Unlocking the Potential of Cross-Border Hospital Planning on the Island of Ireland:

A Prototype Modelling Framework

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Unlocking the Potential of Cross-Border Hospital Planning on the Island of Ireland

A Prototype Modelling Framework

A Report to the Centre for Cross Border Studies by

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Unlocking the Potential of Cross-Border Hospital Planning on the Island of Ireland

Report Highlights

• Whilst there are significant barriers to the development of cross-border acute healthcare services, these can be worked around; however, legislative, administrative, and cultural changes are required for long-term solutions to such obstacles to facilitate wide-scale progress.

• CAWT (Cooperation and Working Together) represents the most appropriate structure for the development and management of future cross-border health and social care initiatives, including those in the acute sector.

• The modelling framework for cross-border acute healthcare services is a comprehensive and holistic process, incorporating quantitative and qualitative factors (the former supported by data modelling techniques), to generate a series of decision points that contribute to the development of appropriate models for new and restructured services.

• Community involvement is a crucial aspect in the planning of new and reformed acute hospital services in the border regions, as outlined in the report from the first strand of this research, The Role of Community Involvement in Hospital Planning.

• The new South West Acute Hospital in Enniskillen presents a significant opportunity for fresh thinking in respect of service provision on a cross-border basis. Particular opportunities may arise in areas such as day-case surgical procedures in orthopaedics, serving patients not just in Fermanagh and Tyrone but also in the surrounding cross-border areas. We believe that further research is merited into the potential for the new South West Acute Hospital to serve a cross-border catchment area.

• Future development of cross-border acute healthcare services should aim to generate a two-way flow of patients across the border, rather than a one-sided approach providing services largely in one jurisdiction to be accessed by patients from the other. This requires a more collaborative mindset on the part of the health authorities, who need to work together to develop strategies and programmes to benefit those in the border regions.

• The report examines five sample or exemplar clinical service areas (orthopaedic surgery, ENT surgery, paediatric cardiac surgery, cystic fibrosis, and acute mental health services) to explore their potential for cross-border collaboration and to test the modelling framework.
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PART I
1 Introduction

1.1 Background

Horwath Bastow Charleton (HBC) was appointed by the Centre for Cross Border Studies (CCBS) in November 2009 to undertake research into the development of a prototype modelling tool for hospital planning on a border region and all-island basis.

In relation to the current issues in acute healthcare delivery in both the Republic of Ireland and Northern Ireland\(^1\), a 2007 report from the CCBS, *Removing the Barriers: an Initial Report on the Potential for Cross-Border Co-operation in Hospital Services in Ireland*, concluded that there is a clear case for joint hospital planning and rationalisation in the border region. The report documented differences in strategic policy between the two jurisdictions: for example, there appears to be a greater premium on accessibility in Northern Ireland than in the Republic of Ireland. There are also questions raised in respect of future acute hospital provision in the HSE North-East region, suggesting that account needs to be taken of services available across the border. Similarly, in April 2008, an OECD report highlighted the latter issue.

In March 2008, the Centre for Cross Border Studies published a further paper – *Surveying the Sickbeds: initial steps towards modelling all-island hospital accessibility* – in which it examined the possibilities of spatially exploring the accessibility of present and future hospital provision, with particular attention paid to the cross-border region.

In light of the above research, the Centre for Cross Border Studies, in partnership with the Institute of Public Health in Ireland and with funding from the EU INTERREG programme opted to commission further research on the planning of hospital services in the border region. The project, *Exploring the Potential for Cross-Border Hospital Services in the Border Region*, was part of a five-part INICCO programme, and comprised two strands; the first strand examined the issue of public participation in the planning of acute hospital services. This was undertaken by Ruth Taillon of the Centre for Cross Border Studies and a substantial report, *The Role of Community Involvement in Planning Hospital Services*, outlining the importance of such participation, was published in October 2010.

CCBS invited tenders in mid-2009 for the second strand of the project: the development of a prototype modelling tool for hospital planning on a border region and all-island basis. HBC, in partnership with the Matrix Knowledge Group of London, was successful in this competition, and commenced work in November 2009.

1.2 Terms of reference

1.2.1 Original Terms of Reference

The overall aim of the present project, as stated by CCBS, was to ‘identify how cross-border hospital services can provide mutual benefits for the people of the border region’. The key focus was to support strategic cross-border co-operation for a more prosperous and sustainable region by exploring the potential for cross-border hospital services in the Irish border region.

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\(^1\) For ease of reference, in this report we refer to the two jurisdictions as “Northern Ireland” (NI) and “the Republic of Ireland” (RoI). In relation to the latter, we acknowledge that the name of the Sovereign State is Éire or Ireland: our terminology has been adopted solely to distinguish this State from Northern Ireland.
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This study by HBC is required to focus specifically on the Irish border region but draw on comparable practice elsewhere in the EU, and strive to make a real contribution to a renewed emphasis on developing cross-border health co-operation.

Specifically, we are required to deliver interim and final reports that:

• examine the number, size, composition and possible locations of the hospitals that would be required in the future if the planning of acute services in the border region was on the basis of population needs rather than jurisdictional frontiers;

• develop a prototype modelling tool for hospital planning on a border region and all-island basis that could make possible accessibility to hospital services based on geographical distribution of patients (potential need and demand); taking into account the potential supply based on bed numbers and specialisms, and the transport network (modelling of accessibility based on travel time); and

• make recommendations on the future configuration of hospitals North and South that would be required if planning of acute services in the border region was on the basis of population needs rather than jurisdictional frontiers.

This project ran initially in parallel with the first strand – being undertaken directly by CCBS as discussed above – looking at the role of community involvement in planning hospital services within the border region.

1.2.2 Shift in Focus

From the earliest stages, the project team emphasised the need to take into account the context of the changing picture within health services, in particular the shift from the traditional image of acute hospitals towards the delivery of many services at or near the patient’s home, alongside the pattern of centralising complex care in fewer locations in order to safeguard patient safety and improve outcomes. These changes are impacting on the structure of services and on the configuration of care. What an acute hospital looked like ten years ago is different from its current set-up, and that will be radically different again into the future.

It was also felt that this project should be as relevant and practical as possible, and take into account the reality of the current hospital configuration, the plans, if any, for changes to that already in train, and the likelihood of new investment in acute facilities and services. Whilst a “blue skies” approach can be useful in suggesting new ways of considering how communities’ needs can best be met by health services, it can run the risk of being dismissed as irrelevant and aspirational. What CCBS wants from this project is something that can have a tangible benefit in the promotion of cross-border acute health services.

In light of these considerations, this study has focused on developing a methodology for modelling and examining acute healthcare services on a cross-border and all-island basis, without being limited to considering only hospital locations. As we have seen with the success of initiatives led by the agency CAWT (Co-Operation and Working Together – see Section 3 below), looking at clinical areas and services rather than at physical infrastructure can lead to more easily implementable, practical solutions that can rapidly deliver real benefits to patients.
1.3 Method of approach

1.3.1 Original Methodology

Our original methodology – as set out in a Project Initiation Document agreed with CCBS in late November 2009 – comprised a series of inter-related tasks over the period November 2009 to April 2011, as shown below in Figure 1, which also illustrates the timelines and critical paths associated with these tasks.

Figure 1.3.1: Original Methodology, Timelines and Critical Paths

1.3.2 Agreed Revisions to the Methodology

Fundamentally, the original methodology envisaged a four-month period of consultation with key stakeholders across the health and social care systems in NI and RoI, commencing in December 2009 and finishing in March 2010. This was intended to lead to a period of analysis and examination of the main strategic imperatives, with an Interim Report being issued in June 2010.
In practice, however, the consultation period took much longer than originally anticipated, due to problems related to the availability of a significant number of senior executives within the organisations with which we sought to engage. As a result, the original four-month consultation period – which included the Christmas and New Year break in 2009/2010 – took considerably longer to bring to a conclusion, and we agreed with CCBS to revise the project plan to take account of these issues. The Interim Report was submitted in October 2010; this document dealt mainly with the potential barriers to establishing cross-border acute services, and provided some early discussion of exemplar projects which had tackled these barriers across the two jurisdictions.

Further delays and reconsiderations led to an agreed extension of the date for submission of the draft final report to August 2011, a target which was achieved. This Final Report is a final iteration of the main document and reflects discussions with CCBS held in late August 2011, and with the Project Advisory Group in September 2011.

1.4 Seminars/conferences

Over the course of the project there were three opportunities to publicly present the project and its emerging findings and to elicit discussions and contributions from relevant interested parties to inform the process. At each event, the project team made presentations in relation to the emerging findings and developing modelling process, for discussion with the attendees. These were supplemented on occasion by presentations from other relevant stakeholders, such as CAWT (Cooperation and Working Together). The questions, contributions, and panel discussions drew out important insights and key suggestions for the direction and development of the project and the modelling process. These were very valuable aspects to the project’s development and evolution throughout the duration of the assignment.

1.5 Structure of this report

We have divided this report into four parts, by agreement with CCBS, in order to present a logical flow to our presentation of evidence, discussion and analysis. We also believe that it is important to take the reader through a progressive build-up of understanding regarding a wide range of complex issues, so that the prototype modelling tool which lies at the heart of CCBS’s requirement can be properly contextualised. On that basis, the structure of this Final Report is broadly as follows:

**Part I**

The first part of the report sets out the introduction to the study, describes the current health system in NI and RoI, sets out an initial description of the role of CAWT, and provides an overview of some of the most significant barriers and inhibitors which might affect the design and delivery of cross-border health services.

**Part II**

In the second part of our report, we describe the overall modelling framework we have adopted, after which we discuss a series of exemplar services in which defined health needs have been met or could be met in future, followed by an overall assessment of the lessons learnt from these exemplars.

**Part III**

The third part of our report provides a brief description of what health services in the Irish border region might look like in 2030, if no barriers existed and cross-border service design and delivery were to be adopted as a policy imperative.
Part IV

The fourth part of the report describes the modelling methodology which emerges from the earlier stages of our work, and the means by which it might be used by policy makers, planners, managers and other stakeholders in future. It also includes a section discussing the potential for the new Erne Hospital in Enniskillen to take on a cross-border dimension, and the concluding comments from the report.
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Section 2 Setting the Context

2.1 The two health systems

2.1.1 Northern Ireland

The provision of public health and other social care services in Northern Ireland is publicly funded and is based upon the National Health Service model operating in Great Britain. The Northern Ireland Executive, through its Health Minister and the Department of Health, Social Services and Public Safety (DHSSPS), has overall policy and funding responsibility. And all public health and social care services in NI are free of charge to citizens of the United Kingdom.

Following a restructuring of health and social care in NI in early 2009, the new Health and Social Care Board (HSCB) became responsible for commissioning, resource management, performance management and improvement. The HSCB replaced the previous four area-based Health and Social Services Boards.

Service delivery is provided by five Health and Social Care Trusts (Belfast, Northern, South-Eastern, Southern and Western) which provide the full range of acute, community, primary and continuing care services, on an integrated basis, in their respective areas. The role of the Trusts includes managing and administering hospitals, health centres, residential homes, day centres and other health and social care facilities.

With particular regard to the border region, the Southern HSC Trust provides services to its catchment population in the Armagh, Banbridge, Craigavon, Dungannon, and Newry and Mourne council areas (including major acute hospitals at Craigavon and at Daisy Hill in Newry), whilst the Western HSC Trust provides services in the Derry City, Limavady, Strabane, Omagh, and Fermanagh council areas (including the major hospital at Altnagelvin in Derry, and the new hospital at Enniskillen, which commenced construction in 2009).

Other entities within the health and social care system in NI include the Ambulance Trust, a patient and client council, and a variety of other agencies including the Public Health Agency, the Business Services Organisation and the Regulation and Quality Improvement Authority.

The overall framework for developing the strategy for health care in NI is the Developing Better Services initiative, which aims to change the way in which health care services are provided to patients throughout NI. These changes are taking place at local, sub-regional and regional levels and are reflected both in where and how these services are being provided.

In 2003, it was announced that the then configuration of 15 acute hospitals would be replaced by a network of nine (now 10) acute hospitals supported by seven (now six) local hospitals, with additional local hospitals in other locations, as appropriate. For the border region, the acute hospitals included the four referred to above within the Western and Southern HSC Trusts, with the Tyrone County Hospital in Omagh being a local hospital with enhanced status, and the South Tyrone Hospital in Dungannon also providing local hospital services to border communities.

Other strategic initiatives undertaken within the NI health and social care sector in recent years include:
• Publication by DHSSPS of the **Primary Care Strategic Framework** – Caring for People Beyond Tomorrow – in October 2005, which concentrates on comprehensive person-centred care, having a first point of contact that is readily accessible and responsive to meet people’s needs, and developing a co-ordinated, integrated service employing a team approach with multi-agency linkages;

• The **Bamford Review of Mental Health and Learning Disability**, completed in 2007, which provided a strategic framework for the provision of services in this field.

Substantial work is continuing to ensure effective implementation of these various initiatives, with added focus coming as a result of the reconfiguration of Trusts in 2007 and the creation of new structures for commissioning, public health and business support in 2009.

**2.1.2 The Republic of Ireland**

Policy responsibility for health services in the Republic of Ireland is held by the Minister for Health and Children. The Department of Health and Children’s statutory role is to support the Minister in the formulation and evaluation of policies for the health services. The Department also has a role in the strategic planning of health services, carried out in conjunction with the Health Service Executive (HSE), voluntary service providers (including those running some of the major acute hospitals in Dublin and Cork), other Government Departments and other interested parties.

Under present arrangements, every person living in the Republic of Ireland is entitled to receive health care through the public health care system, which is managed by the HSE and is funded by general taxation. The medical card scheme entitles qualifying individuals to receive certain health services (including GP visits, inpatient and out-patient services in public hospitals) free of charge, with applicants subjected to a means test. For those not eligible to receive a medical card, private health insurance is available and is provided by the Voluntary Health Insurance Board (a statutory body) and by two private sector firms.

Health services are delivered mostly by the HSE, which owns and manages the majority of the 51 public hospitals in Ireland, and which also provides a wide range of primary, community and continuing care services through its network of 32 Local Health Offices. The majority of the largest academic teaching hospitals in the State are owned and run by voluntary boards, and form part of the network of public hospitals. A small number of private hospitals serves patients mainly in Dublin, Cork and Galway (with others planned), and most public hospitals also offer private or semi-private beds to those holding health insurance or paying privately.

The most recent health strategy for Ireland was published in 2001, and focused on a “whole system” approach to tackling health in Ireland beyond the traditional boundaries of health services, guided by four principles: equity; people-centeredness; quality; and accountability. Reforms introduced in the wake of the 2001 health strategy include:

• **The Primary Care Strategy** (2001), which introduced the concept of Primary Care Teams – teams of health professionals (GP and Practice Nurse, Public Health Nurse, Community Registered Nurse, Occupational Therapist, Physiotherapist, Social Worker and Home Care staff, and others) who work closely together to meet the needs of a population of approximately 8,000 to 12,000 people living in local communities, and to provide a single point of contact to the health system for the person [as of December 2010, there were 351 Primary Care Teams in place around the country, with an intention to increase this number to 530 by 2011];
• **Acute hospital reconfiguration**, initially in the North East, South and Mid-West regions, and more recently extended to cover most parts of the HSE, with increasing focus on the delivery of complex medical and surgical interventions (including major trauma and critical care) in the larger hospitals, and the provision of a wide range of other acute services (such as non-urgent care, elective day procedures, diagnostic services, and out-patient appointments) in smaller centres;

• **The reorganisation of the ambulance service** into a national service, with a new cadre of Advanced Paramedics trained to provide resuscitation to patients in the home, or at the roadside, and with patients being conveyed to the hospital most appropriate to treat them (i.e. larger centres for critical care);

• **A transformation programme introduced in 2007**, whose vision included the plan to:
  - Develop integrated services across all stages of the care journey so that people can easily get into, through and out of the health and social care system;
  - Configure Primary, Community and Continuing Care services so that they deliver optimal and cost effective results, and in so doing make it easy for people to access a broad spectrum of services through their local primary care teams;
  - Configure hospital services to deliver optimal and cost effective results so people will be able to easily and rapidly access high quality acute care through designated centres of excellence;
  - Implement a model for the prevention and management of chronic illness so that people receive high quality care and results from comprehensive and integrated care in their communities and designated care centres;
  - Implement standards-based performance measurement and management throughout the HSE so that people can be confident that they will receive high quality care measured against transparent standards; and
  - Ensure all staff engage in transforming health and social care in Ireland and ensure their work has a direct impact on, and contributes to, the overall transformation of health and social services.

These national transformation priorities set a direction of travel in which more care could be provided at home or as close to home as possible, ensuring that when patients do need acute hospital services, they can receive high quality care that is integrated with local services.

Further acute hospital service reconfiguration plans are under way in the HSE currently, with the Director of Quality and Clinical Care, Dr Barry White, spearheading an **Acute Medicine Programme** to be rolled out over a three-year timeframe starting in early 2011. Under this programme, hospitals will be designated as Model 1, 2, 3, or 4 based on the complexity of care offered. A new clinical specialty in acute medicine is being developed alongside this programme and Model 4 hospitals will have full-time acute medicine consultants. The plan will operate on a regional system and will tie in with the Report of the Expert Group on Resource Allocation and Financing in the Health Sector. In line with the latter report’s recommendations, the HSE has now combined the National Hospital Office with the Primary, Community, and Continuing Care Directorate, which is a step towards integrating acute, primary, and community care.

Dr White is also heading up the **Patient Safety First** initiative, a set of 20 clinical programmes across primary and acute care. This initiative will introduce standard care pathways for patients and will form part of a National Framework for Clinical Effectiveness, which will develop national guidelines for treatment based on best practice and evidence.

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2 Irish Times, “HSE pledges patients will see doctors within one hour”, 18 Sept 2010
3 Department of Health and Children, Press Release on launch of Patient Safety First Initiatives, 23 Sept 2010
Section 2 Setting the context

There are new plans to reform the health service in the Republic of Ireland fundamentally – owing to the recent change in government – which are discussed in more detail in Section 2.4 below.

2.2 The border region

The border region between the Republic of Ireland and Northern Ireland encompasses seven counties on the southern side (Donegal, Leitrim, Sligo, Cavan, Monaghan, Louth, and Meath) and five on the northern side (Derry, Tyrone, Fermanagh, Armagh, and Down). The CAWT region comprises the border counties of the HSE Dublin North East region in RoI, excluding Meath, and the area covered by the Southern Health and Social Care Trust (which does not include part of Co. Down) and that covered by the Western Health and Social Care Trust (excluding part of Co. Tyrone) in NI.

While some of this report will address aspects of healthcare that may be considered on an all-island basis, much of the focus is on the delivery of healthcare on a cross-border basis within this border region.

CAWT’s comprehensive Population Health Profile\(^4\) from 2008 outlines some key demographics and indicators for the border region, as follows:

- The population of the region in 2006 was approximately 1.26 million, split evenly between NI and RoI and representing 21% of the population of the island as a whole;
- The region’s population had increased by 15% in the preceding ten years, with the CAWT RoI area’s population increasing at a greater rate than that in NI (as high as 29% in the Louth/Meath/Cavan/Monaghan area);
- The report predicts that the age group set to have the largest growth by 2016 is the 65+ years group, with consequent implications for healthcare planning and delivery;
- There is a predominantly rural population in the region, and the region includes significant areas of deprivation.

2.3 The European context

The issue of cross-border healthcare on the island of Ireland also sits within the context of the membership of the European Union of both Ireland and the UK.

The EU has a long history in respect of addressing the delivery of healthcare services across member state borders. EU legislation has to date addressed issues such as cover for emergency and unscheduled care for EU and EEA citizens while temporarily in another member state (by means of Regulation 1408/71 and the European Health Insurance Card), and the European Court has issued judgements supporting the principle that EU citizens have the right to access care in other member states if their home member state cannot deliver such care.

EU-funded initiatives like INTERREG and Euregio support the development of cross-border healthcare projects in European border regions, and EU regulations and instruments such as the 2005 Directive

\(^4\) CAWT, Population Health Profile, 2008
(2005/36/EC) on the recognition of professional qualifications to support cross-border healthcare by establishing principles such as those related to the mobility of healthcare professionals. This latter Directive has been transposed into Irish and UK law by means of Statutory Instrument SI No. 166 of 2008 in RoI and Statutory Instruments 2007/3101 and 2007/2781 in the UK.

The most recent development at European level is the directive on cross-border healthcare. This directive, which has just been passed in the European Parliament, provides a framework that entitles citizens to seek healthcare services in other EU member states if there are issues such as waiting lists that prevent them from accessing timely treatment in their home member state. This is expected to come into law in 2013, although when it would be implemented in UK and Irish law is unclear as directives are not always immediately adopted.

The directive allows citizens to access services in another member state; acute hospital services require “prior authorisation” from the home member state and the one providing the treatment. The cost of the treatment will be reimbursed by the home member state but may have to be paid initially by the patient. However, the costs will only be reimbursed up to the level that the treatment would have cost in the home member state. States can block access to certain services if it can be argued that it would create an imbalance or severe difficulty for either the home state or the one providing the services. For example, if the home state argues that the sustainability of a particular service in a border region would be threatened if large numbers of patients were to seek treatment across the border, this could permit them to deny prior authorisation. Conversely, if the state providing the treatment claims that to do so would place undue strain on their resources and compromise their ability to treat their own citizens, the access can be denied from that side.

