPSS	Health & Personal Social Services
IT	Information Technology
ICT	Information and Communication Technology
R&D	Research and Development
MDT	Multi-disciplinary Team
NI	Northern Ireland
NIAO	Northern Ireland Audit Office
NICE	National Institute of Clinical Excellence
NIHPSS	Northern Ireland Health and Personal Social Services
NPT	Near Patient Testing
POCT	Point of Care Testing
PPP	Public Private Partnership
QA	Quality Assurance
QUB	Queens University Belfast
RGHT	Royal Group of Hospitals Trust
ROI	Republic of Ireland
RSS	Regional Supplies Service
TaT	Turn around times
UKAS	United Kingdom Accreditation Service
UPCI	Unique Patient and Client Identification
UoU	University of Ulster

APPENDIX 2 - PROJECT STRUCTURE

PROJECT SPONSOR

DHSSPS

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Project Chair

- Dame Ingrid Allen

Project Board

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| • Dr Henrietta Campbell | Chief Medical Officer, DHSSPS |
| • Dr Alistair Crockard | Consultant Scientist (Immunology) |
| • Dr Nizam Damani | Consultant Microbiologist |
| • Dr Dermott Davison | General Practitioner |
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| • Dr Curly Morris | Consultant Haematologist |
| • Professor Elisabeth Trimble | Consultant Clinical Biochemist |
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| • Dr Miriam McCarthy | Principal Medical Officer, DHSSPS |
| • Mr Brian Magee | Laboratory Services Manager |
| • Dr Maurice O'Kane | Clinical Director |

The findings of the workshop are summarised in full in a report, which is available from the review's web page. This workshop provided a valuable insight into the opinion a wide spectrum of key stakeholders in the review process.

The key priorities, which emerged from the day, included:

- The very fundamental requirement for a regional ICT solution which should include both pre and post analytical services as well as the provision of a clinical information management system and good epidemiology.
- The need for any regional strategy to be built upon a sound HR strategy, which should include manpower planning, training, and education. The strategy must also include expert facilitation/support in terms of organisational development and change management.
- The expressed desire for greater harmonisation of methodology, procedures and procurement.
- A willingness to work towards more integrated management arrangements. This should lead to better resource utilisation and would require strong leadership and a clearly defined and costed implementation plan.
- The need to ensure a more patient centred service with equality of access for the population as a whole.

APPENDIX 4 - REFERENCES

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