The implementation of this directive may well have direct implications for the provision of healthcare services in the Irish border region. If the legal right to seek treatment across the border, with guaranteed reimbursement, is brought in, in theory it will force a lot of the current issues and barriers to be overcome at institutional level to facilitate the rights of citizens under EU law. In practice, the requirement for “prior authorisation” may enable the health authorities on either side to limit access and delay the full implementation of the directive in terms of the impact on patients waiting for treatment.

2.4 Current political priorities/developments in Northern Ireland and the Republic of Ireland

2.4.1 Republic of Ireland

The February 2011 election saw the coming to power of a new Fine Gael – Labour coalition government in the Republic of Ireland. The parties issued a Statement of Common Purpose document when launching the coalition, which includes proposals for significant and fundamental reform of the health services in RoI. These proposals include the following:

- Universal Health Insurance (UHI) for all citizens will be introduced by 2016;
- The HSE will “cease to exist over time”, its functions returning to the Department of Health and Children or being taken over by the new UHI system;
- GP fees will be removed under a new Universal Primary Care system;
• Hospitals will be managed by independent, not-for-profit trusts rather than the HSE – this introduces a split between commissioning and provision of healthcare services in RoI that differs from the current structure;

• Hospitals will be paid according to the care they deliver and will be incentivised to deliver more care in a “money follows the patient” system.

Aspects of the proposed reforms with particular relevance to the border region acute service provision include the following:

• Smaller hospitals may combine in a local hospital network with shared management;

• The Minister for Health will be responsible for determining that hospitals which play an important role in an area should not be allowed to close under UHI;

• The Hospital Insurance Fund will assist hospitals in more remote locations that may not have a large throughput of patients to continue to provide important local services.

These reforms are on a scale potentially even greater than the creation of the HSE and the abolition of the Health Boards in January 2005. The structure of healthcare resourcing is set to change significantly and it remains to be seen how this will play out in terms of the transition period between now and full implementation. The proposals refer to new GP and consultant contracts as part of the new financing arrangements, the negotiations for which on past experience may prove problematic, certainly within short timeframes.

In terms of the potential impact on the future development of cross-border healthcare, the proposed reforms may be viewed as a cause for concern. The transitional period is likely to be lengthy and during this time it may be difficult to get new initiatives off the ground. As the fundamental structure of the health services is earmarked for change, managers and clinicians alike may not have confidence in their authority or capacity to implement changes in the shorter term. Funding may not be released for new programmes until the final structures are known.

There is a risk in terms of the “champions” of cross-border collaboration: in any fundamental reconfiguration of healthcare services, it is likely that the consequent reshuffle of personnel may result in many of those currently engaged in the promotion, support, or implementation of cross-border services may move to other positions in the new organisations. This risks a loss of knowledge and learning, and may hinder the future development of these kinds of services.

However, it is also a potentially advantageous situation if new and innovative ways of delivering healthcare services are being considered and supported in a reformed structure. While the new organisations are in formation, it is an opportunity to keep cross-border healthcare at the forefront when national services are being planned and reconfigured.

One other issue within the RoI health system which may create a significant impact in the border region is the change to the National Treatment Purchase Fund (NTPF). The NTPF was established by Government in 2002 as an independent statutory agency with the primary aim of providing faster treatment for public patients. The mission of the NTPF was to reduce the amount of time public patients are on hospital waiting lists for surgery by offering choice in obtaining access to treatment promptly, safely and to a high standard of patient satisfaction. Until now, this has meant that when waiting times for certain types surgery exceed a predefined limit (i.e. three months), the patient could apply to the NTPF for their treatment to be funded in another hospital. 29,000 patients were treated
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under the NTPF in 2009, in both private and public hospitals; historically, some RoI patients had also been treated in NI hospitals.

In June 2011, it was announced by the Government that the NTPF would cease accepting new referrals after July 2011, and that a new agency – the Special Delivery Unit (SDU) – would be set up to cut hospital waiting lists. The SDU is chaired by Dr Martin Connor, an expert who worked in the NHS in Britain and on waiting list reforms in NI, and who has now been appointed to the HSE Board.

At the time of writing, it is unclear how the SDU will achieve the required reductions in waiting lists, and how its work will impact upon hospitals in the border region.

2.4.2 Northern Ireland

As with the political changes in RoI, the Assembly Elections in Northern Ireland in May 2011 led to some changes in the electoral strengths of the main parties, and resulted in the appointment of a new Executive and the allocation of departmental portfolios to a new ministerial team.

From a health and social care perspective, the most significant change was that a new Minister, Edwin Poots (Democratic Unionist), was appointed, replacing Michael McGimpsey (Ulster Unionist) who had held the health portfolio since 2007. Within one week of his appointment, the new Minister announced that he had decided to provide capital and revenue funding to the proposed radiotherapy centre based at the Altnagelvin hospital site in Londonderry, effectively reversing a decision made by his predecessor two months previously, one of the most contentious issues facing the health sector in NI.

Other significant challenges facing health policy-makers and stakeholders in NI at present include the following:

• Considering the recommendations arising from the 2010 McKinsey report commissioned by the Health and Social Care Board, entitled Reshaping the System: Implications for Northern Ireland’s Health and Social Care Services of the 2010 Spending Review, which stated:

  “Over the coming months, Northern Ireland – led primarily by health and social care professionals – will need to develop and implement a new model of service configuration that includes:

  • Fewer acute hospital sites, reflecting the need to consolidate services for quality and productivity reasons, as well as the impact that reducing length of stay and acute activity will have on smaller local hospitals’ ability to cover their fixed and semi-fixed costs
  • Development of “local hospitals” that provide local access to urgent care services, complex and urgent medicine, intensive care units (ICU), and paediatric ambulatory treatment service (PATs)
  • Integrated care centres that support multi-disciplinary teams working across primary, community and social care, and offer 12-16 hour, 7 day a week urgent care services, diagnostics, assessments and access to outpatient services
  • Ambulance and transportation services that support the new service configuration
• Reconfigured mental health and learning disabilities services that provide greater care in the community, less in inpatient settings.”

• Linked to the McKinsey report, an ongoing review of the health service which is being undertaken by the Chief Executive of the Health and Social Care Board; this review was commissioned in early 2011 by the previous Minister, and is now being taken forward by the new Minister, who has said\(^5\) that the review team “would focus primarily on the delivery of acute services”.

• Continuing to run services within a highly-constrained public expenditure environment, with an expected £200m shortfall impacting on the NI health and social care budget in 2011-12.

2.4.3 Common Challenges

It is striking that both jurisdictions are facing very similar challenges in respect of the planning and delivery of health and social care services, particularly within acute hospitals. Both NI and RoI are facing very significant budgetary constraints in respect of health care expenditure, with major cuts likely to have a substantial impact in the near term, and very restricted expenditure available for future capital or revenue development.

Both Health Ministers are actively considering the requirement for consolidation of acute hospital services and sites, with more activity likely to be transferred to primary and community care settings, and some existing hospitals facing the reconfiguration of their services away from the traditional 24 / 7, full-service inpatient model, to one whereby their main activities will centre around day procedures, diagnostics, outpatients, and urgent care not requiring inpatient overnight admissions.

Given the similarity of the challenges being faced, and of the service configuration approaches which have been independently recommended in the two jurisdictions, perhaps there is now an ideal opportunity to consider whether such approaches might best be achieved on a cross-border basis, thereby providing better access to care for people within border communities, and offering enhanced economies of scale to the NI and RoI exchequers.

2.5 Consultation process

2.5.1 Introduction

At an early stage in this project, we identified a range of external consultees whom we felt would have a potential capacity to add some value to the analysis, particularly those with some pre-existing involvement in cross-border health issues in both NI and RoI. These included stakeholders with involvement or interest in policy matters, service planning, service management, funding and clinical delivery.

During 2010, we were able to benefit from significant input from stakeholders in both jurisdictions, and our consultation list is replicated in Appendix A. This process included substantive input from over 30 senior individuals within nearly 20 organisations [including large agencies such as the HSE and the HSC Trusts, where we engaged with several individuals with responsibility for different services, in some cases on several occasions].

\(^5\) Reported by BBC News, 24 June 2011
It should be noted, however, that the consultation process did not include any input on policy matters regarding cross-border health services from either the Department of Health and Children in RoI, or the Department of Health, Social Services and Public Safety in NI. With regard to DoH&C, we sought meetings with a range of senior individuals throughout the first half of 2010 in order to discuss the project, but sadly it proved impossible to get the Department to commit to a meeting, despite repeated contact from HBC.

With regard to DHSSPS, we requested (in January 2010) a meeting with representatives of the Department to discuss the issues central to our terms of reference. However, the Department declined to meet us (March 2010) on the grounds that service configurations had been reviewed under the Developing Better Services (DBS) initiative in 2002, and that the implementation of the policy as set out in DBS is still underway and not scheduled for review.

It is disappointing that neither Department saw fit to engage with us as part of the consultation process, but perhaps unsurprising in the light of the fact that the report arising from a strategic framework study on cross-border health care, jointly commissioned by the two Departments in 2007, remains unpublished with little apparent appetite on the part of either Department at present to advance the matter (see Appendix B for further detail and discussion).

2.5.2 Issues Raised During Stakeholder Consultations

A significant majority of those whom we consulted indicated a positive attitude towards the potential for further development of cross-border health and social care services, although stakeholders typically recognised the existence of various factors which might impose limitations or restrictions on such initiatives. In Section 5 below, we describe the principal barriers and inhibitors identified by stakeholders during the consultation process, and we discuss the practical implications of these factors.

Notwithstanding these barriers, many consultees recognised that significant potential may exist for the development of enhanced healthcare services on a cross-border basis in a number of areas, including:

- **Services within the “border corridor”,** typically in clinical areas where there may be gaps on either side of the border, or where accessibility may be problematic, or where there is general potential for providing services out of hours;

- **Services which may be provided on an “all island” basis,** for example highly specialised tertiary services which may not be economically viable in either jurisdiction, but which could be operated in one location to serve the whole of the population of the island. Other potential examples would include services which both jurisdictions currently outsource to Great Britain, in areas like organ transplantation, highly specialised eating disorder treatments, or the provision of psychiatric intensive care beds.

- **High technology services which require substantial capital investment,** for example in certain diagnostic fields or in areas such as radiotherapy, where again a more justifiable business case may be developed if services were to be established to meet the needs of a catchment population covering both sides of the border.

In addition to these areas, many stakeholders identified existing good practice with regard to cooperation between agencies in NI and RoI, where potential may exist to extend service models into other clinical areas or into additional territory within the border region. Some of the examples quoted included:
• co-operation in the provision of renal dialysis services between Daisy Hill in Newry and the Dublin North-East region of the HSE;

• provision of neo-natal services within Altnagelvin Hospital in Derry to patients from Donegal;

• co-operation between the Western HSC Trust and HSE West for the provision of oral maxillofacial services in Altnagelvin to patients from Donegal, Sligo and Leitrim;

• co-operative project between the Western HSC Trust and HSE West for the provision of vascular procedures to renal patients (service provided in the Erne Hospital in Enniskillen to patients from Sligo General Hospital and its catchment area) and reciprocal arrangements for the provision of screening to Erne Hospital patients in Sligo General;

• provision of radiation oncology services in Belfast to patients from Donegal.
3 Cooperation and Working Together (CAWT)

3.1 Overview

Cooperation and Working Together (CAWT) is a partnership between the Health and Social Care Services in NI and RoI, which facilitates cross border collaborative working in health and social care. CAWT’s region includes counties Donegal, Sligo, Leitrim, Cavan, Monaghan and Louth in RoI, and in NI covers counties Armagh and Fermanagh, mid- and West Tyrone, much of Derry, and south Down.

On behalf of the two Departments of Health, CAWT is managing the implementation of 12 EU INTERREG IVA funded large scale cross border health and social care projects. The title of this overarching programme is Putting Patients, Clients and Families First, and has a strong focus on improving access to services, promoting health and well-being, reducing health inequalities, and promoting social inclusion.

The projects have been categorised into five strategic themes:

- Acute Hospital Services;
- Primary, Community and Continuing Care (PCCC);
- Mental Health;
- Population Health;
- Disability.

Previously, under INTERREG IIIA, CAWT managed funding in the region of €10.45m / £6.74m for 37 cross border health and social care projects, and a further seven PEACE II funded projects to the value of €1.57m / £1.08m.

3.2 Current projects

3.2.1 Overview

CAWT’s current work programme covers 12 projects as described above. The projects were selected from initial applications on the basis of evidence of need. Projects needed to demonstrate a patient focus, be capable of providing additionality to the current services, and be capable of mainstreaming following pilot programmes.

In addition to general criteria and cross border specific criteria, projects and services had to demonstrate that they met a range of health-specific criteria including:

- Must contribute to cross border core health services, in line with the CAWT partner’s Strategic and Service Plans;
- Must demonstrate health and/or social gain, impacting directly on patient/client care and bring added value;

6 Full details of CAWT can be found on its website www.cawt.com and in “The CAWT Story 2003-08” available from the CAWT website.
• Must be based on common and identified cross-border needs;
• Reduce inequalities and disadvantage, facilitate access and equity and ensure social inclusion;
• Show true partnership with evidence of community and voluntary sector engagement and input into the planning and delivery process;
• Improve patient/client access to primary and secondary care;
• Have a clear exit strategy with the potential for future mainstreaming;
• Capable of delivering focused, achievable, specified outcomes within a given timescale, which can be clearly evaluated;
• Ensure consumer involvement and person-centredness;

The selection process involved a series of workshops with clinicians and frontline staff to narrow the initial pool to the final twelve:

• Cross Border Acute Hospital Services;
• Cross Border Eating Disorder Network;
• Cross Border Outcomes for Children Project;
• Cross Border Disability Project;
• Cross Border Diabetes Project;
• Cross Border Workforce Mobility Project;
• Cross Border Sexual Health/GUM Services;
• ‘Time IVA Change’: border region alcohol project;
• Cross Border Older People’s Project;
• Cross Border Social Inclusion and Health Inequalities Project;
• Cross Border Obesity Project;
• Cross Border Autism Project: Turning the Curve.

The INTERREG IVA CAWT programme will be subject to evaluation, focusing on the collective impact of the projects. The evaluation will ensure the quality of baseline data provided and will make an assessment of the return on investment of the funding provided. It is also intended to conduct a cost-benefit analysis of the programme so that its impact can be measured.
3.2.2 Acute Hospital Services

CAWT’s Acute Hospital Services project is a €9m initiative and has three streams of work:

- Ear, Nose and Throat (ENT) services;
- Vascular surgery;
- Urology.

The ENT project is described in detail in Section 8 of this document, as is CAWT’s previous ENT pilot project in the North-West.

The Vascular project is located in the Erne Hospital in Enniskillen and performs vascular surgery, including procedures for dialysis patients who previously had to wait long periods for such interventions in Dublin, for patients from all partner areas. There is a multidisciplinary team between the Erne Hospital and Sligo General as some screening is provided to patients from the Erne in Sligo; both clinicians and patients travel between the locations in delivering and accessing the related services.

The Urology project involves the appointment of a consultant urologist in Letterkenny General Hospital, which along with the existing consultants creates a team of five, treating patients in HSE West, Western HSC Trust, and HSE Dublin North East regions.

3.2.3 Other Services

Whilst CAWT’s other projects are not in the acute hospital sector, the role of health promotion and prevention of illness must be acknowledged in having an impact on acute services. Of particular note in this regard are the Sexual Health/Genito-Urinary Medicine (GUM) project and the Eating Disorder project.

**GUM services** are being enhanced in the border region by CAWT’s programme: the CAWT initiative will put in place several clinics along the border corridor. Early intervention is particularly cost-effective in sexual health, with one estimate suggesting that £1 spent on prevention today can save the health system £10,000 of treatment in ten years’ time. The CAWT-managed project has been very successful in providing services to patients and the initiative has garnered support from the HSE and the NI HSC Trusts with an agreement to maintain the service beyond the pilot programme.

**Eating disorders**, as discussed in Section 11 of this report (Acute Mental Health Services), can be complex and difficult to treat once advanced. CAWT has developed a border-region community eating disorder project with 12 eating disorder therapists. If eating disorders can be treated early, the patient may not require inpatient treatment, thus reducing the cost to the health service and the impact on the patient. The CAWT project has developed clinical pathways, eating disorder support groups, training for health professionals, and a cross-border eating disorder network.

CAWT’s projects in respect of obesity awareness and alcohol abuse also have impacts on the need for acute hospital services as these factors cost the health service significantly to treat at acute level; if preventive measures can be taken at the community level then the ultimate cost to the health services will be lower.
3.3 Future development

CAWT have a series of strategy groups, consisting of clinical and managerial representatives from the border health services, who are tasked with considering future projects and initiatives for cross-border healthcare co-operation. The strategy groups will develop initial concepts for future projects on which CAWT can build.

3.4 CAWT’S role in the development of additional cross-border services

It is evident from our examination of the current and previous CAWT projects that the organisation has a wealth of experience and expertise in developing and managing cross-border health and social care projects.

The recent INTERREG IVA programme has enabled the CAWT partners to provide new and additional frontline cross-border services, including those in the acute sector, which have a direct impact on patients and clients, and significant benefits to those in the border region.

CAWT’s considerable body of experience and accomplishments lead us to believe that with the strategic direction of the CAWT partner organisations, it should remain the central partnership for the promotion, development, and implementation of cross-border health and social care, including acute hospital services, in the NI/RoI border region.

CAWT’s structures, which include the management board, secretariat, development centre, project managers, and project boards, have already, for example, worked through or around the kinds of barriers discussed in the next section; have established networks of clinicians and managers across the border; have demonstrated the effectiveness of cross-border working in health and social care; have generated goodwill and a positive image of cross-border healthcare projects; and have a network of key contacts and “champions” – not least the CAWT structures in place – to facilitate future cross-border development.

CAWT should also have a role in helping to design future all-island services which operate on a cross-border basis [and would therefore be within its remit].

We therefore work on the assumption that any potential acute hospital cross-border services would be developed in conjunction with CAWT and would build on their already-impressive portfolio of projects.
4 Potential barriers and inhibitors

4.1 Introduction

In any collaboration in the delivery of services across jurisdictional boundaries, there will be many issues to work through, especially around aspects that may prove a hindrance to providing such services. Healthcare is no different, and indeed brings in a host of very specific issues that act as perceived or actual barriers, inhibitors, and detractions from the ability to deliver healthcare services across borders. Some of these are specific to the border between NI and RoI, such as differences in legislation and healthcare funding between the two jurisdictions, and some apply to any border region’s healthcare delivery structures, such as quality assurance and care pathways.

The following section briefly outlines the main issues that need to be addressed when developing healthcare services to be delivered across the border, along with some ways in which these barriers have been worked around or overcome in existing cross-border initiatives and suggestions for more permanent solutions that could and should be put in place to facilitate the more extensive and strategy-based development of acute healthcare services on a cross-border basis. This section is a summary of the key factors; more detailed discussion is found in Appendix C.

Many if not all of these challenges have been encountered and discussed in previous reports, such as the 2001 CCBS report on cross-border healthcare co-operation\(^7\), but they are still very relevant, still pose obstacles to the development of cross-border acute services, and still require to be addressed if significant progress on this issue is to be made. If anything, it is testament to the intractability of many of these problems that many years on they remain in place, are still discussed as barriers to co-operation by many stakeholders, and take considerable time and energy to be worked through by those implementing cross-border initiatives.

4.2 Policy matters

4.2.1 Key Issue: Perceived Lack of Support at the Top Level

The commonly held belief among stakeholders at every level is that in the absence of a policy imperative supporting and prioritising cross-border care initiatives, it is and will continue to be extremely difficult to obtain funding approval for the development of hospital or other healthcare services on a cross-border basis. We referred above to the feasibility study commissioned by the two Departments of Health, which remains unpublished (see Appendix B). Many senior officials within the NI health and social care system indicated a belief that the report’s suppression was illustrative of their perception that major collaborative efforts in health service planning would be unlikely to take place between the two jurisdictions, other than specific initiatives which are already under way.

This perception had been bolstered by the recent decision as mentioned above in respect of the postponement of the radiotherapy service centre in Altnagelvin, which is designed to provide services to RoI patients from Donegal as well as those in the west of Northern Ireland. This is in many ways the most significant cross-border development in acute services and its delay for some was a worrying signal that the NI authorities, at least, were not committed to developing cross-border services on a larger scale. Its rapid reversal by the new Minister has gone some way towards

\(^7\) Cross-border Co-operation in Health Services in Ireland, Jamison et al, CCBS March 2001
allaying such fears; however, the saga is a reminder of how such projects are vulnerable to political whims and tactics.

4.2.2 Overcoming the Barrier

Overcoming such high-level opposition or simply lack of interest is a difficult prospect. If key authority figures do not see a value in developing a co-ordinated approach at a strategic level, it undermines all attempts to establish cross-border initiatives further down the chain. However, as the various successes at a micro level have demonstrated, a lack of political support or drive does not automatically spell failure for such projects. Indeed, the successful development and implementation of projects at local level and the gradual roll-out of such initiatives across more sites and specialties can inform later political and strategy-making decisions. They are an advertisement for the potential of cross-border services to deliver healthcare in a joined-up way to serve the needs of the population effectively, and can act as a lever to drive a more strategy-based policy of collaboration in the future.

The current political environment in both jurisdictions is characterised by increasing cutbacks and pressure for reforms in the face of public and trade union opposition. Deeply unpopular decisions are being taken, such as the closure of the Accident and Emergency Department in Roscommon County Hospital, despite staunch local opposition and pre-election promises by government representatives to maintain services at the hospital (seemingly despite the evidence which tends to suggest that small A&E units cannot be operated safely on a 24/7 basis). The prospect for cross-border services to deliver “good news” stories without requiring significant financial investment could be exploited to sell the concept to those in authority.

4.3 Professional standards

4.3.1 Key Issue: Standards Differ Across the Border

There exists a disparity in relation to the existence of formal clinical and governance standards and protocols within the health services in the two jurisdictions, with this being far more developed within Northern Ireland than within RoI up to now. A significant concern amongst stakeholders in Northern Ireland is that the existence of two different sets of standards (one well-developed, the other less so) between the two jurisdictions may create difficulties if clinicians are expected to practise on both sides of the border, or if services are provided in one jurisdiction to patients from the other.

Whilst the development of clinical standards, pathways and governance arrangements has not been formally mandated in RoI in a standardised format, anecdotal evidence would suggest that levels of voluntary compliance with standards and guidelines such as those used in NI are reasonably high amongst clinicians in RoI. HIQA are undertaking the development of draft national standards for healthcare services, alongside a separate stream of work developing clinical practice and protocols for a wide range of specialisms within the HSE. It is anticipated that this will expedite the “catch-up” for standards by comparison with the UK.

4.3.2 Overcoming the Barrier

It is clear that this issue has been worked through successfully in the many projects formerly and currently implemented in border regions through CAWT by means of extensive consultation with the clinicians and healthcare managers involved. Initiatives such as the vascular project between Sligo and Enniskillen have involved lengthy discussions developing and formalising the clinical pathways and responsibilities at all stages of care. This is evidence that with a willingness to address the issue
on the part of the frontline clinical team and the management within the hospitals and health services at a local level, this issue does not represent a barrier; it is a challenge to get agreement but not an insurmountable obstacle.

For the most part, however, this process has been done on an individual project basis, specific to that specialty or procedure, rather than developed as a blueprint for future collaborative efforts. As the level of formality improves in Rol, and the standards for various clinical areas are implemented into HSE policy, which will in itself make the process considerably easier in terms of marrying the two sets of standards together, we would recommend that there be an examination on a wider basis as to how such standards relate to those in NI and agree on ways in which standards can be considered equivalent for the purposes of designing future cross-border services.

4.4 Service definitions, roles and grades

4.4.1 Key Issue: Different Definitions in respect of Roles, Grades, and Services

Related to the matter of professional standards and clinical guidelines is the fact that some differences exist between North and South regarding the definition of certain clinical procedures or services, and the allocation of responsibilities for the performance of these procedures. Where roles and service delivery can be somewhat correlated, another issue is the grade at which the clinicians are practising. There are differences in how staff progress through grades between the two jurisdictions, making defining equivalent positions difficult. This also has an effect on salary scales, which already differ considerably given the differences in cost of living and the benchmarking and other agreements that led to public sector salary increases in Rol in recent years.

4.4.2 Overcoming the Barrier

Similarly to the manner in which the issues surrounding professional standards and clinical guidelines have been addressed, projects already up and running have found individual solutions to work around these problems. Clinical pathways and clinicians’ responsibilities are worked out between the parties for the specific initiative in question and these are formally agreed before the project starts up. Considerable work has gone into ensuring that a post on one side of the border has been correlated as far as is possible with its cross-border equivalent. There are unavoidable inconsistencies such as ostensibly identical posts being filled on either side of the border with a considerable salary difference because of the disparities in pay between the HSE and the HSC Trusts in Northern Ireland.

It is both impractical and undesirable to suggest that one jurisdiction simply model itself on the other in this respect, so it is difficult to recommend strategic changes that will deal with this problem. If future healthcare reform in Rol proceeds as outlined by the new government, there will be widespread and considerable changes to service definitions, grades, and indeed potentially payscales. It remains to be seen as to whether such changes bring the two systems closer in terms of this issue or whether indeed a lot of the current work will be rendered moot as a new process will need to commence in terms of matching the roles once new structures are in place.
4.5 Accreditation/regulatory issues

4.5.1 Key Issue: Differing Systems for Professional Accreditation

Concern was expressed by a number of stakeholders on both sides of the border that different systems for the professional accreditation of medical, nursing and allied health professional staff, and different regulatory regimes, could create significant challenges with regard to clinicians practising outside their “home” jurisdiction. There are specific issues within this in respect of non-EU staff, for example, and doctors in higher specialist training, who are not covered by the relevant EU directive and can therefore find movement across the border restricted. The allied health professional registration body in RoI has experienced considerable delays in establishing a register for all the AHPs it intends to regulate. This can pose problems for trying to put in place mutual recognition of registration in this area.

4.5.2 Overcoming the Barrier

This issue has been dealt with in existing cross-border health projects by and large by means of dual registration. Clinicians who form part of a project that involves working in the other jurisdiction are required to register in both. This has been effective as a means of getting projects up and running; it does, however, add considerably to the timescales as it can take several months to complete such registration. There is a concern that whilst this may be worthwhile for well-paid senior medical staff such as consultants, it may prove less practical for lower grades, for nursing staff, and for allied health professionals on a wider scale.

We understand that there can be difficulties in establishing bilateral agreements for registration owing to both states being members of the EU. However, it is something that warrants examining to see if there are ways to facilitate the dual registration or recognition of healthcare staff that are less time-consuming, bureaucratic, and expensive.

4.6 Legal and indemnity issues

4.6.1 Key Issue: Legislative Differences and Indemnity of Professionals

Legislative differences, such as the differences in mental health legislation on both sides of the border, create barriers to cross-border healthcare initiatives.

Indemnity of healthcare professionals, related as it is to the accreditation/registration issues mentioned above, also needs careful consideration in the development of cross-border services. On both sides of the border, healthcare professionals are indemnified by the health authorities on the basis of their registration and/or certification or accreditation in their particular field. If such registration or accreditation is not easily obtainable in the other jurisdiction, this creates significant problems in maintaining professional indemnity for such healthcare professionals.

4.6.2 Overcoming the Barrier

Legislative differences in relation to the mental health issues have not been dealt with and there are few ways to work around them. We recommend that this area be examined in detail with a view to harmonising the legislation to facilitate greater cooperation between the jurisdictions in relation to the transfer of mental health patients and the establishment of cross-border acute mental health projects.
Indemnity has been dealt with by means of honorary contracts in the projects that are up and running to date. The clinician based in one jurisdiction is given an honorary contract in the relevant institution in the other jurisdiction. This, along with dual registration, allows them to practise in both and incorporates their professional indemnity. Again, this process can add to the time it takes to set up a project and it may be asked if broader agreements on indemnity and similar issues could be implemented at a higher level to at least provide a framework for future cross-border initiatives.

4.7 Data standards and data transfer

4.7.1 Key Issues: Data Gathering and Standards Differ

Closely connected with the matter of service definitions is the issue of how relevant data is gathered and analysed within each jurisdiction, which has a significant bearing upon the ability to compare activity levels, outcomes, prevalence, and a wide range of other statistics. This has a direct and considerable impact on the ability to plan and implement cross-border projects. This is an issue not confined to cross-border initiatives: gaps in data or inadequate information can hinder service redesign anywhere in a health service, but the issues are significantly exacerbated when one has to try to match data from one jurisdiction with that gathered from another.

As we will see in some of the exemplar service areas later in the document, data that does not allow us to properly assess needs, determine activity levels, and measure outcomes makes for ineffective services, and data that cannot be compared across the jurisdictions means that the effectiveness of future services is difficult to predict, to justify, and to measure.

The problems here are more evident in RoI, where the way in which hospital data is gathered and collated varies from hospital to hospital. Here there are a number of problems with gaps in data, individual quirks throwing the data out of kilter (one example is a hospital with a particular unit that is on two floors: when a patient is moved from one to the other it is counted as a new admission to the unit even though there is no break in the care, making for misleading figures in relation to admissions to the unit and lengths of stay), inconsistencies, data being collected for different audiences (international databases, for example, as well as HSE records), etc.

4.7.2 Key Issue: Sharing Information across Borders

Frequent mention was made of potential difficulties regarding the sharing and transfer of data and information, both at the level of individual patients or cases, and at macro level. Many stakeholders saw considerable difficulty regarding the sharing or holding of patient information between the two jurisdictions, both in terms of data protection legislation and the physical and technical issues associated with sharing data.

4.7.3 Overcoming the Barriers

The first data obstacle relates to the consistency and quality of data collection. While individual projects have been able to be initiated by obtaining information from individual hospitals, clinicians, and managers, there is no doubt that this is an issue for all cross-border projects, and in particular for continuing to justify the concept by means of having robust outcome measurements indicating the success of such initiatives.
Section 4 Potential barriers and inhibitors

4.8 Costs, funding and finance

4.8.1 Key Issue: Money

Stakeholders in both jurisdictions expressed the belief that funding and finance issues would prove difficult to address in the context of more services being provided on a cross-border basis. The differences between the two systems in terms of eligibility for free treatment, and the existence in RoI of the medical card scheme operating alongside private health insurance arrangements are obstacles to the development of simple and effective reimbursement mechanisms.

A further matter identified by a number of stakeholders was the relatively high cost of medical treatment in RoI, which might limit the potential for services being provided in that jurisdiction for patients from NI.

The overriding issue, of course, is the straitened economic circumstances prevailing currently. Arguably RoI is in a considerably worse situation than NI in this regard; however, NI is not immune to the effects of the recession, and the UK Comprehensive Spending Review has resulted in significant cutbacks being flagged, up to and including the closure of hospitals in the region. In the context of health services on both sides of the border being cut back, in some cases severely, many stakeholders are either sceptical of the value of investing in cross-border services, or while supportive of the principle, are sceptical that those who make the decisions about where money goes will opt to develop such services, at the potential expense of others.

RoI in particular has issues in relation to standardised data collection. HIPE data\(^8\) is reported to the ESRI and the HSE, along with data such as that used to compile the Healthstat dashboard figures (used by the HSE for public reporting of its performance figures). However, it is apparent that different hospitals do track and record data in different ways and this should be standardised and formalised across the HSE. Lengths of stay and the breakdowns between types of care at all stages, such as elective versus emergency procedures, should be routinely captured in a consistent and standard manner to enable both comparison across the border and comparison with past and future performance.

While there is likely always to be some disparity between the data collected in NI and that collected in RoI, this would be reduced and could be worked around if there were clearer and more standardised ways to report the data in RoI.

In respect of data sharing and transfer, this remains problematic. Within both jurisdictions, there are significant internal transfer and sharing restrictions and many believe that if information cannot flow freely within an organisation, it is unreasonable to expect that it might move between organisations across a jurisdictional boundary. There have been some strides made in relation to, for example, prescribing by GPs from one jurisdiction for patients from another. This issue, however, warrants considerable scrutiny to explore the full implications of data transfer. The development of electronic patient records will certainly enhance the future potential of cross-border data transfer to support cross-border healthcare projects but such records are not proving easy to develop even internally within the health systems themselves.

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8 Hospital In-Patient Enquiry Scheme (HIPE) is a computer-based system designed to collect demographic, clinical and administrative data on discharges and deaths from acute hospitals nationally.
4.8.2 Overcoming the Barriers

Existing cross-border projects have dealt with reimbursement from one institution or health service to another on an individual basis. Some projects have a cost per patient or per procedure; some have a system of charging for theatre time or staff resources; some have a fixed contract based on a predicted activity volume. A clear and consistent basis for predicting costs (related to the data issues above) and for establishing the way in which such costs will be met and by whom would be useful for the future development of cross-border services.

Existing arrangements are not always satisfactory to all involved. One hospital’s management are unhappy that they are effectively paying over the odds because their share of the costs for a particular project is greater than the cost per patient should they be charged individually. In another case, the opposite issue is a problem: where there is a proposal to charge on a per-case basis, the hospital providing the service has very limited capacity and cannot simply provide additional care without investment in an expanded and properly resourced service, which will not be derived on a fee-per-case basis.

In terms of the financial crisis and the effects on health service budgets, there are two advantages to considering cross-border services in these difficult times: the first is that there is potential to share resources, especially in the delivery of services in the dispersed border regions, which should be a route to reduced costs for the same or better services for both health systems; and the second is that the CAWT model, which attracts external EU funding for its activities, offers the health systems a way to pilot and develop such services without having to commit all the investment at the outset. This is an attractive option and should be used as a selling point when finances are used as a reason not to consider the development of cross-border services in this area.
PART II
5.1 Overview

We believe that the establishment of the prototype modelling tool for hospital planning on a border region and all-island basis should involve a combination of critical questions (ideally within a “decision cycle” format) and an assessment of several sets of factors, including statistically-based planning where appropriate, in order to assist in finding the optimum way forward for each individual specialty or service.

It should be noted that whilst the original terms of reference refer to the development of a “modelling tool”, and indeed as part of the overall process we include an Excel-based data modelling tool that can be used in some instances to facilitate some quantitative analysis, what we have developed is a holistic modelling methodology, designed to bring the user through the process of examining and making decisions about the feasibility and shape of proposed cross-border healthcare services.

5.2 Initial approach – the decision tree

In the earlier stages of the project, we presented our initial vision of the modelling process using a “decision tree” – a series of consecutive key questions to be asked to determine the potential for cross-border collaboration in the area being examined.

We then expanded the later stages of the methodology to incorporate the factors we believe need to be taken into account when making further decisions about the viability of cross-border projects and to inform the development of possible models for such services.

5.3 Development and refinement of the process

Following on from the May 2011 conference (see Section 1.4 above) and taking into account the input from various contributors, combined with some of the learning from examining the various clinical areas, we revisited the elements of the modelling methodology and changed some features as follows:

- We introduced an initial assessment step, which asks what the issues are with the service area in question, and whether a cross-border approach is likely to be able to tackle same. This is intended to be a high-level, short-term assessment of the key issues prior to embarking on the more complex study and modelling.

- We reconfigured the decision tree into a cyclical process. This is to allow users to enter the process at any of the key stages, rather than assuming that one element takes priority. We have also softened the response to a negative assessment of these factors, suggesting that consideration be given to how the situation might be changed to enable the process to continue.
Following the key decision cycle, we introduced another element: selecting benchmarks. Whilst, like all the elements, this will be more relevant to some service areas than others, we have found that successful modelling depends on having some key data from other sources to contextualise, validate, and provide benchmarks for the data being used in relation to the border areas or all-island services.

We integrated the previously separate aspects of the toolkit by indicating that the detailed, multi-factor considerations that need to be examined are to determine the optimum model arising from the decision to move forward with a cross-border project. These can be broadly considered quantitative elements, comprising the supply and needs analyses, supported by modelling such as that generated by our sample data modelling tool, and qualitative elements, comprising consideration around access and service issues. Together these build a holistic picture out of which suitable models can be identified.

Overleaf is a first look at the modelling framework as illustrated in a graphic format. Whilst it appears complex, it aims to bring together the various diverse aspects and influences involved in the development of cross-border services into a coherent process. The methodology itself is explained in detail in Part IV of the report (Section 14), but as the following chapters discuss the exemplar services examined as part of the study, and apply the methodology to such clinical specialties (whilst taking account of what each area’s characteristics brought to the development of the framework), we felt it prudent to give an early illustration of the modelling process.

The diagram overleaf can be considered in two stages: the early decision-cycle phase, followed by the detailed analytical stage.
5.4 The modelling methodology: diagram

![Diagram of the modelling methodology.](image)
5.5 How it works

A more detailed explanation of the modelling process and the data modelling tool appears in Part IV, looking at each of the elements and how they fit together.

Briefly, as can be seen in the diagram above, the process commences with an initial assessment of the key issue and whether a cross-border approach can address it. The question to be asked is “Why consider this cross-border?”

The decision cycle follows: a set of three key areas in which questions must be asked and decisions taken regarding the ability of the modelling process to move forward to the next phase. The decision elements are:

- **Benefits** – for a project to be feasible, there must be potential benefits (clinical, economic, patient-related, etc) in its implementation;
- **Barriers** – there must not be insurmountable barriers (e.g. regulatory, legislative, financial, etc) to the development of a project;
- **Champions** – there must be “champions”: key personnel with the capability, willingness, and authority to drive forward the initiative; this also includes community support and involvement.

If these key decisions suggest that a project has merit in being modelled further, we proceed to the next phase of the process. The first element here is to select benchmarks or comparator information to ensure that a service model has a basis for its structure and a mechanism to measure outcomes against certain standards.

This is followed by more detailed analysis involving four strands of key factors, broadly grouped into quantitative (supply factors and needs analysis) and qualitative (access and service factors). The former group of elements is supported by a sample data modelling tool to look at some relevant data and compare to a selected benchmark.

The data modelling tool is an Excel-based model using in this instance (to illustrate how such tools can be used) activity data, benchmark data from another country, and bed utilisation figures to generate some expected resource requirements in terms of beds for a project to address the needs of the population. This is used for the orthopaedic and ENT surgery exemplar services and is discussed in detail in Part IV. As mentioned in that section, this Excel tool is considered to be a small subset of the inputs required to build a model for a cross-border service and is not intended to be a stand-alone modelling tool.

It must be stressed that the aim is not to produce a mechanism by which one can take data and use the modelling process to generate an answer. This is a decision-making aide that aims to ensure that the relevant questions are asked, the relevant information is gathered, and that different aspects of service design can be examined. It is designed to be flexible for different service areas and is intended as a holistic toolkit to be used alongside judgement and critical thinking. The data modelling tool is one aspect of the overall modelling framework and is not the single key element in what should be a wider approach, incorporating qualitative and quantitative aspects.
6 Identifying exemplar services

6.1 Rationale in doing this

This study is intended to develop a modelling methodology that is of practical benefit to those considering and developing cross-border healthcare services. As we discussed in the introductory section, the project evolved from considering acute hospitals as separate entities towards the development of a methodology for planning acute services across borders (potentially across a number of locations, not all of which might be traditional acute hospitals).

We therefore felt it appropriate to both illustrate and test the concept by examining in detail a number of acute services, representing a range of clinical issues. We have designated these as “exemplar” services: brief case studies that can be used as examples of how the modelling process has been developed and how it can be applied.

6.2 How it can be used for the prototype modelling tool

The identification of the exemplar services has informed the development of the modelling methodology as well as illustrating and “testing” the modelling itself. For example, the range of different services chosen has influenced the way in which we have built and refined the process, and has stressed the need for flexibility and adaptability within the modelling. One size most emphatically does not fit all, and this became apparent in the use of the exemplar services to assist in the drafting of the structure of the modelling methodology.

For instance, whilst we have developed as part of the overall methodology a tool to examine at a high-level some quantitative aspects such as the bed requirements for different configurations of care in specific surgical specialties (and the impact of initiatives on such requirements), this is not something that can universally be applied to every clinical specialty, for reasons such as disparities in data recording, or the nature of the treatment involved. Therefore this cannot constitute the sole mechanism for modelling new service structures and a much more holistic approach is required. In this way, the selection of exemplar services has driven the development of a methodology that can be adapted to differing clinical areas.

6.3 Role of CAWT in driving this

In looking at exemplar areas for examining the potential for cross-border cooperation, we must take account of CAWT’s extensive and pivotal role in establishing and managing cross-border healthcare projects. One of the areas we have selected, for example, is Otolaryngology or ENT services in the border region. CAWT is already managing a considerable ENT project between the Southern Trust and the HSE Dublin North-East region, following a successful pilot project in the North-West, and will be expanding the former in the coming months. The impact of the CAWT initiatives demonstrates how waiting lists can be tackled with considerable benefits to patients and provides an excellent example of how CAWT-driven projects can make a real difference to people in the border region.
6.4 Service areas selected

We have considered five service areas to consider the potential for cross-border cooperation. We have examined the current configurations and applied the modelling framework to these five areas to both test and illustrate the modelling process and to suggest aspects that could be developed on a cross-border basis in these areas.

The service areas examined are as follows:

- **Orthopaedic Surgery** in the North-West
- **Otolaryngology (ENT) Surgery** in the border region
- **Paediatric Cardiac Surgery** on an all-island basis
- **Cystic Fibrosis** in the North-West
- **Acute Mental Health Services** in the border region and on an all-island basis
7 Orthopaedic surgery

7.1 Introduction and background

Trauma and orthopaedic surgery is an area that has proved difficult to manage over the past several years for many countries, not least the UK and Ireland. While some initiatives in both jurisdictions in the past have managed to reduce waiting times, the signs are that the problems remain unresolved in the long term, and with both health services facing further cuts in funding, without specific action it is likely that the waiting times will continue to increase in future.

We have opted to consider elective orthopaedic surgery services in the North-West region for the purposes of the modelling exercise, examining the issues in relation to the provision in Donegal and Derry.

7.2 Current provision

Currently, in the North-West region, orthopaedic surgery is performed in three hospitals: Altnagelvin in Derry, serving the Western HSC Trust; Letterkenny, serving most of Donegal; and Sligo, serving Sligo, Leitrim, and some of south Donegal.

The diagram to the right indicates the hospitals (red) performing orthopaedic surgery in the region.

The population of the catchment area is approximately 630,000, although Altnagelvin’s orthopaedic service also serves some of the Northern HSC Trust area.

All three hospitals provide a range of acute services; none are specialist orthopaedic hospitals. As a result, other services such as trauma care, general surgery, and intensive and critical care units are available on each of the sites, important supporting resources for complex inpatient orthopaedic surgery. With the exception of some significant trauma and highly complex surgery, such as neurosurgery associated with trauma injuries, most emergency and elective orthopaedic cases are dealt with in the three hospitals.
While the vast majority of emergency orthopaedic surgery takes place following admission via Emergency Departments, elective orthopaedic surgery such as planned hip or knee replacements is referred by means of the orthopaedic outpatient clinics. Patients are referred to an orthopaedic specialist consultant by a GP or other primary health clinician, and on assessment — including imaging and other diagnostics — if deemed suitable are referred for surgical treatment. This means that patients have up to three waiting periods to negotiate before receiving the surgical procedure required: a wait for an outpatient appointment; a wait for necessary diagnostic tests such as MRIs; and a wait for surgery once this has been indicated as the recommended course.

Within the NI part of the north-west, Altnagelvin serves as a regional centre for orthopaedic surgery, with outpatient clinics taking place in the Erne Hospital in Enniskillen and Tyrone County Hospital in Omagh; patients are then referred for any necessary surgery to Altnagelvin.

### 7.3 Service metrics

- **630,000+** Population of the catchment
- **17** Number of orthopaedic consultants in the region
- **>4,200** Patients awaiting outpatient appointments at the end of 2010
- **3,827** Patients treated electively in 2010
- **97** Orthopaedic beds in the relevant hospitals
- **33** Number of orthopaedic beds closed in Sligo
- **>1,600** Patients awaiting scheduled orthopaedic surgery in the region

### 7.4 Issues and challenges

#### 7.4.1 General Orthopaedic Issues

An increasingly elderly population places more pressure on orthopaedic services, and a significant proportion of the service by necessity is driven by trauma and emergency cases, making planning more difficult. Developments in technology and clinical practice have also added to the demands on the services. The pressures on the services on both sides of the border have in recent years been exacerbated by cuts in funding and the consequent reduction in capacity and resources. The result has been increased waiting lists both for outpatient appointments and for elective orthopaedic surgery.
7.4.2 Capacity Problems

The indications are that both sides of the border struggle to provide timely elective orthopaedic services, especially in relation to accessing outpatient appointments in the case of RoI, without which a patient cannot be assessed, diagnosed, and referred for surgery if necessary: the November 2010 NTPF report showed 184 patients waiting more than 3 months for orthopaedic surgery in Letterkenny.

A recent written answer from the Minister for Health and Children in RoI stated that the NTPF has paid for treatment for 7,302 orthopaedic surgery patients from January 2008 to April 2011. What is notable is that two of the hospitals who have provided NTPF-funded orthopaedic surgery procedures are Letterkenny and Sligo; this means that hospitals who do not have the capacity to address the demand for orthopaedic surgery are providing such treatment privately to patients via the NTPF. Individual hospital figures are not available.

NI has managed to reduce outpatient waiting times considerably – however, more than 2,000 were awaiting outpatient appointments on 31 December 2010, with more than 600 waiting more than three months – but still has capacity issues in relation to providing treatment once the patient has been considered a suitable candidate for surgery. The waiting list for inpatient admissions in the Western Trust for trauma and orthopaedic surgery at 31 December 2010 was more than 1,000, with more than 300 waiting more than six months for treatment. There were an additional 450+ patients on the day-case waiting lists for the Trust in the same speciality.

7.4.3 Latent Demand

Looking at the same specialty in areas in England and Wales, we identified some significant differences in service configuration and a strong suggestion of “latent” or hidden demand. Latent demand refers to the increase that can be expected in the demand for healthcare services when access to the services and the capacity to treat patients improves. What this means in simple terms is that patients refrain from attempting to access services if they perceive that they cannot be treated in a timely fashion. Once that perception changes, more patients tend to be seen entering the system. If someone is aware that the waiting list merely to see a consultant for an outpatient appointment could be more than two years, followed by another lengthy wait for diagnostics, further appointments, and then on to a several-month waiting list (with the potential in these times especially for repeated cancellation and rescheduling of planned elective surgery), this is a disincentive for those with non-life-threatening or severe conditions to enter the process.

Suppressed demand was a feature of previous waiting list exercises carried out within the NHS in Britain. Once service capacity improved and waiting lists dropped, patient demand rose. This needs to be built into demand calculations and must also be borne in mind when it may appear that improving the service has not resulted in a drop in numbers seeking treatment: this may well be a marker of success but can be perceived as failure. Orthopaedic surgery is one area where this latent demand is a feature and this needs to be considered when assessing demand for the region.

7.4.4 Is it All About the Border?

We must recognise that the problems within certain specialties do not stem from the existence of the border, although they tend to be exacerbated by it. A quick review of the figures in both NI and RoI for orthopaedic surgery, by comparison with regions within Britain, indicates that the services on both sides of the border are struggling to provide the required level of capacity to meet demand even at present, leaving aside the issue of the potential extra demand suppressed by the problems in the service delivery as discussed above. This, therefore, is not solely a border issue.
Resource cuts in both jurisdictions are certainly adding to the pressure on the system on both sides to meet the demand. Without extra resources in some form or other, it is unlikely that the problem can be tackled in a long-term strategic fashion. However, again some lessons may be learned from taking comparator information from NHS regions in Britain: reconfiguring the services may be able to free up capacity without necessitating significant extra investment. One notable difference in the region’s orthopaedic service delivery model from comparators in GB is the lower percentage of activity carried out as day cases. There is a potential to tackle some of the waiting times by introducing more day surgery in this specialty.

Whilst this could be done in each jurisdiction in isolation – and potentially address many of the problems in each service if that were to be undertaken – it is not the case that we believe that the border is irrelevant. What is important is to recognise where things may have to change over and above those issues directly related to the existence of a jurisdictional boundary. Service redesign carries its own set of challenges whether conducted within a region, within a state, or across a border. The last presents an additional set of issues and barriers, but these do not supersede the need to address those non-border issues that can hamper service reconfiguration regardless of the setting.

7.4.5 Data

As we anticipated, obtaining and comparing data from the two jurisdictions poses considerable challenges. Data is not collected in the same way; the detail captured is not consistent; service definitions can vary; the inclusion or exclusion of various figures varies from one to the other. In RoI, the hospitals collect data and supplied us with various figures, which we had to go back and clarify and get more detail on in terms of how it could be further broken down (e.g. the breakdown between elective and emergency, between adult and paediatric, and between inpatient and day-case categories). In NI, data collection is detailed and the statistics section of DHSSPS publishes a considerable body of data on all specialty activity in each NI hospital. RoI HIPE data is not available publicly for individual hospitals, so we are reliant on the hospital management’s willingness and ability to provide data.

However, it must be added that the data modelling is only one aspect of the process we have codified. Whilst it is important to have as much accurate and detailed data as possible, it should not be considered that the modelling process cannot or should not proceed if this is not universally available. Once there are mechanisms to estimate missing data elements in a logical and reliable fashion, this is a way to circumvent the barrier created by non-availability of data.

One technique is to use the aforementioned comparator data to “validate” the data and indicate whether it is likely to be accurate, and to help fill in gaps with expected figures – something we have done where the data on orthopaedics has been problematic. Other gaps can be filled with data based on, for example, epidemiology, data from the other side of the border, benchmarks or service standards developed by research or indicated by professional bodies, etc.

7.5 Applying the modelling framework

7.5.1 Overview

Whilst we were not commissioned (nor did we attempt) to design a blueprint for orthopaedic services in the region, whether developed into the future on a cross-border basis or not, it is useful to illustrate the modelling process, firstly by assessing the service by means of going through the methodology,
and secondly by examining some alternatives to the existing structure and seeing the effect – at a relatively high level – on the figures we have to hand.

### 7.5.2 Initial Assessment – Why Consider This Cross-Border?

The question to be asked here is whether there could be an advantage in developing a cross-border approach and structure for orthopaedic surgery in the North-West.

This process is designed to elicit the actual problem(s) within the service being considered and to make an initial assumption or estimate as to whether a cross-border approach is likely to be able to address – albeit partially in some cases – these issues.

As we have discussed above, there is a considerable problem in respect of the ability of the health authorities in both jurisdictions to meet the needs of the population in respect of orthopaedic surgery. The result is long waiting lists, especially for outpatient appointments, with the consequent impact on the patients’ quality of life and the severity of their condition.

An overview of the key metrics reveals an urgent requirement to develop new approaches to the problem, given the increasing difficulty in meeting demand and, of course, the worsened economic climate and reductions in healthcare budgets.

This leads us to believe that it is worth considering a cross-border initiative in elective orthopaedic surgery in the North-West.

### 7.5.3 Benefits

Whilst we have configured our decision process in a cyclical format, to reflect that it is not necessarily the case that one factor must be considered before another, we will consider the orthopaedic specialty in a more sequential “decision tree” order, and look at potential benefits first.

We have identified capacity issues on both sides of the border, so there is no benefit immediately evident in respect of capturing capacity on one side to address unmet demand on the other. However, as we have mentioned, an initiative to increase the day-case rate may increase the capacity of the system to address the needs of the population. Using both sides of the border to do this increases the flexibility and may, as we have seen in other cross-border projects, capture more capacity for all the patients rather than losing out on potential opportunities to provide more procedures because of the existence of the border.

Another key benefit is that a cross-border project could attract external funding and resources. This makes it very attractive to the health authorities in both jurisdictions, allowing some of their capacity problems to be addressed in straitened budget circumstances without diverting funding from other areas. It also allows for the design to be piloted and tested, especially if it involves a change in the ratio of day-case to inpatient surgery, something that in the longer term could be mainstreamed, ultimately allowing the services to provide more capacity at a lower cost than at present.

**Decision:** There is potential benefit in considering elective orthopaedic surgery on a cross-border basis.
7.5.4 Barriers

We move on to consider whether there are barriers to developing a cross-border orthopaedic surgery service in the North-West.

We have outlined in Section 5.4 of this report a number of barriers encountered in the establishment of cross-border healthcare projects. Many of these are likely to be hindrances in a proposed initiative regarding orthopaedic surgery, including dual registration of clinicians and allied health professionals such as physiotherapists; the need for well-developed patient pathways, clinical governance and reporting structures, and indemnity; human resources and industrial relations considerations; and aftercare responsibilities including links with primary care teams.

However, there are successful projects in similar circumstances already established (for example, ENT services – see Section 8 below), indicating that although we would anticipate considerable input and time will be required to ensure the issues can be worked around, we would be confident that there is no immediately evident issue that would call a halt to such a project at an early stage.

Decision: There are no significant barriers (insurmountable) to the development of elective orthopaedic surgery on a cross-border basis.

7.5.5 Champions

This area is one that we cannot assess in a theoretical fashion from an external perspective. We do not know whether there are clinical or managerial individuals with the mandate, authority, knowledge, and most importantly willingness to spearhead an initiative in relation to elective orthopaedic surgery on a cross-border basis. This would have to be carefully considered by those involved in formulating a proposed project.

On the other hand, the involvement of CAWT in cross-border healthcare projects presents a “ready-made” set of people who have a strong background in and motivation to drive forward these kinds of projects. If a proposal were to be framed under the auspices of CAWT, there would be considerable support for those within the system who wished to develop the project.

For the purposes of this exercise, we are assuming that there are champions in each jurisdiction, supported where necessary by CAWT, to drive forward an initiative in relation to this specialty.

Decision: There are (assumed) champions, and CAWT support, within the clinical and managerial areas to develop a cross-border orthopaedic surgery project.

7.5.6 Select Benchmarks

This aspect is especially relevant to the design of a cross-border orthopaedic surgery model. It is important to recognise where the current service provision varies from that provided elsewhere and to give some inspiration for new ways of working. We looked at a number of sources for benchmark data, including recommendations for orthopaedic surgeon numbers per population from professional bodies, reports on and plans for orthopaedic surgery services in parts of the UK, and
previous exercises undertaken to address orthopaedic waiting lists and capacity issues by the NHS in England.

We selected these as they represent data that is comparable in terms of the patient profiles and the way in which health services are provided. The numbers give us an insight into how the services could be reconfigured in the North-West to take into account lessons learned and find capacity without necessarily demanding huge inward investment. (Similar comparisons were used in the 2010 McKinsey report9 on the implications of the spending review in NI on health and social care.)

### 7.5.7 Choice of Model

**What Kind of Model or Project Will Have an Impact?**

A key consideration in any proposed cross-border orthopaedic surgery service is the cost of complex inpatient orthopaedic surgical procedures. Without significant extra investment, it is difficult to see how even a reconfigured service could provide additional capacity to treat such cases, whether designed as a cross-border service or not. However, as mentioned above, there is substantial potential to undertake additional day-case surgery to alleviate some of the lengthy waiting lists and to have a knock-on effect on the capacity to treat the more complex cases. Day-case surgery is less costly and any proposal to address capacity by increasing the ratio of day-case to inpatient treatment would require less funding than addressing the issue by means of the current high inpatient rates.

We have therefore looked at the impact of providing day-case surgery capacity – potentially using capacity in hospitals not currently providing specialist orthopaedic surgery, such as the Erne and Tyrone County – in a similar fashion to the ENT model established by CAWT. The latter identifies spare capacity in a group of hospitals across the region and allocates theatre time to those awaiting treatment.

**Quantitative Factors Influencing Model Choice:**

<table>
<thead>
<tr>
<th>Supply Factors</th>
<th>Critical Mass</th>
<th>Infrastructure</th>
<th>Supporting services</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resources</strong></td>
<td>Demand exceeds capacity so this is less relevant here</td>
<td>Requirement is for theatres with specific capability for orthopaedic surgery</td>
<td>Physiotherapy</td>
</tr>
<tr>
<td>97 orthopaedic beds</td>
<td>17 orthopaedic surgeons</td>
<td>Geriatric specialists</td>
<td></td>
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<tr>
<td>3 hospitals currently; potential for 1-2 more to do day-cases</td>
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Unlocking the Potential of Cross-Border Hospital Planning on the Island of Ireland

Section 7 Orthopaedic surgery

7.5.8 Key Considerations Arising from the Modelling Process

Our Excel modelling tool (provided in “soft copy” format on the CCBS website) compared the current activity figures and waiting list numbers in the catchment region with those for similar services in England, which has a similar population profile and is unlikely to vary significantly in terms of the demand for orthopaedic surgical services. This comparison is not intended to suggest that services in NI or RoI should be replicas of those in Britain, nor is it in any way conclusive. However, such comparison, however rough, can highlight aspects that warrant further investigation.

Note that where exact figures were not readily available, best estimates based on available information have been used in order to demonstrate the capability of the modelling. The overall outcomes are unlikely to be different even if there are some small inaccuracies in the data used.

Such is the case with the profile of orthopaedic services. The Excel modelling showed that there appeared to be a degree of latent demand given that the figures for emergency trauma and

<table>
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<th>Needs Analysis</th>
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<tr>
<td>Catchment</td>
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<td>North-West</td>
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We used the Excel data modelling tool we have developed to take some of these supply and demand factors, compare them to a benchmark set of data, and assess the impact on bed capacity and patient numbers if attempts were made to develop an initiative to address the demand.

Qualitative Factors Affecting Model Choice

<table>
<thead>
<tr>
<th>Access</th>
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<tbody>
<tr>
<td>Appropriate for local provision</td>
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<tr>
<td>Yes – some day-case surgery may also be possible in other local hospitals</td>
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<table>
<thead>
<tr>
<th>Service</th>
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<tr>
<td>Patient experience</td>
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<tr>
<td>Providing service within NW region; Day surgery less of an impact</td>
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Orthopaedic surgery were broadly in line with the expected figures if the English numbers are taken as a guideline. However, the elective figures suggested that even with those on waiting lists counted into the demand figures, there seemed to be fewer people seeking treatment than one would expect, suggesting that there are people who are not on waiting lists but who potentially require treatment. Using the English figures as a mechanism for estimating the total expected demand enables us to anticipate the emergence of the latent demand in any future service provision.

**Modelling indicates that latent demand needs to be factored in.**

The following screenshots indicate the comparative situation when the NI and RoI data is compared to that from the English benchmark data.
The other key issue emerging from an examination of the English figures is that the percentage of cases treated by means of day surgery is significantly higher in England than in NI or RoI. This suggests that there is an opportunity to move more patients to day-case treatment in RoI and NI, something that as mentioned above has benefits to patients and to health services.

The above-mentioned McKinsey report also noted the low day-case rate in NI by comparison with the English data, suggesting that in the region of £5 million in annual savings could be generated by moving NI’s day-case rate across a number of surgical procedures to a rate equal to the prevailing rate in England.

**Modelling indicates that day surgery rates could increase significantly.**

The indicators from the model are that there is a significant undersupply of orthopaedic beds in the region, and that demand outstrips capacity considerably. This is partly due to the reduction of beds in Sligo (these closures represent a third of the estimated additional requirements).

As we have mentioned, orthopaedic surgery is expensive and resource-intensive, and it is understandable that hospitals under severe budget pressure will reduce activity levels in this clinical area. Letterkenny has also had periods of enforced cancellation of all elective orthopaedic surgery. Accordingly, it may be observed that some of the demand issues do arise from an “artificial” reduction in supply. If the service is to cater for the needs of the population, however, it is difficult
to see how this can be done without both restoring and maintaining the resources that have been suppressed for cost reasons and providing additional capacity.

**Modelling indicates that significant extra capacity is needed in the system to meet patients’ needs.**

### 7.5.9 Conclusion

As we stressed at the outset, this process is not intended to be prescriptive in terms of a structure or blueprint for orthopaedic services in the North-West, but to indicate how the modelling process we have developed can help those planning services on a cross-border basis. As may be noted, in many ways it can be said that the methodology generates rather than answers questions.

What is evident from using the modelling process and the sample data model in relation to orthopaedic surgery services is that some aspects of the current service delivery warrant examination and that a collaborative approach focused on increasing day surgery rates where possible could be potentially beneficial.

It should also be noted that the planned opening of the new South West acute hospital in Enniskillen in mid-2012 [see Section 15 below] may create further opportunity of delivery of day-case surgical procedures in orthopaedics, serving patients not just in Fermanagh and Tyrone but also in the surrounding cross-border areas.

### 7.6 Lessons for the prototype modelling tool

Assessing the potential for a cross-border orthopaedic surgery project by means of the modelling tool highlighted the following issues:

- The toolkit needs an initial assessment of why the project could or should be considered on a cross-border basis;
- The methodology must include the ability to analyse quantitative demand data where appropriate;
- Selecting comparative data to enable assessment of projected demand and to inform service structure is an important step in the process.
8 Otolaryngology (ENT)

8.1 Current provision

Otolaryngology, sometimes otorhinolaryngology, is more commonly known as Ear, Nose, and Throat surgery, or ENT. It is defined as the combined specialties of the ear and larynx, often including the upper respiratory tract and many diseases of the head, neck, and oesophagus. It is a diverse specialty and patients range from newborn babies to the elderly. There can be considerable overlap between ENT and related specialties such as head and neck oncology and oral-maxillofacial surgery.

Otolaryngology or ENT surgery is provided in several of the border region hospitals, including Sligo, Altnagelvin, Craigavon, Daisy Hill, and Our Lady of Lourdes, Drogheda (in red, right). Outpatient consultations and day-case surgery are provided in Tyrone County in Omagh, South Tyrone (Dungannon), Letterkenny, and Monaghan by consultants based in other hospitals. The Erne Hospital in Enniskillen has outpatient clinics run by consultants from Altnagelvin, but all surgery is carried out in the latter hospital, not in the Erne.

8.2 Service metrics

<table>
<thead>
<tr>
<th>Population of the catchment</th>
<th>Number of ENT consultants in the region</th>
<th>Patients awaiting outpatient appointments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.26 m</td>
<td>17</td>
<td>&gt;8,000</td>
</tr>
<tr>
<td>8,035</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Patients treated electively in 2010

<table>
<thead>
<tr>
<th>Number of patients treated under CAWT's current ENT programme</th>
<th>Percentage of patients referred for surgery following outpatient consultation</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;4,800</td>
<td>10-15%</td>
</tr>
</tbody>
</table>
8.3.1 CAWT ENT Pilot Project

A cross border pilot Ear, Nose and Throat (ENT) service was developed and delivered during the period between April 2006 and March 2007, and was aimed at reducing waiting times and waiting lists at Altnagelvin Area and Letterkenny General Hospitals. The intention of the pilot was to develop additional capacity by employing an extra consultant and administrative support staff, and purchasing equipment to permit ENT surgery to be extended. These developments were supported financially through CAWT with a grant of 75% funding from the European INTERREG IIIA Programme. The pilot was project-managed with direct input from clinicians and managers from Altnagelvin and Letterkenny hospitals, and from the then Sperrin Lakeland HSS Trust (now part of the Western HSC Trust).

Prior to the commencement of the pilot, ENT services for the border populations served by Altnagelvin and Letterkenny hospitals had been provided as follows: two ENT consultants were based at Sligo General Hospital provided out-patient services at Letterkenny General Hospital twice weekly, with all surgical procedures being carried out at Sligo General Hospital. This was part of a wider elective and emergency ENT service to the counties of Donegal, Sligo and Leitrim (the former North-Western Health Board area), a total population of 230,000. ENT services in Derry and Tyrone were provided by a team of six consultants who worked between Altnagelvin Area Hospital and the Tyrone County Hospital in Omagh, serving a population of 270,000 people.

As part of the pilot project, the following arrangements were put into place for a time-limited period of one year:

- An extra ENT consultant was recruited to the staff of Altnagelvin Area Hospital, adding to the six consultants based there, with input from Letterkenny on the interview panel, and commenced work in May 2006;
- The consultant team was detailed to work on a rotational basis, with inpatient surgical procedures at Altnagelvin, and outpatient and day case services delivered at Letterkenny Hospital.

Outcomes

The pilot project was evaluated as having had a beneficial impact. As a direct result of the additional resources provided through INTERREG, almost 1,000 extra first outpatient appointments were delivered for patients on the Letterkenny waiting list at Altnagelvin and Tyrone County Hospitals. The project also facilitated a major reduction in waiting lists:

<table>
<thead>
<tr>
<th>Patients awaiting scheduled ENT surgery in the region</th>
<th>&gt;4 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,350</td>
<td>Length of time some patients are waiting for outpatient appointments</td>
</tr>
</tbody>
</table>
Conclusions and Recommendations of the Evaluation

- this model of ENT Service has the potential to deliver benefits to the resident population and to build on the developing Managed Clinical Network of ENT services in the West;
- feedback from patients/carers indicated a high level of satisfaction with services received;
- a consensus emerged amongst the main stakeholders that referrals should continue be made by GPs to the ENT Team rather than to named consultants, thereby facilitating consideration of such issues as sub-specialist interests and the waiting times for appointments for the consultants concerned;
- outpatient services would be delivered on a “one stop shop” basis at the hospital closest to the patient’s home (i.e. audiology, investigative services and pre-operative assessment being available during a single visit, where possible). Day case procedures and post-operative follow-up would also be carried out at the local hospital closest to the patient’s home, and inpatient procedures would be carried out where suitable facilities, equipment and capacity exist;
- arrangements for dealing with post operative complications and other emergencies were also recognised as being essential;
- communication arrangements should be in place to provide feedback on the outcome of assessments and treatment to the patient’s GP and to other relevant services or agencies.

8.3.2 CAWT’s Current ENT Project

CAWT are currently managing a project providing ENT services between Monaghan and Craigavon hospitals, principally serving the Cavan/Monaghan region in RoI and the South Tyrone/Armagh region in NI.

The service provides outpatient consultations and day-case surgery for adults in Monaghan Hospital, with paediatric cases referred to Daisy Hill Hospital in Newry and inpatient cases treated in Craigavon. Two ENT consultants were recruited under this programme, one full-time based in Craigavon, who sees outpatients in Craigavon, Newry, and Monaghan, and performs some surgery in Craigavon (inpatients), Newry (day-cases), and Monaghan (day-cases). The other consultant is part-time and is based in Monaghan, where he does outpatients and day-case surgery.

The initiative is funded through the Interreg IVA European funding mechanism, and is supported by in-kind provision of resources such as, for example, nursing time in Monaghan. The consultant surgeons have trained the clinical team in Monaghan to facilitate high-quality care for day-case ENT patients. CAWT have funded the necessary equipment and pay for the consultants.
Section 8 Otolaryngology (ENT)

This project also works to identify theatre capacity in the relevant hospitals, so that patients can be slotted in to utilise the available resources, and the waiting lists reduced accordingly.

The project is not without its limitations and issues:

- clinical guidelines recommend a six-hour post-op observation period, necessitating much of the Monaghan day-case surgery to be completed by 12 noon as the patients ordinarily require to be discharged by 6 pm from Monaghan. This reduces the number of operations that can be performed on a given day. The discharge time can be extended by prior arrangement, however;

- Monaghan can only take adult patients, meaning that even day-case paediatric patients must be referred to Daisy Hill;

- Monaghan is not a full-service acute hospital: protocols are in place for emergency transfer to Craigavon should the need arise. To date, this has never been needed;

- procurement can be problematic with NHS supply-chain restrictions;

- perception in relation to patients accessing the service provided under the CAWT programme as having a somewhat different status than “ordinary” hospital attendees;

- difficulties in attracting staff to hospitals outside the main urban centres in both NI and RoI.

However, the project is well-established and despite these and other limitations, has successfully treated over 4,800 patients in a little over two years.

8.3.3 Mainstreaming

Given the demonstrated success of the cross-border clinical network approach being piloted by CAWT, funding and support has been secured from the HSE and the Southern HSC Trust to maintain the ENT cross-border service between Monaghan and Craigavon. The project will therefore continue beyond the external EU funding and be mainstreamed as part of the health services in both jurisdictions.

8.3.4 Future Development of ENT CAWT Programme

The significant waiting lists in areas such as Louth for ENT outpatient consultations (>2,000) have led to the expansion of the Monaghan/Craigavon project to treat patients from Louth. It is intended that patients on the Louth waiting list can be seen in Louth County Hospital outpatient clinics and, where necessary, may avail of treatment in Monaghan on a day-case basis.

There is an intention to develop a permanent cross-border ENT clinical network in the north-west, providing services in Letterkenny and the Erne Hospital in Enniskillen on a day-case basis (the Erne has no ENT surgery service at present) and Sligo and Altnagelvin on an inpatient basis. This will build on both the success of the pilot project in the north-west and that running successfully in Monaghan and Craigavon. The identification of spare theatre capacity across a number of sites, as mentioned above, means that more patients can be treated in a timely manner while the hospital resources are not going to waste.
Ultimately, it is intended that there will be a border-region ENT service operating on a cross-border clinical network basis. There are 17 ENT consultants practising in the border corridor and all have expressed interest in developing such a clinical network approach.

8.4 Applying the modelling framework

8.4.1 Initial Assessment – Why Consider This Cross-Border?

This specialty has already been tried and tested in a cross-border capacity with excellent outcomes and benefits to patients.

8.4.2 Benefits

A clear benefit that has been identified has been the utilisation of capacity in both non-acute hospital settings and theatre space to slot in day-cases and inpatient treatment so as to tackle waiting lists and treat patients in a timely manner.

Clear benefits, as outlined above, have been illustrated by both the pilot North-West region ENT project and the current initiative running in Monaghan, Craigavon, and Daisy Hill.

Decision: There are demonstrable benefits to a cross-border ENT surgery project.

8.4.3 Barriers

There exist several issues and challenges to the successful implementation of cross-border ENT services, many of which are discussed above. Many relate to the general cross-border stumbling blocks, such as dual registration and indemnity of clinicians, and some are specific to this initiative and the locations in which it operates, such as the restrictions on day-case timings because of the non-acute and part-time nature of the hospital facilities in Monaghan. Expanding the scheme is likely to encounter similar issues in using non-acute hospitals without on-site trauma care or in recruiting clinical team members in relatively remote areas.

However, what is clear is that successful ENT cross-border projects have been initiated and are up and running despite the challenges. Whilst some of the solutions have been project-specific and somewhat temporary, the issues have been worked around in order to drive forward the project. This means that it is probable that similar challenges in expanding the programme can also be overcome.

Decision: Whilst barriers exist, there are precedents in working around and overcoming them; no insurmountable obstacles exist to prevent the development of further cross-border ENT services.

8.4.4 Champions

It is evident that the success of the previous and current ENT programmes relies heavily on the drive and commitment of the CAWT team and the clinical leads. There is evidence of significant input from key individuals without which the project might not have developed as successfully as it has to date. The managers are in the process of developing expanded cross-border ENT services and are deeply...
committed to both extending and maintaining a quality cross-border ENT service along the border corridor.

**Decision:** There are champions with the commitment, mandate, and authority to develop further cross-border ENT services.

### 8.4.5 Select Benchmarks

Owing to the fact that there are already ENT cross-border programmes running, it is less relevant here to look at comparators, given the already-documented success of the previous and current initiatives. However, for the purposes of using the Excel data model, we have opted to run a brief comparison with the stats for ENT activity for England (as with the orthopaedic surgery specialty). Again, the patient profile is unlikely to differ markedly in terms of the incidence of ENT issues requiring treatment and it may be illustrative to compare the elective and emergency rates and those of day-case treatment versus inpatient treatment.

**Outcome:** There are existing examples of well-run cross-border ENT programmes within the NI/ROI border region; there is also some English data for rough comparison.

### 8.4.6 Choice of Model

**What Kind of Model or Project Will Have an Impact?**

It’s clear that the existing model for cross-border ENT services as established by CAWT is working well to utilise both the external resources (INTERREG IV-A funding) and the existing spare capacity to develop an effective service, reducing waiting lists and enabling patients to access a service both relatively locally and in a timely manner.

We have looked at the relevant factors in developing further the CAWT model, as envisaged by CAWT themselves also, to the entire border corridor region.

**Quantitative Factors Influencing Model Choice:**

<table>
<thead>
<tr>
<th>Supply Factors</th>
<th>Resources</th>
<th>Critical Mass</th>
<th>Infrastructure</th>
<th>Supporting services</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resources</strong></td>
<td>17 ENT surgeons</td>
<td>1 ENT consultant surgeon per 70,000 population</td>
<td>Requirement is for theatres with specific capability for ENT surgery</td>
<td>Audiology</td>
</tr>
<tr>
<td>****</td>
<td>8 hospitals currently; potential for more to do day-cases and inpatient</td>
<td>3 consultant surgeons per ENT centre</td>
<td></td>
<td>Speech and language therapy</td>
</tr>
</tbody>
</table>
Unlocking the Potential of Cross-Border Hospital Planning on the Island of Ireland

8.4.7 Key Considerations arising from the Modelling Process

Our Excel modelling tool compared the current activity figures and waiting list numbers in the catchment region (excluding Louth, for which data was not yet available) with those for similar services in England.

Note that where exact figures were not readily available, best estimates based on available information have been used in order to demonstrate the capability of the modelling. The overall outcomes are unlikely to be different even if there are some small inaccuracies in the data used.

Whilst the activity levels by population in England for ENT surgery are in fact lower than those in NI and RoI, there is a higher waiting list as a proportion of the annual activity figures, suggesting a capacity issue there.

---

## Needs Analysis

<table>
<thead>
<tr>
<th>Catchment</th>
<th>Population</th>
<th>Incidence</th>
<th>Population Health</th>
<th>Patient</th>
<th>Waiting Lists Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Border corridor</td>
<td>1.26m</td>
<td>1%</td>
<td>n/a</td>
<td>9,335</td>
<td>1,350 – 1,350 – surgery</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8,000+</td>
</tr>
</tbody>
</table>

We used the Excel data modelling tool we have developed to take some of these supply and demand factors, compare them to a benchmark set of data, and assess the impact on bed capacity and patient numbers if attempts were made to develop an initiative to address the demand.

### Qualitative Factors Affecting Model Choice

#### Access

<table>
<thead>
<tr>
<th>Appropriate for local provision</th>
<th>Ability to access similar services</th>
<th>Transport infrastructure</th>
<th>Willingness to travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes – some day-case surgery may also be possible in other local hospitals</td>
<td>Varies with location: Drogheda patients face nearly 3-year waiting lists for OPD appointments</td>
<td>Poor for many in area, exacerbated by rurality and by elderly patient profile</td>
<td>Patients willing to travel for procedures rather than stay on long waiting lists; Service to be provided within region</td>
</tr>
</tbody>
</table>

#### Service

<table>
<thead>
<tr>
<th>Patient experience</th>
<th>Outcomes</th>
<th>Service quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Providing service within NW region; Day surgery less of an impact</td>
<td>Less complex cases done by day surgery should have fewer complications</td>
<td>Need to maintain quality and develop clinical teams in all locations proposed</td>
</tr>
</tbody>
</table>
Modelling indicates that actual activity by population for ENT surgery is higher in NI and RoI than the English data shows.

When the activity data is adjusted to take account of the unmet demand in England, there is some unmet demand suggested for NI and RoI in the modelling. This is not on a par with that for orthopaedics, and indeed the lower numbers on waiting lists for surgery (rather than for outpatient appointments) bear this out.

Modelling indicates some unmet demand in NI and RoI.

The day-case rate in England is 53% for ENT procedures, which is higher than the rate prevailing in NI but lower than that in the RoI areas being examined (Louth was excluded as the data was not available). Day-case initiatives such as the CAWT project in Monaghan are likely to have influenced these figures and will continue to impact on this, and the team managing this programme are also aiming to conduct more procedures on a day-case basis that are currently inpatient surgeries.

Modelling indicates higher rate of day-case surgery in England than in NI but lower than the RoI data.

The screenshot below indicates that if unmet demand is similar to the benchmarked (adjusted) data, approximately 45 beds would be required to service the demand. We do not have figures on ENT beds because some hospitals do not designate specific beds for this specialty.
8.4.8 Conclusion

What is evident from using the modelling process and the sample data model in relation to ENT surgery services is that the service compares well in terms of its ability to address need by comparison with England, but there is still room to improve. CAWT’s programme is addressing waiting lists and maintaining a high day-case surgery rate, in keeping with good practice.

8.5 Lessons for the prototype modelling tool

Assessing the potential for further cross-border ENT surgery services by means of the modelling tool highlighted the following issues:

- The use of existing projects as models for future development and expansion of services;
- The need to use data so that it can be comparable and can be informative in the right ways;
- Evidence of the effectiveness of champions in driving cross-border projects to success.
9 Paediatric cardiac surgery

9.1 Current provision

Paediatric cardiac surgery is a highly complex tertiary clinical specialty. With its relatively low volumes but high complexity, it is by necessity a centralised service, with all surgery being delivered in a single centre in RoI, Our Lady’s Children’s Hospital Crumlin in Dublin, and in a single NI centre, the Royal Children’s Hospital Belfast (surgery is actually physically carried out in the adult Royal Victoria Hospital theatres).

The RoI centre serves a total population of 4.58 million, with NI’s Belfast centre serving a population of 1.7 million. The incidence of congenital heart disease is approximately 1 in 100 births, with the current annual surgical treatment numbers at 560 for RoI and 120 for NI.

The vast majority of paediatric cardiac surgery in both jurisdictions relates to the treatment of congenital heart defects, commonly diagnosed either in the womb by ultrasound and other scanning or after birth and in early childhood via the cardiology services.

Cardiology outpatient clinics are delivered in centres outside Dublin (e.g. Cork, Limerick, Galway) by cardiologists based in Crumlin; there are no on-site cardiology or cardiac surgery services based in hospitals other than Crumlin. Similarly, paediatric cardiology is centred in the Royal Hospital for Sick Children in Belfast, with outreach paediatric cardiology clinics delivered at the major NI hospitals.

There are two full-time paediatric cardiac surgeons in Crumlin, soon to be increased to three, and five cardiologists. The sole paediatric cardiac surgeon in Belfast retired last year after many years in post, and the service is currently delivered by a locum surgeon, supported by the Dublin team (see more on this arrangement below).
Unlocking the Potential of Cross-Border Hospital Planning on the Island of Ireland

9.2 Service Metrics

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population of the catchment</td>
<td>6.28 m</td>
</tr>
<tr>
<td>Incidence of congenital heart defects</td>
<td>1 in 100 births</td>
</tr>
<tr>
<td>Minimum recommended number of surgeons in a paediatric cardiac surgery unit</td>
<td>4</td>
</tr>
<tr>
<td>Number of paediatric cardiac surgeons</td>
<td>3</td>
</tr>
<tr>
<td>Number of paediatric cardiologists</td>
<td>9</td>
</tr>
<tr>
<td>Number of paediatric cardiac surgical procedures in 2010</td>
<td>680</td>
</tr>
<tr>
<td>Number of cases per annum from NI treated in Britain</td>
<td>30</td>
</tr>
<tr>
<td>Incidence of Down Syndrome in RoI</td>
<td>1 in 600 births</td>
</tr>
<tr>
<td>Incidence of congenital heart problems in those with Down Syndrome</td>
<td>40-60%</td>
</tr>
</tbody>
</table>

9.3 Issues and challenges

9.3.1 Higher Incidence and Complexity

There is a higher incidence of paediatric congenital cardiac disease in Ireland and a consequent higher demand for paediatric cardiac services per head of population owing to the very low rate of termination of pregnancy. Neither RoI nor NI have legal termination available, and there is as a result a much higher rate of live births of children with congenital cardiac defects, a diagnosis of which is more likely to lead to a decision to terminate in Britain, for example.

There is a high incidence of Down Syndrome in RoI (approximately 1 in 600 births in RoI as compared to 1 in 1,000 births in the UK), again partly linked to a low termination rate: the termination rate in England and Wales following a prenatal diagnosis of Down Syndrome is 92%; whilst it is not possible to obtain accurate figures for RoI owing to the need for women to travel to the UK for a termination, the anecdotal evidence from cardiologists suggests a rate of 2%. Between 40 and 60% of babies with Down syndrome have congenital heart defects.

As a result of these factors, RoI in particular sees a higher number of paediatric cardiac surgery cases in relation to its population than the UK average, and the cases are often of higher complexity for the same reasons. This means that comparisons in relation to benchmarking, for example, are not straightforward, as aspects such as length of stay or expected demand would vary considerably.

9.3.2 Increasing Demand

Whilst there is not the same element of latent demand inherent in paediatric cardiac surgery as one would find in areas such as orthopaedics, and demand can be predicted with a reasonable accuracy once population figures are known, there has been a steady increase in the demand for
paediatric cardiac surgery, which must be factored into any consideration of future service design. A number of factors are pushing up the numbers of cases coming through the system:

- The population increase over recent years has naturally brought with it an increase in the numbers requiring paediatric cardiac surgery;
- Diagnostic capabilities and the level of ante-natal screening have improved, leading to more referrals for surgery;
- Surgical techniques, technology, and medical advances mean that surgery can now successfully be used where previously it was considered inappropriate, ineffective, or carried too great a risk;
- Linked to the above, advances in care mean that survival rates and outcomes from surgery have improved, which also means more repeated procedures and further interventions for patients that previously might not have survived.

9.3.3 Capacity Problems in RoI

Fundamentally, there is a capacity deficit in RoI that renders it very difficult to meet the needs of the children within the State in relation to paediatric cardiac surgery. It is difficult to determine exact numbers definitively, because waiting lists are managed according to clinical need rather than on a first-come, first-served basis, and because delaying a cardiac operation for a child may be a clinical decision (e.g. to allow the child to grow, put on weight, recover from infection, etc) rather than an inability to provide the procedure.

Waiting lists are therefore not necessarily a reliable guide to the numbers requiring immediate treatment and not being able to access it. However, Crumlin performed 560 operations last year, a significant increase on previous years’ activity levels, and the clinical team would like to have treated up to 100 more children in that time. They estimate that if the capacity existed to meet all the needs of the children requiring cardiac surgery, their annual activity level would be approximately 650 per year.

Bed availability is also an issue because the ICU in Crumlin does not have cardiac-specific beds; nor are there ring-fenced beds on the wards, so it is difficult to predict the availability of beds for cardiac patients. This regularly impacts on the ability to provide treatment: it is commonplace for paediatric cardiac surgical procedures to be cancelled at short notice because an ICU or ward bed is no longer available.

The increase to 560 procedures (from fewer than 400 three years ago) was achieved by means of a specific initiative that saw some extra resources temporarily provided by the HSE to tackle the capacity problem. A sustained effort involving significant staff input in terms of out-of-hours working, Saturday theatre sessions, increased theatre time each week, etc, made inroads into the waiting lists. However, the programme has not been approved for longer-term support by the HSE and is potentially unsustainable in the long-term in that format, reliant as it is on staff working well beyond normal hours and dependent on other hospital resources such as ICU bed availability.

9.3.4 England’s Safe and Sustainable Review of Paediatric Cardiac Surgery

However, we can learn from the experience in UK in respect of the importance of maintaining high-volume specialist centres for paediatric cardiac surgery. Following concerns regarding the safety and outcomes from some of the units conducting paediatric cardiac surgery in England, a review was
undertaken to make recommendations on a safe and sustainable paediatric cardiac surgery service. This review, the recommendations of which are now out for public consultation, found that there were too many units providing paediatric cardiac surgery in England and that there were negative implications for clinical safety and patient outcomes. The review recommends the closure of a number of units, reducing to six or seven units across the country in total.

There are detailed recommendations arising from this review for standards and protocols that should be in place to optimise patient safety and outcomes. These include, for example, the recommendation that a paediatric cardiac surgery unit should have a minimum of four full-time consultant surgeons and should have an activity level of approximately 500-600 procedures per year. While the patient numbers and complexity seen in RoI are higher in terms of the relative population, the recommendations regarding clinical activity are still appropriate.

9.3.5 Northern Ireland’s Paediatric Cardiac Surgery Service

It is evident in light of the Safe and Sustainable Review in England that the single-handed paediatric cardiac surgery service in Northern Ireland is not in line with the recommendations for safe and effective clinical practice. There are considerable risks in maintaining a service with a single surgeon, supported as they may be by the adult cardiac surgical team, and it cannot continue in this mode. This is fully recognised by the Belfast HSC Trust as well as the cardiac team in the unit.

The service, as mentioned above, is currently being delivered by a locum surgeon. Belfast HSC Trust are trying to recruit a full-time replacement surgeon, but this has proved difficult, partly owing to the risks inherent in single-handed practice. The specific clinical requirements for registration as a specialist cardiac surgeon (even where the position relates to paediatric services) require adult cardiac experience to qualify for the specialist register.

Patients in the Northern Ireland centre have their surgery carried out in the adult Royal Victoria Hospital and spend the first 24 hours in the adult ICU before being transferred to the paediatric ICU in the Royal Hospital for Sick Children (a separate building). This is not ideal in terms of the optimum care for paediatric patients.

9.3.6 Collaboration

As a temporary measure to support the service in Belfast, an agreement is in place between Our Lady’s Children’s Hospital Crumlin and Belfast HSC Trust to provide consultant support to the team in Belfast. This comprises clinics, surgery carried out by Dublin surgeons in Belfast, and in the case of between four and seven children from Northern Ireland per year, a transfer to Crumlin for complex surgery. In addition, cardiology support is provided and complex screening is carried out in Dublin for children from Northern Ireland where required.

Highly complex cases from Northern Ireland are transferred to Birmingham for surgery; this constitutes approximately 30 cases per year out of the total of 100-120.

Discussions are ongoing between Belfast and Dublin in relation to the creation of a managed clinical network, in effect building a single service based across two sites. This envisages a four-person surgical team as recommended in the English Safe and Sustainable Review, but with three based in Crumlin and one in Belfast. Approximately 70 or so surgeries would take place in Belfast, with 30 children from NI per year treated in Crumlin, with some of the highly complex cases still travelling to Birmingham (10 or so per annum).
9.3.7 Data

As with many service areas, obtaining and comparing data from the two jurisdictions posed considerable challenges in relation to paediatric cardiac surgery. On the one hand, the numbers are relatively small and the demand element is quite predictable (without the latent demand aspect that features in other clinical areas). On the other, this is a highly complex tertiary specialty, with small numbers, and individual cases can vary enormously in terms of the care required, the length of stay, the resources, etc. This means that figures can easily become skewed.

Adding to that the differences in terms of expected numbers from a population point of view as discussed above makes for a difficulty in matching and comparing data in this particular specialty. There are specific issues in relation to calculations of lengths of stay because of the classification of patients in long-term “transitional” care as still technically being within the ICU in Crumlin, and therefore impacting on average lengths of stay to the point that they would be entirely misleading.

The bed availability is also difficult to predict; as mentioned earlier the ICU beds in Crumlin are not cardiac-specific; nor are the ward beds, so modelling the impact of an increased service level is problematic as it is hard to quantify how many beds can be deemed to be available.

These issues mean that the numerical modelling element of the process is not practical and useful in this clinical area. Until and unless the way in which the data is collected changes to provide meaningful information that can be used to model the impact of various changes, that aspect of the modelling process cannot effectively be used in this exemplar service.

9.4 Applying the modelling framework

9.4.1 Overview

The key driver for change is the unsustainability of the Northern Ireland paediatric cardiac service in its current form. The health authorities, hospital managers, and clinicians are in discussions with a view to developing an all-Ireland service, but this is not a straightforward process. Without superseding the current negotiations, and within the limitations such as the data problems discussed above, we wished to examine the paediatric cardiac surgery specialty in relation to the possibility of an all-Ireland service by means of the modelling methodology we have developed, to see what issues emerge and any suggested ways forward for such a service.

9.4.2 Initial Assessment – Why Consider This Cross-Border?

As discussed above, one key issue is that the service in Northern Ireland cannot be sustained as it currently exists. The evidence is strongly against small units performing paediatric cardiac surgery and there are considerable risks to patient safety and outcomes in maintaining a service with a single surgeon and a very low activity level.

The service in RoI is under extreme pressure, requiring additional resources in the form of extra critical care beds, cardiology, staff, etc. This additional investment is unlikely to be forthcoming from the government in the current economic crisis. There is an opportunity to consider pooling the resources north and south to create a service that will meet the needs of all the children on the island in a safe and sustainable fashion.
The caveat as before is that we are merely using the modelling methodology to generate some ideas and consider the main issues arising; we are not aiming to develop a single model or structure for the future provision of paediatric cardiac surgery on the island of Ireland.

### 9.4.3 Benefits

In this instance, as has been discussed there is a capacity problem in RoI: the service is very stretched, with specific programmes having been undertaken in recent years to increase the activity levels, involving significant commitment from staff in terms of out-of-hours work, in order to try to meet the increased requirements for paediatric cardiac surgery. With healthcare sector cutbacks and considerable uncertainty about the future structure of the health service, addressing these capacity issues is posing significant problems. There may therefore be a benefit in an all-island service in providing additional capacity in a shared service without requiring all the funding to come from the RoI economy.

Northern Ireland’s service simply cannot continue as it is. The overriding benefit to the Belfast centre of an all-island service is the ability to maintain a unit in Northern Ireland providing paediatric cardiac surgery. Without such a structure, it is likely that the service would have to close and all NI patients would require to be treated in Britain.

**Decision:** There are a number of potential benefits to the development of an all-island paediatric cardiac surgery service.

### 9.4.4 Barriers

Whilst the various issues that affect cross-border health projects in general, such as differences in standards and protocols, registration of clinicians, etc, are relevant here, the work that has already been undertaken between Belfast and Crumlin has worked through these and developed solutions: consultants have honorary contracts in the other jurisdiction from their "home" base; indemnity is covered by the same mechanism; and clear clinical pathways and responsibilities have been worked out by the clinicians and managers for the existing support arrangements and the small number of children who travel from NI to be treated in Crumlin. A more extensive collaboration could build on this work and these obstacles would not present significant challenges to the development of an all-island service.

However, there are some stumbling blocks to this concept which may prove more intransigent. There is a mismatch between the expectations and aspirations for what a combined service can do. Whilst NI requires support in order to maintain its surgical service, the question in RoI is whether that is something they are capable of doing without compromising their own already over-stretched service. The NI unit would in effect wish to buy the service from RoI but the capacity does not currently exist to take extra patients. Without a commitment to invest in capacity expansion, Crumlin are reluctant to take on NI patients because they risk displacing those from RoI.

This has been partly addressed by the proposal to fund a critical care bed and part of a neonatal critical care cot in Crumlin by the Belfast HSC Trust. However, this in itself does not address the overall capacity issues according to the Crumlin team, and raises new questions in terms of the availability of the funded resources to the RoI service: e.g. whether an NI patient would take priority for the bed in question.

The preferred option for NI is pay on a fee-per-case basis, but as the RoI service does not have the capacity, it remains to be seen how they could provide the service, whether reimbursed or not. It must...
be remembered that while the numbers are likely to average out over the year, it is entirely possible that several patients might require treatment within a short space of time for clinical reasons: it is not possible to simply schedule the NI patients over the year at regular intervals.

The service in NI sees such a relatively small number of children that there are concerns in Crumlin that it does not represent the level of specialist skill required to safeguard outcomes: therefore the prospect of RoI patients travelling north for treatment is not supported in any way. The clinicians are also unhappy about, for example, the use of an adult hospital to perform paediatric procedures. There is consequently little opportunity for the capacity issues to be addressed by means of utilising capacity in NI.

If the service were to be considered as an all-island service on two sites, it might raise the question as to why such a service could not then be provided on a similar basis in other major population centres on the island, such as Cork. It could well be argued that if resources from RoI are being used to support a service in another centre, with some surgery taking place there and a permanent cardiology service in place, why such an arrangement could not also be set up for Cork.

There is, however, a willingness to consider this opportunity to develop a service that could better meet the needs of all the children on the island, and there is ongoing work to set up a more extensive collaboration than currently exists. The barriers are very real, though, and could at the least delay considerably the vision of a single service. For the purposes of this exercise we will continue with the assessment of other factors, but much work needs to be undertaken on considering how to deal with the obstacles impeding progress.

**Decision:** There are significant barriers to the development of paediatric cardiac surgery on an all-island basis. However, there is a willingness to find solutions.

### 9.4.5 Champions

This project, and indeed the clinical service itself, is characterised by committed individuals spending a large amount of personal time and effort in finding solutions to the problems within both services. The clinical teams have worked together for some time and have worked through many of the issues that arise during the development of cross-border projects. Managers have also been involved and appear committed to the concept and supportive of the process.

**Decision:** There are champions within the clinical and managerial areas to develop an all-island paediatric cardiac surgery service.

### 9.4.6 Select Benchmarks

As discussed above, there are some difficulties in comparing activity in RoI especially with that in other countries, specifically the UK, because the prevalence and complexity run far ahead in RoI in respect of paediatric cardiac congenital anomalies. There are also, as mentioned earlier, data comparison problems because of low numbers, skewed figures, and classification differences.

However, in terms of the drivers for setting up a safe and sustainable service (especially relevant in NI), we have the recent review conducted in England of all the paediatric cardiac surgical units there. This comprehensive review examined the outcomes from the surgical units (it was prompted by a high mortality rate in one such unit) and concluded that there needed to be fewer units providing more high volume and high quality services. As with many clinical specialties, paediatric cardiac
surgery sees the best outcomes and clinical safety levels by maintaining a high throughput of cases, maintaining the practitioners’ skills at the highest levels.

The English review has some fundamental recommendations that can be used to underpin the design of any paediatric cardiac surgery service on this island.

- A minimum of four full-time consultant paediatric cardiac surgeons in a tertiary centre;
- A minimum of 400 procedures per annum, preferably 500 or more, relatively evenly spread across the surgeons in the centre;
- Co-location with a range of other specialisms such as:
  - paediatric cardiology;
  - screening and diagnostic services such as echocardiography, MRI, and cardiac catheterisation;
  - adolescent cardiac surgery;
  - paediatric anaesthesia;
  - general and specialised paediatric surgery;
  - paediatric ICU at a level capable of supporting multi-organ failure;
  - paediatric neurology.

It is these standards that have driven the discussions to date between Belfast and Crumlin, and the current support provided to the NI service, in order to minimise the risks inherent in the single-handed surgical practice in NI. Following the benchmarks above, it is evident that the NI service is unsustainable in its present format and poses unacceptable risks to patients.

**9.4.7 Choice of Model**

**Quantitative Factors Influencing Model Choice:**

<table>
<thead>
<tr>
<th>Supply Factors</th>
<th>Resources</th>
<th>Critical Mass</th>
<th>Infrastructure</th>
<th>Supporting services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently have 3 surgeons, one locum Two sites (one involves surgery in adult theatre)</td>
<td>400-500 cases per year recommended</td>
<td>Should have a 4-surgeon clinical team with appropriate nursing and other supports. Require paediatric theatre, anaesthesia, ICU, etc.</td>
<td>Paediatric cardiology; screening and diagnostic services; paediatric anaesthesia; other paediatric surgery; paediatric neurology</td>
<td></td>
</tr>
</tbody>
</table>
### Needs Analysis

<table>
<thead>
<tr>
<th>Catchment</th>
<th>Population</th>
<th>Incidence</th>
<th>Population Health</th>
<th>Patient</th>
<th>Waiting Lists Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entire island, NI and RoI</td>
<td>6.38 million approx</td>
<td>1 in 100 births</td>
<td>Down Syndrome has a high rate of congenital cardiac disease</td>
<td>560 in 2010 in RoI; NI annual activity is 100-120 cases</td>
<td>122 in RoI*</td>
</tr>
</tbody>
</table>

*Waiting lists are not necessarily an indicator of the shortfall in capacity as discussed earlier. Patients are prioritised according to clinical need and may be on a list because to perform their surgery now would be inappropriate.*

The Excel data modelling tool we have developed was not capable of being used in this instance as the key metrics are not available, as the data is not captured in the way required for the use of the tool; this relates to the data issues mentioned above.

### Qualitative Factors Affecting Model Choice

#### Access

<table>
<thead>
<tr>
<th>Access</th>
<th>Appropriate for local provision</th>
<th>Ability to access similar services</th>
<th>Transport infrastructure</th>
<th>Willingness to travel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>None</td>
<td>Very good between Dublin and Belfast. Preferable to have a short road trip than travel by air to GB, which is alternative for NI patients</td>
<td>Yes – there is a full understanding among patients/parents that the best care is necessary and that travel is the way to secure such care</td>
</tr>
</tbody>
</table>

#### Service

<table>
<thead>
<tr>
<th>Service</th>
<th>Patient experience</th>
<th>Outcomes</th>
<th>Service quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient experience better if air travel not involved. Closer to family and more access for NI patients in Dublin than in Britain.</td>
<td>These are key to this service. An all-island service would safeguard outcomes for NI patients currently in a service that carries risks. All evidence points to outcomes being better in higher-volume centres in fewer locations.</td>
<td>This is an issue in respect of the stretched capacity at present (e.g. cancelled procedures). However, a properly resourced all-island service would be in a position to deliver a high-quality service to children.</td>
<td></td>
</tr>
</tbody>
</table>
Models considered:

All-island service based solely in Dublin

This would have the advantage of maintaining the recommended structure of a paediatric cardiac surgery service as per the review in England’s evidence-based standards. The surgical team would be expanded to four consultants, with appropriate support; the cardiology service could be similarly reinforced; and patients from all over the island would travel for treatment to Dublin.

This could be achieved only if a difficult political decision was taken to entirely remove the surgical service from Belfast, and potentially also the paediatric cardiology service. However, it is worth noting that the recruitment information being provided to potential replacements for the locum paediatric cardiac surgeon in Belfast mention the possibility of a full merger with Dublin to a single-site service and the consequent relocation of the surgical post.

The feeling in Crumlin is that the service in Northern Ireland is being maintained on a largely political basis. If the service were located elsewhere in the UK it would have already closed and patients referred to a larger centre. A decision will need to be made regarding the funding and resourcing of a service that is inappropriate rather than redirecting the funding to an all-island service that would provide safer and better outcomes for NI patients as well as those from RoI.

All-island service on two sites

We understand that there is little appetite politically in NI to close the paediatric surgical service entirely, especially with the knock-on effect it would have on the paediatric cardiology service. The current arrangement with Dublin to support the single-handed surgical practice is one way to mitigate the risks, and a more integrated all-island service with a greater number of patients being treated in Dublin would further strengthen the NI service and reduce the risks somewhat further, whilst not being the ideal from an evidence-based point of view.

We have considered the barriers to this above, chiefly the lack of resources in RoI to take on extra patients without investment in capacity expansion.

This is the model being worked towards by Belfast and Dublin, and it could potentially be seen as a stepping-stone to a single-site service in future if ways can be found to make that a more palatable solution in political terms.

Opportunity in relation to the new National Paediatric Hospital in Dublin

Given the resource issues in Crumlin and the proposals to develop a single all-island service, it is worth considering the opportunity afforded by the forthcoming development of the new National Paediatric Hospital in Dublin. It is probable that the development of the physical resources necessary to provide the capacity to meet both the RoI and NI demand for paediatric cardiac surgery will incur only a marginal extra cost to that for providing for RoI patients alone.

If some of this extra capacity can attract investment and support from the NI health authorities in return for the provision of the service to NI children, there is a real opportunity to develop a fully-resourced all-island service providing top-quality safe and effective clinical care to all the children on the island.
9.5 Lessons for the prototype modelling tool

Assessing the potential for an all-island paediatric cardiac surgery project by means of the modelling tool highlighted the following issues:

- Modelling with incomplete data;
- Influences on structure and location;
- Financial constraints;
- Incorporating learning from elsewhere.
10 Cystic Fibrosis

10.1 Current provision

10.1.1 Overview

Cystic Fibrosis is the most common life-threatening genetically inherited disease in Ireland and the UK. The underlying disorder in cystic fibrosis is one of very sticky, mucous secretions. CF affects the glands, damaging many organs including the lungs, the pancreas, the digestive tract and the reproductive system. The result is that people with CF are prone to constant chest infections and malnutrition.

RoI has the highest incidence of cystic fibrosis in the world, with more than 1,100 people receiving treatment currently. In Ireland, approximately 1 in 19 people are carriers of the CF gene: if two carriers become parents, there is a one in four chance of the child developing CF. There is also a 50% risk that children will become carriers of the gene\(^\text{13}\).

In NI, there are approximately 260 adults and 180 children with CF\(^\text{14}\). The incidence of CF in NI (1 in 1,850) is lower than that in RoI (1 in 1,460) but higher than the UK average.

10.1.2 Services for People with Cystic Fibrosis: Northern Ireland

Cystic Fibrosis treatment and care is centralised for all of Northern Ireland in two centres in Belfast: the Royal Belfast Hospital for Sick Children, which handles paediatric CF care, and the Belfast City Hospital, which deals with adult CF care. This reflects the accepted model of care for the UK, relying on specialised tertiary centres for the delivery of CF treatment\(^\text{15}\). CF care in NI rests solely within the Belfast centres, with links to GPs but with no formal shared-care arrangements with centres or clinics outside Belfast. The services for children and adults do coordinate and operate a transitional arrangement for those aged 14-18 whereby the adult-service clinicians attend clinics in the paediatric centre so as to ensure continuity of care for those who transfer to the adult service at 18. This and other links are facilitated further by both services being located within the same HSC Trust.

Northern Ireland operates a neonatal CF screening programme and has done since 1983, the first region within the UK to do so. This screening, using the routine heel-prick test for newborns, means that the paediatric service patient numbers are relatively stable and likely to remain so over the coming years. Meanwhile, improvements in CF care and treatment have led to later median death age and consequently an increase in the number of adult CF patients, a trend anticipated to continue. It is expected that the numbers of adult CF patients will exceed 300 within 3 to 4 years.

10.1.3 Services for People with Cystic Fibrosis: Republic of Ireland

Pollock Report

The services for CF treatment in RoI have undergone significant change in recent years and are still in a process of reconfiguration and improvement. This follows the publication of a report in 2005

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\(^{13}\) Cystic Fibrosis Ireland

\(^{14}\) Department of Health, Social Services and Public Safety Northern Ireland Respiratory Services Framework

\(^{15}\) Cystic Fibrosis Trust Clinical Standards and Accreditation Group, Standards for the Clinical Care of Children and Adults with Cystic Fibrosis in the UK, 2001
by Dr Ronnie Pollock, commissioned by the Cystic Fibrosis Association of Ireland, to examine the CF services and outcomes in Ireland. The report found serious inadequacies in the delivery of CF services, including inappropriate accommodation, lack of co-ordinated services, understaffing, absence of specialist registrars, and inadequate commitment of resources to CF. The key issues identified in the Pollock Report are as follows:

- seriously inadequate, unbalanced, and too thinly distributed staffing for CF services over too many, too small, units;
- physical resources, particularly in Dublin, falling well below accepted standards, with St Vincent’s being identified as particularly poor;
- huge deficiencies in the provision of adult services, and the availability of consultants further diminished by their heavy general medical ‘on-call’ responsibilities;
- special concern relating to the steadily increasing proportion of adults, and the necessary complexity and severity of their condition;
- unstable funding at risk from other pressures;
- lack of a system of accreditation of CF Centres.

The main recommendations of the report were as follows:

- Urgent action to correct the dangerously inadequate staffing position;
- A small number of adequately staffed, fully supported cystic fibrosis centres should be designated;
- The existing Dublin centres should remain but the links between the adult and children’s units should be strengthened and developed along geographical lines;
- Tertiary paediatric services should be designated;
- Adult provision outside Dublin should be developed urgently to create a balanced service with broad geographical coverage;
- All beds for patients with cystic fibrosis should be in single rooms with en-suite toilet facilities;
- A Microbiology Reference Laboratory should be established in Dublin;
- A Neonatal Screening Programme should be established following the establishment of a logical pattern of joint child/adult CF centres;
- A structured, regular Accreditation Process should be developed;
- A new funding methodology [possibly based on banded ‘packages of care’] should be developed to create the stability required in the system;
- The CF Registry of Ireland should be maintained and developed.

16 Cystic Fibrosis Association of Ireland/Pollock, R., “Towards a Better Service”, the Treatment of Cystic Fibrosis in Ireland: Problems and Solutions, 2005
HSE Working Group Report

Following the publication of this report, the HSE established a Working Group to undertake a review of the infrastructure for CF in RoI. The Working Group concluded its report in 2006, but this was not published until 2009. However, in the meantime, the recommendations of the report were starting to be implemented. The report concurred with Pollock on the inadequacies of the CF services and defined optimum care as per the European Consensus document as being based on multidisciplinary care supervised by a specialist centre.

The Working Group concluded that the needs of people with CF in RoI would be best met by a configuration of services as follows:

- Specialist cystic fibrosis centres offering either full care or supervision of structured shared care with satellite CF centres:
  - Dublin North: Beaumont [adult] linked with Children’s University Hospital, Temple Street [children]
  - Dublin South: St Vincent’s [adult] linked with a more closely integrated OLCH, Crumlin / AMNCH, Tallaght service [children] (pending the establishment of the new national children’s hospital)
  - Cork: Cork University Hospital [children and adult]
  - Limerick: Regional Hospital, Limerick [children and adult]
  - Galway: Galway Regional Hospitals [children and adult]

- Waterford Regional Hospital and Our Lady of Lourdes Hospital, Drogheda should provide shared paediatric care with a designated specialist centre (Our Lady’s Children’s Hospital, Crumlin and the Children’s University Hospital, Temple Street respectively).

- With regard to adult patients, a Consultant Respiratory Physician with a special interest in Cystic Fibrosis should be appointed to Waterford Regional Hospital with a view to the hospital developing as a CF specialist centre over time. Other units currently providing services may continue to do so on a shared care basis linked with a specialist unit.

Other key recommendations of the report are as follows:

- The enhancement of staffing and accommodation to international guideline levels;

- All services should be designed to minimise the risks of cross-infection by the adoption of a service control of infection policy;

- The establishment of a national CF reference laboratory as a priority.

CF Service Reconfiguration

As a result of the HSE report, CF services have undergone considerable reconfiguration both in the designation of specialist CF centres as per the report and in the upgrading or building of accommodation and infrastructure to support best practice in CF care, such as single rooms and en suite facilities to minimise cross-infection. However, the planned specialist CF ward and daycentre in St Vincent’s University Hospital Dublin, a 120-bed unit due to open in 2011, has been delayed because the original firm contracted to construct the unit ran into financial difficulties and an

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17 HSE Working Group on CF in Ireland, Services for People with CF in Ireland, 2009
alternative contractor had to be selected. At the time of writing, the contract was due to be signed for this unit imminently, and recent statements from government ministers have affirmed the intent to go ahead with the project.

Building had also started on a new CF day-care unit in Cork University Hospital, due to open in 2011, and plans are also well advanced for the development of a dedicated 10-bed CF inpatient unit, together with a single isolation room.

A neonatal screening programme has recently commenced, incorporating CF screening into the heel-prick test already carried out to screen for metabolic disorders. Early diagnosis is identified in the reports as a factor in improving outcomes and increasing the survival age.

The regional shared-care centres like Waterford Regional Hospital, Mayo General Hospital in Castlebar, and Our Lady of Lourdes in Drogheda have poorer infrastructure and fewer resources. There are issues such as a lack of rooms for the respiratory consultant in Waterford to cater for adults CF patients. Community and primary care investment has also lagged behind and there are areas of concern such as a lack of adequate community specialist physiotherapy for people with CF. There are many CF patients still receiving care in hospitals not designated as CF specialist or shared-care centres; many patients continue to opt for local care or continuity of care with clinicians they have attended previously rather than transfer to the designated CF centres.

Lung transplants, for many people with CF the only way to treat an advanced stage of the disease, have been developed in recent years at the Mater Hospital’s cardiothoracic department. The first double-lung transplant in Ireland for a CF patient took place in 2007, but the numbers of transplants for CF patients have remained small, with only 4 in total since the inception of the Mater’s lung transplant programme. The vast majority of CF patients receiving lung transplants do so at the Freeman Hospital in Newcastle in the UK. All NI patients receiving lung transplants do so at the Freeman. It is hoped that the Mater programme can expand and develop so that more Irish CF patients can receive transplants in Dublin. Two such transplants have taken place this year so there are indications that this is in progress.

10.2 Service metrics

<table>
<thead>
<tr>
<th>1 in 1,460</th>
<th>1 in 1,850</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incidence of CF in RoI</td>
<td>Incidence of CF in NI</td>
<td>Designated CF centres in RoI and NI</td>
</tr>
<tr>
<td>&gt;1,360</td>
<td>30</td>
<td>Number of people with CF in treatment across island</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RoI CF patients awaiting lung transplants</td>
</tr>
</tbody>
</table>
10.3 Issues and challenges

10.3.1 Outcomes for People with CF

There are strong indications that outcomes in RoI are worse than those for other countries. As mentioned in the Pollock report, the comparison of survival between countries is complicated by the absence of a European Registry recording individual age and vital statistical data for all cases. RoI displays a significantly higher number of deaths than does England and Wales, and the same is true for the comparison with NI, where outcomes are among the best in the UK\(^\text{19}\). The Pollock report quotes research indicating an influence of socio-economic factors and health insurance on outcomes.

Much media attention has been focused on the variation in outcomes for people with CF in RoI by comparison with other countries, and the healthcare service structure for those with CF often being cited as being problematic. While it is undisputed that the services, in particular the infrastructure and the way in which services were delivered, were completely inadequate and inappropriate for the needs of those with CF, it must be noted that one significant factor in the variation in outcomes for people with CF in RoI is the particular genetic mutation that characterises the majority of CF cases in that jurisdiction. This specific genetic mutation is associated with disease that is likely to be more difficult to treat, is more progressive, and results in lower median death age and worse outcomes for people with CF. It is important to bear in mind that outcomes may, and are expected to, improve for people with CF as a result of the reconfiguration of services in RoI, but it is unlikely that the median age of death will match those in other countries.

However, according to the HSE’s Working Group report, “sound evidence exists from populations around the world that centralised specialist care from a multi-disciplinary team markedly improves the quality and outcomes of care to cystic fibrosis patients”. Pollock’s report notes that “it has been demonstrated that it provides better symptom control, more concentrated expertise, more intensive care and greater patient satisfaction, demonstrated improved nutritional and pulmonary status, and improved survival”. These reports are in accord with the European Consensus document, which notes that specialist care in dedicated CF centres is associated with improved survival and quality of life. Neonatal screening and the associated benefits of early diagnosis of CF should also contribute to improved survival rates.

10.3.2 Existing Cross-Border Collaboration

No formal service delivery initiatives are currently under way in the delivery of services to people with CF across the border. There is no documented flow of patients across the border for CF services and as it stands currently, no entitlement to seek treatment for CF across the border in either direction.

There is a good degree of cross-border cooperation and collaboration by clinicians and researchers and a good working relationship exists between the clinical teams in each jurisdiction. For example, researchers from the Adelaide and Meath Hospital, Tallaght, the Northern Ireland Public Health Laboratory, the University of Ulster and the Northern Ireland Regional Adult Cystic Fibrosis Centre collaborated on a project investigating bacteria associated with CF lung infections. There is an international CF nurses group which includes nurses from both NI and RoI, and the Irish Thoracic Society, promoting research in and developing standards of care for respiratory medicine in Ireland, includes clinicians from NI and RoI.

\(^{19}\) UK CF Registry Annual Data Reports
10.3.3 Potential for Future Cross-Border Services in CF Care

There are issues in relation to access to specialist CF services for those in the border regions, especially the north-west. For people with CF living in the north-west of RoI, accessing the specialist centres poses considerable logistical difficulties owing to the distances involved and the poor transport infrastructures. People with CF in the western areas of NI likewise face longer journeys to access the specialist care that is optimum to maintaining their quality of life.

As the adult CF patient population grows, owing to better survival rates, the requirement for more adult services, which entail care for more complex CF-associated conditions such as diabetes, is increasing. This has led the CF service in NI to consider a second specialist centre for adult CF patients. It is felt that the existing centre is nearing capacity and that increasing the capacity would not necessarily be the best option.

This second centre is proposed for the Altnagelvin Hospital in Derry, to address both the increasing requirements of the NI CF population as a whole and the difficulties in accessing the Belfast service for those in the west.

As part of the proposed centre in Altnagelvin, there is a proposal that CF patients from the north-west of RoI would also be treated there, giving access to such patients to a specialist centre much closer to home than those available elsewhere in RoI. This is in line with the HSE’s Working Group recommendation that "cross-border arrangements should be facilitated if this provides closer access to specialist care and is the preference of the person with CF. These would be to the Belfast City Hospital at present and possibly to Altnagelvin Hospital in Derry where a service is currently being developed."

The proposed radiation oncology service at Altnagelvin, which is intended to serve cancer patients from Donegal, is a model for the proposed CF centre cross-border service.

It has also been suggested that the proposed centre for adult CF patients in the North-West could be located in Letterkenny, with access for those patients in the north-west region of NI. In terms of assessing feasibility, there is little significant difference in the physical location, given the proximity of the two hospital sites.

10.3.4 Differences in Service Delivery

While the CF services in RoI are much improved in recent years, and the structure is moving towards the model of specialist CF centres delivering care, there are still significant differences in the way that care is delivered, from the earliest stage (where NI has had neonatal screening for many years, this has only very recently been introduced in RoI) through to the treatment of adult CF patients, not all of whom are treated in specialist centres in RoI.

It is expected that the continuation of the reconfiguration and investment in infrastructure in RoI will mean that its services to CF patients will match more closely to the way in which services are delivered in NI.

10.3.5 Perception of Standard of Care in the Republic of Ireland

The difficulties in the services for CF patients in RoI, the reports highlighting the deficiencies, and the media attention focused on these combine to paint a picture of a service that is not likely to be attractive to patients in NI. If cross-border CF care is to be implemented, patients will have to have the confidence that the clinical care on both sides of the border is to an equally high standard. Both
the services themselves and in particular the public perception of the standard of those services will have to be significantly improved in RoI if they are to be attractive to those in NI. This is especially important in considering on which side of the border a potential future CF centre in the north-west would be located.

**10.3.6 Standards of Care and Key Performance Indicators**

The development and reconfiguration of services in RoI is improving the standards of care, bringing them into line with the European consensus documents that underpin CF services in other countries, including the UK/NI. The similarities in the models, once the RoI services are fully developed, will make any future co-ordination of services more feasible.

However, in RoI, key performance indicators (KPIs) are still in development. These KPIs are already in place in the UK and other places, such as the US for example. Co-ordinating and collaborating on services to CF patients is more difficult when these are not in place on both sides of the border. Again, within a few years it is expected that KPIs will be fully developed in RoI and this will facilitate more cross-border co-operation on services to CF patients.

**10.3.7 Transplant Programme**

The Mater lung transplant programme, if it develops to the level anticipated, may well have the capacity to take CF patients from NI as well as those from RoI. However, this may not be attractive to patients or clinicians in NI, where the link with the Freeman Hospital in Newcastle is very well-developed. A clinic run by doctors from Newcastle is held in Belfast every three months for CF patients so a relationship exists both with clinicians and patients. The outcomes from Newcastle are well-documented and positive, whereas the Mater’s programme is relatively new and may not inspire the same confidence in patients as the longer-established Newcastle programme. This may change over time as the Mater’s outcomes are tracked and its reputation develops.

One possible attraction of the Mater programme would depend on its criteria for transplantation. The hospital in Newcastle is extremely strict with its criteria – one reason for its impressive outcomes – and if patients perceive that they may be able to have a transplant in Dublin which they have not been able to qualify for in Newcastle, this would be a significant attraction.

**10.4 Applying the modelling framework**

**10.4.1 Introduction**

We will briefly examine the cystic fibrosis service in relation to the modelling methodology and look at the factors that would feed into the development of a cross-border cystic fibrosis service, specifically the proposed second NI centre based in Altnagelvin and serving Donegal as part of its catchment; consideration can also be given to locating a centre for patients in the north-west in Letterkenny, with access for NI patients in a similar fashion. NI requires an expansion in its capacity to treat adults with CF, because of the growing demand for services arising from the longer survival rates of those with CF. Whilst services will be expanded at Belfast City Hospital, it would not be appropriate to expand the unit to accommodate the needs of all those who require the service into the future. It is therefore, as discussed above, suggested that a second NI centre be developed at Altnagelvin and that this should incorporate a cross-border dimension from the outset and provide services to adults with CF in Donegal. Alternatively, the centre could be located in Letterkenny and provide services to NI patients in the North-West region.
10.4.2 Initial Assessment – Why Consider This Cross-Border?

There are two principal drivers for the consideration of a cross-border cystic fibrosis service: increasing the resilience of a proposed second NI centre for CF treatment, and providing services closer to home for people with CF in Donegal. A brief overview suggests that these aims could be achieved with a cross-border initiative and therefore a further modelling process should be undertaken.

10.4.3 Benefits

The benefits of developing a cross-border dimension to a proposed second NI centre, or indeed a centre based in RoI [i.e. Letterkenny] with access for NI patients, are as mentioned in the initial assessment. NI requires additional capacity to treat adults with CF, and when the patient numbers from Donegal are added to the proposed catchment for NI, the service has even more justification to be located in the North-West.

Patients from Donegal who require adult CF services would have access to specialist CF care much closer to home than currently available. For those with CF, access to a specialist unit as mentioned above improves outcomes, reduces complications, and improves quality of life. Given the distance from the RoI specialist units, it would certainly appear to be beneficial to those with CF in Donegal to have access to a unit at a shorter distance from home, whether on the RoI side of the border or in NI. This also benefits family and support systems for those with CF as long distances combined with frequent hospital admissions make it difficult on those supporting the patient. Alternatively, admissions to hospitals without specialist CF care can pose significant risks to those with CF, so a unit within a reasonable distance can reduce the risk of cross-infection and other problems common to CF patients receiving treatment in non-specialist general hospitals.

Decision: There are potential benefits to developing a cross-border CF service in the north-west.

10.4.4 Barriers

As with other cross-border services, careful consideration will need to be given to the issues and obstacles that arise in any cross-border project development. There is some disparity at present between the structures and standards of care for those with CF between NI and RoI and considerable attention will need to be given to co-ordinating the care for people with CF across the two health systems.

For example, the referral procedures will need to be considered so that closer ties can be developed between, for example, GPs and other healthcare professionals in the north-west of RoI and the CF team in Altnagelvin. If patients are to be referred to the CF centre in Derry, there will need to be familiarity with, clear pathways to, and confidence in the services on the part of the healthcare professionals in RoI. This applies in reverse should Letterkenny be considered as the location.

Whilst the standards of care for CF as defined in the European consensus documents call for specialist CF centres for treatment of people with CF, it must be recognised that many CF patients in RoI continue to receive treatment outside the specialist or shared-care centres. This is due in many cases to patients’ choosing to remain under the care of their local respiratory clinician rather than
transfer to the specialist CF services. This may be partly a question of access and partly confidence in the clinical team and treatment received up to now, and the desire to have continuity of care.

If the new North-West CF specialist centre is developed, some patients in both NI and RoI will be required to move to this centre for their CF care. This may not be an option that all patients are happy with. The NI adult patients proposed to be moved may have been treated in Belfast for many years and may be reluctant to transfer regardless of the centre being closer to home. Successfully implementing the change will require a period of transition and careful consideration of the clinical team to operate the north-west unit.

For patients in the north-west of RoI, again they will have to decide whether to opt for treatment closer to home but by a clinical team and in a location that is unfamiliar to them or to remain in the RoI service structure, should the unit be sited in Altnagelvin. For many of these, this would represent a further change as they will already have potentially transferred to a specialist RoI CF centre under the current reconfiguration plans (for example, transferring from Letterkenny to Galway). This may militate against patients’ choosing to attend a new unit.

**Decision:** There are barriers that require to be worked through, specifically in respect of co-ordinating care and in terms of patient willingness to transfer, but these ought not to be insurmountable.

### 10.4.5 Champions

Those advocating for people with Cystic Fibrosis are committed individuals and groups pushing for improvements in care. There is a very strong and vocal lobby keeping CF issues on the agenda in RoI particularly and maintaining a high profile in the media, for example. CF Ireland, the RoI advocacy group, is strongly supportive of the proposed centre in the north-west having a cross-border dimension. The organisation is working with the CF team in Belfast City Hospital on driving the project forward.

The latter team has been extremely active, with key clinicians within the CF team in Belfast being particular champions for this project, albeit specifically in relation to the Altnagelvin site.

**Decision:** There are strong champions on both sides of the border supporting and driving this initiative.

### 10.4.6 Select Benchmarks

There are clear standards and guidelines for CF care as outlined earlier in this section. The Pollock and HSE reports on CF care in RoI outline clearly how care should be delivered and the structure in RoI is moving towards the implementation of these recommendations. The development of the new centre is entirely in line with these recommendations and others from international evidence for the care of adults with CF.

As we mentioned previously, some of the comparator information must be treated with care, given the specific nature of much of the CF found in RoI. The most common strain of CF in RoI is more aggressive than most others, leading to a higher rate of complications, more complex care requirements, and lower median age of death than the averages for other countries. Whilst care can
be and must be improved, comparisons with outcomes for other countries must be treated with care because even with identical care, people with CF in RoI will on average have more problems and die younger than those with CF elsewhere.

Outcome: While comparisons must be used with care, there are benchmarks for the delivery of care for optimum outcomes for those with CF.

10.4.7 Choice of Model

Quantitative Factors Influencing Model Choice:

<table>
<thead>
<tr>
<th>Supply Factors</th>
<th>Critical Mass</th>
<th>Infrastructure</th>
<th>Supporting services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources</td>
<td>Maximum patients in centre is approx 250-300 patients; current NI centre approaching this</td>
<td>Requires CF-specific care such as single rooms &amp; infection control policy Dedicated treatment rooms</td>
<td>Specialised physiotherapy Gastro-enterology Dietician</td>
</tr>
<tr>
<td>No CF centre in RoI in north-west region</td>
<td>CF centre in NI in Belfast only</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Needs Analysis

<table>
<thead>
<tr>
<th>Catchment</th>
<th>Population</th>
<th>Incidence</th>
<th>Population Health</th>
<th>Patient</th>
<th>Waiting Lists Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western HSC Trust area; Donegal; Sligo</td>
<td>500,000</td>
<td>NI: 1:1,850</td>
<td>CF gene common in Rol is more aggressive so outcomes are lower</td>
<td>1,100 in Rol total; 15 in Donegal, 19 in Sligo</td>
<td>n/a</td>
</tr>
<tr>
<td>NI: 1:1,460</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Qualitative Factors Affecting Model Choice

<table>
<thead>
<tr>
<th>Access</th>
<th>Appropriate for local provision</th>
<th>Ability to access similar services</th>
<th>Transport infrastructure</th>
<th>Willingness to travel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not appropriate for provision in several places – must be specialist CF centres</td>
<td>Similar services are only available in CF centres such as Belfast, Dublin, or Galway</td>
<td>The centre in the North-West would dramatically reduce travel time for specialist care</td>
<td>Patients are often willing to travel for specialist care as this has the best outcomes. However, in Rol, care has been delivered locally despite it not being the best system so some may have to choose a specialist centre further away</td>
<td></td>
</tr>
</tbody>
</table>
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Service

<table>
<thead>
<tr>
<th>Patient experience</th>
<th>Outcomes</th>
<th>Service quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialist CF centres reduce anxiety for CF patients who are prone to hospital infections and take serious risks when admitted to non-CF units. Reduced travel time for care will also improve experience.</td>
<td>Evidence suggests outcomes are much improved in specialist CF centres, so the proposed project should deliver good patient outcomes as it will be in line with best practice</td>
<td>Quality of CF care in NI currently appears more developed than in RoI. Second centre will be delivering similar care in the same way so quality will be maintained. All evidence suggests that the highest quality of care to CF patients arises from specialist CF centre structures.</td>
</tr>
</tbody>
</table>

Taking into account the various factors, most are indicating a new site in the North-West (either Altnagelvin or Letterkenny) favourably, suggesting that the project has merit in being progressed. Significantly, the model is based on the radiotherapy centre that has finally received long-awaited approval. This is a boost to the proposal for the cross-border CF centre.

10.5 Lessons for the prototype modelling tool

- Champions must be identified;
- Factors to consider in using comparator material;
- Initial question must be asked in relation to benefiting both jurisdictions.
11 Acute mental health services

11.1 Current provision

11.1.1 Development of Acute Mental Health Services in Northern Ireland

In October 2002, the NI Minister for Health, Social Services and Public Safety announced the commencement of an extensive, independent review of the law, policy and service delivery relating to people with mental health problems or learning disabilities. Prof David Bamford from the University of Ulster was appointed to chair the review, the chairmanship of which was assumed by Prof Roy McClelland from QUB following the death of Prof Bamford in 2006.

The Bamford Review was designed to take into account recent policy and other developments in NI and in the European Union, and address how best to provide services to people with specific mental health needs or a learning disability in accordance with the statutory equality obligations of the Northern Ireland Act 1998, with the Human Rights Act 1998, and to promote their social inclusion.

Equally, the Review was intended to address how to promote positive mental health in society, analysing the relevance of key concepts such as community education, prevention and the promotion of mental health awareness. The Review also covered the role and function of the Mental Health Commission and the Mental Health Review Tribunal, and relevant social issues including education, employment, housing, and social security benefits. It operated in partnership with the Northern Ireland Office and criminal justice agencies to review therapeutic intervention with offenders who have psychiatric difficulties.

The review produced a series of 10 reports between June 2005 and August 2007, which together represent a composite vision for radical reform and modernisation of mental health and learning disability law, policy and services. Overall, this vision entailed:

- promotion of the mental health and wellbeing of the whole community and, in parallel, decreasing the prevalence of mental ill-health through preventative action;
- valuing those with mental health needs or a learning disability by asserting their rights to full citizenship, equality of opportunity and self-determination;
- providing a legislative framework, based on principles which protect the dignity and human rights of people with a mental health problem or a learning disability; and
- reforming and modernising services in a way that will make a real and meaningful difference to the lives of people with mental health needs or a learning disability and their carers and families.

The key recommendations emerging from the Bamford review were grouped under three main headings, as follows:

- Person-centred services, informed by service users and carers
  - New legislation to protect the rights of people unable to make their own decisions about their mental health treatment and about other health, care and financial and property issues;
Involvement of service users, their carers and families in the planning, delivery and monitoring of services, both at individual and population level;

Giving service users, their carers and families a bigger say in their own care and treatment, and provision of advocacy services to support them;

Development of Service Frameworks for mental health and learning disability services, leading to more uniform, regionally agreed models of care;

Accommodation of adults with a learning disability, who need housing with support services, in households of no more than 5 people, where possible;

Development of better services for people with specialised needs, involving fewer people needing to be sent outside NI for treatment.

**Seamless services**

Better collaboration between public sector organisations to promote positive mental health and to provide joined-up services to meet the full range of people's needs;

Encouragement of the independent sector to play an active part in service delivery;

Establishment of an inter-Departmental Ministerial group on Mental Health and Learning Disability to ensure better working across Departments;

Establishment of a Task Force to ensure coordinated action across the health and social care sector;

Agreement of clear care pathways across NI so that people know where they are being referred, for what purpose and the services they should expect to receive.

**Community-based services centred on early intervention**

Faster assessment of people who need specialist health and social care services;

Better access to a range of evidence-based psychological (“talking”) therapies;

Access for young people in post-primary schools to an independent counselling service funded by the Department of Education;

Enablement of more people needing mental health and learning disability services to live at home while they receive their care. If they need to be admitted to a hospital, they will stay for only as long as they need assessment or treatment in that environment;

By 2014, no-one in NI will have a hospital as their permanent address.

As part of this study for CCBS, we undertook a process of consultation with senior representatives of the Southern Health and Social Care Trust in NI, in order to understand the work ongoing at present to implement the recommendations arising from the Bamford review, which also forms part of their ongoing work to develop and enhance mental health services within the Trust area. The outcome of these consultations is presented in the following paragraphs. This is particularly relevant as we have
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Section 11 Acute mental health services

also examined the comparative issues regarding mental health service developments within the HSE in Monaghan, which is directly across the border from the Southern HSC Trust area.

11.1.2 Development of Acute Mental Health Services Within Southern HSC Trust

The recommendations which were developed as part of the Bamford review represent a substantial policy driver for the work currently being done within the Southern HSC Trust to improve mental health services, as part of a regional initiative being implemented by DHSSPS and service commissioners (previously the Southern Health and Social Services Board, and since 2009 the NI Health and Social Care Board).

In addition, the Southern HSC Trust commenced a review of mental health services within its area in May 2008 [the “Change in Mind” project], which was prompted by the Bamford Review, by regional and national programmes to improve access to psychological therapies, and by the need to achieve greater uniformity of services within the Southern Trust following its creation from the four legacy Trusts in 2007.

A primary aim of the “Change in Mind” project was to adopt a five step model of service provision, developed from the stepped care framework outlined in the clinical guidance for the management of depression in primary and secondary care and for the management of anxiety, both published by the National Institute for Health and Clinical Excellence (NICE)\(^\text{20}\). The model involves the following five steps\(^\text{21}\):

**Step One:**
*Primary Care - Service users with mild up to moderate mental health needs.*
Services will be provided by local General Practice and or voluntary and community sector and will include early intervention, mental health promotion. Screening will be undertaken for step two services.

**Step Two:**
*Screening, Assessment and Brief Psychological/Psychosocial Interventions - Service users with mild/moderate mental health needs.*
Primary Mental Health Care practitioners in partnership with the primary care team will screen, assess and either treat or signpost and refer to appropriate service as per the step care model for common mental illness outlined in the NICE Guidelines 23 (2004).

**Step Three:**
*Primary Mental Health Care Service - Service users with moderate mental illness.*
This service provides elective short term psychological, psychosocial, occupational and medical intervention within multidisciplinary context based in primary care/community settings.

**Step Four:**
*Support and Recovery Services - Service users with severe and enduring mental health needs.*
This part of the service includes inpatient care, outpatient care, Mental Health Resource Centres, Home Treatment and the community mental health teams that deliver support and recovery services. The Crisis Response service straddles both steps 3 and 4 providing a response within 24 hours to psychiatric emergencies.

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\(^{20}\) Depression: management of depression in primary and secondary care - NICE guidance GC23 (April 2007) and Anxiety: management of anxiety (panic disorder, with or without agoraphobia, and generalised anxiety disorder) in adults in primary, secondary and community care - NICE guidance GC22 (April 2007), National Institute for Health and Clinical Excellence

\(^{21}\) Source: Proposal for the Development of a Stepped Care Model for Adult Mental Health Services, Southern Health and Social Care Trust, July 2009
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Step Five: Specialist Mental Health Services – Chronic, atypical, refractory and recurrent mental health needs.

This step encompasses specialist inpatient services, forensic, eating disorder, clinical psychology, cognitive behaviour therapy and addiction services.

As may be seen from the above, the model involves the provision of appropriate and measured interventions to ensure that patients are treated in the most appropriate setting, with the majority of mental health services provided within a primary care setting, and inpatient and other hospital-based care available when clinically necessary and in conjunction with ongoing involvement of mental health professionals at primary and community level. Similar initiatives are under way within the other HSC Trusts in Northern Ireland to implement the stepped care model.

11.1.3 Current Service Provision / Future Developments in the Republic of Ireland

In 2006, the Irish Government published A Vision for Change, a detailed report setting out a comprehensive model of mental health service provision for Ireland. The report set out a framework for building and fostering positive mental health across the entire community and for providing accessible, community-based, specialist services for people with mental illness.

Amongst the principal recommendations presented within A Vision for Change were the following:

- Involvement of service users and their carers should be a feature of every aspect of service development and delivery.
- Mental health promotion should be available for all age groups, to enhance protective factors and decrease risk factors for developing mental health problems.
- Well-trained, fully staffed, community-based, multidisciplinary CMHTs (Community Mental Health Teams) should be put in place for all mental health services. These teams should provide mental health services across the individual’s lifespan.
- To provide an effective community-based service, CMHTs should offer multidisciplinary home-based and assertive outreach care, and a comprehensive range of medical, psychological and social therapies relevant to the needs of service users and their families.
- A recovery orientation should inform every aspect of service delivery and service users should be partners in their own care. Care plans should reflect the service user’s particular needs, goals and potential and should address community factors that may impede or support recovery.
- Links between specialist mental health services, primary care services and voluntary groups that are supportive of mental health should be enhanced and formalised.
- The mental health services should be organised nationally in catchment areas for populations of between 250,000 and 400,000. In realigning catchment boundaries, consideration should be made of the current social and demographic composition of the population, and to geographical and other administrative boundaries.

• Organisation and management of local catchment mental health services should be coordinated locally through Mental Health Catchment Area Management teams, and nationally by a Mental Health Service Directorate working directly within the Health Service Executive.

• Service provision should be prioritised and developed where there is greatest need. This should be done equitably and across all service user groups.

• Services should be evaluated with meaningful performance indicators annually to assess the added value the service is contributing to the mental health of the local catchment area population.

• A plan to bring about the closure of all mental hospitals should be drawn up and implemented. The resources released by these closures should be protected for reinvestment in the mental health service.

• Mental health information systems should be developed locally. These systems should provide the national minimum mental health data set to a central mental health information system. Broadly-based mental health service research should be undertaken and funded.

• Planning and funding of education and training for mental health professionals should be centralised in the new structures to be established by the Health Service Executive.

• A multi-professional manpower plan should be put in place, linked to projected service plans. This plan should look at the skill mix of teams and the way staff are deployed between teams and geographically, taking into account the service models recommended in this policy. This plan should be prepared by the National Mental Health Service Directorate working closely with the Health Service Executive, the Department of Health and Children and service providers.

• An implementation review committee should be established to oversee the implementation of this policy.

• Substantial extra funding is required to finance this new Mental Health Policy. A programme of capital and non-capital investment in mental health services as recommended in this policy and adjusted in line with inflation should be implemented in a phased way over the next seven to ten years, in parallel with the reorganisation of mental health services.

• A Vision for Change should be accepted and implemented as a complete plan23.

It is worth noting that many of the themes expressed in the reports arising from the Bamford Review in Northern Ireland are very similar to those which appeared in A Vision for Change in RoI at around the same time, which is unsurprising given that both review groups paid close attention to international best practice and emerging thinking in the field of mental health service provision. Common themes addressed by the two groups included:

• the need to involve service users and their carers in making decisions on their treatment and on the provision of services;

• the strengthening of linkages between organisations (across sectors) and individuals providing services to mental health patients;

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section 1 introduction

- the delivery of the majority of mental health services at primary and community care levels, with hospital-based care provided only for those with severe and enduring mental health needs;
- enhanced workforce planning across the full spectrum of services within the mental health sector;
- clear focus on a “whole systems” approach to help develop mental health services in an integrated and cohesive fashion.

It should also be noted that both reviews are exclusively focused on the requirements of the resident population and on the development of services in their own jurisdiction, and do not deal with the potential for developing and delivering services on a cross-border basis.

Despite the similarities in the reports’ strategic recommendations for mental health service delivery, the implementation of A Vision for Change has been much slower than anticipated and the pace of change in the reconfiguration of mental health services in RoI has been curtailed as a result. The annual report of the Mental Health Commission for 2009 noted little improvement in standards for inpatient facilities24, and both its Chairman and Chief Executive expressed concern at government planning for and funding of mental health services, which are not sufficient to implement the recommendations of A Vision for Change25. A 2009 review by Indecon26 and the Mental Health Commission’s From Vision to Action27 report concur that the full implementation of A Vision for Change is well behind schedule and that the model of service delivery has not substantially changed. There remain, consequently, significant differences in the mental health service structures on either side of the border, notwithstanding the similar visions of the reports and recommendations for reform.

11.2 Service metrics

<table>
<thead>
<tr>
<th>81</th>
<th>c.26,000</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient acute mental health units in NI and RoI</td>
<td>Annual admissions for inpatient treatment</td>
<td>Involuntary admissions of NI patients in RoI since 2006</td>
</tr>
<tr>
<td>25%</td>
<td>Higher rate than England for prescriptions for psychosis drugs in NI</td>
<td></td>
</tr>
<tr>
<td>The percentage additional MH needs in NI versus England</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

24 Mental Health Commission, Annual Report for 2009, June 2010
11.3 Issues and challenges

11.3.1 Existing Cross-Border Collaboration

From our consultations with mental health professionals on both sides of the border, it would appear that there are no current arrangements in place for any significant (i.e. service-wide) form of collaborative work in acute mental health services between the two jurisdictions, and that the mental health service in each jurisdiction operates in near-complete isolation and with little reference to its counterpart in the other. Consultees in each system acknowledged a lack of awareness of what services operated on the other side of the border, and indeed tended not to know who their clinical counterparts were in the adjoining jurisdiction. As with other clinical areas, no joint service planning is undertaken to look at the needs of the population in the border area on a cross jurisdictional basis.

It is interesting to note that this lack of significant cross-border engagement, as reported to us in 2010, contrasts (perhaps sharply) with previous attempts to encourage greater cooperation on a cross-border basis. In May 2009, CCBS published Mental Health: The Case for a Cross Jurisdictional Approach Combining Policy and Research Efforts on the Island of Ireland which listed previous initiatives and projects within this field, including:

- examination by the two Health Ministers in NI and RoI of the possibility to establish an All-Island Institute for Mental Health (2003);

- the championing by the Mental Health Commission (RoI) of the proposed development of mental health research infrastructure on an all island basis;

- six cross-border mental health projects managed by CAWT (and supported by EU PEACE II funding), mainly in the area of health promotion, training and research, dealing with topics of:
  - Art Therapy;
  - Carers Needs Assessment;
  - Cognitive Therapy Awareness Training;
  - Cross Border Community Care Services;
  - INSURE - Suicide Research;
  - Mental Health and Young People.

More recently, CAWT has been managing two projects in the field of mental health:

- **NI Registry of Deliberate Self Harm** – piloted in 2007 and now operating in the Western HSC Trust area (and being expanded to include hospitals within the Belfast HSC Trust), the NI Registry is a collaboration with the National Registry of Deliberate Self-harm in the Republic of Ireland which has been operating since 2000. Using the same methodology as the Registry in RoI, the Western Registry extracts and collates anonymised data from existing records of self-harm attendances at the three Accident and Emergency (A&E)/Urgent Care departments in the Western area. The aim of the Registry is to identify the extent of self-harming behaviour by collecting relevant anonymised data from hospital Accident and Emergency departments. The analysis of this information will inform the development of policies and shape the implementation of measures aimed at preventing suicide and self-harm.

- **Joint Protocol for Cross Border Mental Health services** - this project involves the development of a Joint Protocol for the Western HSC Trust and HSE West (Donegal/Leitrim)/
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11.3.1 Introducing Cross-Border Mental Health Services

Sligo/West Cavan] for responding to people with significant mental health conditions who present to or avail of services from outside their home jurisdiction. The protocol offers guidance to primary care and staff working in second tier mental health services who are concerned that a patient may be at risk of self-harm/suicide (or pose a risk to others) and are concurrently accessing or may have accessed services on both sides of the border. The protocol outlines the reporting procedures to be used in sharing information and concerns to the relevant services within each jurisdiction, and is intended to complement existing policies, procedures and guidelines in both jurisdictions. For example, local guidelines relating to data protection and record retention apply to patient records irrespective of where they originated.

Perhaps the key point to note here is that the various initiatives which have been proposed, and those which have been managed by CAWT over the last decade, have tended to deal with those aspects of mental health services which support frontline activity, such as research, training and provision of specialist therapeutic interventions; they have not had significant impact upon the provision of mainstream frontline mental health services in primary care or acute settings, although the recent development of the joint protocol appears to have been very helpful step in the direction of assisting clinicians to deal with the very real problems of patients from one side of the border needing to access mental health services in the adjoining jurisdiction, perhaps in crisis situations.

11.3.2 Other Issues

Notwithstanding the potential which may exist for some mental health services to be developed or enhanced on a cross-border basis, the consultation meetings which we held with senior managers and clinicians identified a number of significant issues which might frustrate attempts to make progress, or which at least would require some focused resolution, including the issues discussed in the following paragraphs.

Legislation

The legislative differences between NI and RoI were identified by several consultees as being a likely barrier, given the differences in the respective Mental Health Acts, which were said to lead to problems at present in transferring patients for treatment between jurisdictions (in effect, a patient has to be discharged from mental health services in one jurisdiction and readmitted to care in another, thus creating a gap which might lead to a patient absconding or being in a very vulnerable position, and certainly providing a lack of continuity in their treatment and care).

In Scotland, for example, specific statutory instruments and orders have been effected to address this issue given the differences in mental health legislation between England and Scotland. Both the legislation in Scotland and that applying in England and Wales have been amended by means of regulations and other instruments to specifically cater for the transfer of patients subject to detention orders and those subject to requirements other than detention, as well as addressing the issue of absconding patients (both during transfers and cross-border absconding), and also escorted visiting across the border. Similar measures would be required between NI and RoI to address these issues.

Clinical Standards

These were regarded as being potentially problematic, given that the two jurisdictions operate different access standards, referral pathways and staffing requirements. As outlined above, the Southern HSC Trust, for example, operates a clear referral pathway and triage system for mental health services, which is not replicated in the border regions of RoI. Establishing a service that operated across the border would consequently present problems.
Clinical Governance

Clinical governance arrangements may also create some problems in the field of mental health services, particularly if clinicians from one jurisdiction were to be practising in the other from time to time, for example as part of a clinical network. If a service were to be established that operated on the basis of the clinical team providing services on both sides of the border, for example by running clinics on certain days in hospitals in NI and on certain days in hospitals in RoI, then significant questions arise as to the reporting lines, governance, risk management, and accountability of the health professionals involved.

Registration – Allied Health Professionals

In NI, AHPs are subject to statutory registration and may not work in the health system without this. However, the registration structure for these professions in RoI is not yet established. Coru, the Health and Social Care Professionals Council, is in the process of setting up registration boards, which will open registers for a range of AHPs. This has not yet come to fruition, however, and consequently AHPs such as social workers, social care workers, and psychologists within the mental health services in RoI do not have a corresponding statutory registration to that effective in NI. This would require to be addressed if clinical teams were to be established providing services on a cross-border basis.

Whilst the above issues were identified as being relatively challenging, most consultees acknowledged that they were not insurmountable, although the central issue within mental health services from a cross-border prospective appears to be that there is relatively little necessity for services to have to be provided to patients from outside the jurisdiction, apart from in a small number of sub-specialist areas where demand outstrips supply, and where there may be viable potential for a single service to be established for the whole of the island of Ireland (e.g. forensic psychiatry).

11.4 Applying the modelling framework

11.4.1 Overview

From our consultations with service managers and senior clinicians within mental health on both sides of the border, a number of critical issues were raised regarding the prospects for enhanced north-south collaboration:

- For most psychiatric patients, the need is for mental health professionals to manage their condition closely and be available to them when crisis situations arise. This cannot be done remotely, or over a wide geographical area: the consultant psychiatrist and their team need to be local, and available. It is therefore unlikely that a viable cross-border mental health service could be developed or sustained for the majority of frontline mental health services and treatments.

- By the same token, some mental health services which do not require close or urgent interaction between mental health professionals and the patient could be developed and delivered on a cross-border basis. These might include input from consultant psychiatrists into learning disability services, or liaison psychiatry (the role of the consultation-liaison psychiatrist is to see patients currently admitted as general medical inpatients to an acute general hospital, at the request of the treating medical or surgical consultant or team).
It is worth noting that the suggestions made by consultees in respect of mental health services which might operate on a cross-border basis were predominantly focused around services in NI being made available to patients from RoI, and that there appeared to be little or no requirement in NI to access mental health services in RoI.

The exception to this relates to the provision of highly specialist, low-volume mental health services, and the prospects for their delivery on an all-island basis. Examples given included the following:

- **Psychiatric Intensive Care** was seen by some consultees in RoI as requiring additional capacity, with a small number of patients from border counties in RoI having to be sent to Great Britain to access psychiatric intensive care beds not available in RoI when needed.

- **Eating Disorders.** In mid-2009, CAWT launched a project to develop an Eating Disorders Network, the aim of the project being to provide and enhance therapeutic services for people suffering from mild to moderate eating disorders. The project will focus on the provision of additional specialist eating disorder resources in the border region within primary care and community settings. It is estimated that around 1,000 people with eating disorders will benefit from this additional EU investment. Funding of approximately €3.1m has been provided through INTERREG IVA, and the original project proposal outlined the need to develop a community based specialist resource across the CAWT region (12 WTE practitioners). Consultees with whom the HBC team engaged during 2010 agreed that this work is valuable and could be the focus for future mainstream development on a cross-border basis.

- **Forensic Psychiatry Services:** The forensic psychiatry service in RoI is under-resourced and due for reform, whilst Northern Ireland has no high-secure unit and has to send those requiring such facilities for detention to Scotland or England, or indeed retain them in prison settings. There is potential to consider this service on an all-island basis, particularly in relation to high-secure facilities. This is briefly considered by means of the modelling methodology below.

### 11.5 Forensic psychiatry services

#### 11.5.1 Introduction and Background

Whilst forensic psychiatry has been defined in a range of ways, the Mental Health Commission’s recent position paper on forensic mental health services in RoI\(^{28}\) adopts the Gordon and Lindqvist perspective:

> “Definitions of forensic psychiatry vary but its essence relates to the assessment and treatment of people with mental disorder who show antisocial or violent behaviour. Key elements include the interface between mental health and the law, affording expert evidence in civil and criminal courts, and the assessment and treatment of mentally disordered offenders and similar patients who have not committed any offences. Forensic psychiatry is a sub-specialty of general psychiatry, which itself is a sub-speciality of medicine. Concurrently forensic psychiatry overlaps with law, criminal justice and clinical psychology and occurs in an evolving social and political context.”

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\(^{28}\) “Forensic Mental Health Services for Adults in Ireland”, Mental Health Commission Position Paper, February 2011
Forensic psychiatry was described by various stakeholders as being a specialist service where demand is currently outstripping supply in RoI, with some patients unable to be admitted to the specialist unit within the Central Mental Hospital (CMH) in Dundrum, Co. Dublin. The National Forensic Mental Health Service (FMHS) at the CMH was described by the Irish College of Psychiatrists in 2005 as having been “underdeveloped and under resourced” for a long period, and indeed A Vision for Change recognised that there are significant capacity constraints at the CMH, often as a result of the “absence or inadequacy of safe acute observation areas in general hospital mental health units [which] has led to many demands being made on FMHS by generic mental health services... reducing the acute capacity available [at the CMH].” As a consequence, A Vision for Change recommended the establishment of “four multidisciplinary, community-based forensic mental health teams... one in each of the HSE regions”, noting that “the location of these teams be carefully considered and that “their location in proximity to prisons and regional ICRUs [intensive care rehabilitation units] would be desirable”.

Northern Ireland has no high-secure facility for the detention of patients. Whilst the Bamford Review recommended the establishment of a high-secure unit, there are questions over the population base warranting investment in such a facility to international standards. It has been mooted that forensic psychiatry services could be considered on an all-island basis so that access to a high-secure facility would not require NI patients to be sent to Scotland or England. This would facilitate family access and potentially reduce costs. Some NI offenders requiring high-secure forensic mental health detention remain in prison owing to the lack of access to suitable facilities. A Criminal Justice Inspection Northern Ireland (CJINI) report from 2010 suggests that Northern Ireland could not justify a facility of its own “unless in partnership with the Republic of Ireland”.

Currently, inpatient forensic mental health services are provided in Belfast and Dublin only. NI’s regional forensic mental health service is based in the Shannon Clinic in the Knockbracken complex in Belfast, providing 34 medium-secure beds and supporting facilities. Patients requiring high-secure detention are transferred to other parts of the UK or remain in prison facilities. There are community forensic mental health teams across the jurisdiction.

RoI’s forensic psychiatry service is located in Dublin, in the 93-bed Central Mental Hospital, providing high-, medium-, and low-secure facilities on the same site. Whilst there have been several recommendations for regional medium- or low-secure units to be established, to date these have not been put in place.

There are also PICU [psychiatric intensive care units] facilities in NI, which provide intensive inpatient treatment for those with acute episodes of seriously disturbed behaviour. Whilst PICUs usually treat those compulsorily detained, they are not secure units designed for forensic mental health treatment or detention; rather they form part of the general mental health service provision.

The Central Mental Hospital is due to be rebuilt; a final decision on its location and design remains outstanding following the decision to rescind the earlier plan to co-locate the new hospital on the grounds of a proposed large prison, Thornton Hall. The planned facility will have an increased number of beds (120) and is intended to provide varying levels of security, supported by four regional low-secure units and four regional community forensic mental health teams.

29 “Forensic Psychiatry in Ireland”, paper by Dr Damian Mohan, Irish College of Psychiatrists, 2005
30 A Vision for Change, op. cit., Section 15.1.4 (p 1389)
31 A Vision for Change, op. cit., Section 15.1.6 (p 139)
32 “Not a Marginal Issue: Mental Health and the Criminal Justice System in Ireland”, CJINI, March 2010
11.5.2 Service Metrics

<table>
<thead>
<tr>
<th>Service Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forensic mental health inpatient units</td>
<td>2</td>
</tr>
<tr>
<td>Beds in these units</td>
<td>127</td>
</tr>
<tr>
<td>Admissions to forensic psychiatric facilities in 2009</td>
<td>91</td>
</tr>
<tr>
<td>Incidence of mental illness among RoI remand prisoners (twice the international rate)</td>
<td>7.6%</td>
</tr>
<tr>
<td>High-secure beds in RoI</td>
<td>26</td>
</tr>
<tr>
<td>High-secure beds in NI</td>
<td>0</td>
</tr>
</tbody>
</table>

11.5.3 Initial Assessment – Why Consider This Cross-Border?

The motivation to consider an all-island forensic psychiatry service, particularly in relation to the provision of secure detention and treatment facilities, stems from both the need to expand and fully resource the RoI service and the inability of the NI service to meet the needs of those requiring high-secure facilities. A single service might have the capability of addressing the issues in both jurisdictions, providing resources for expansion in RoI and access to closer high-secure facilities for those in NI.

11.5.4 Benefits

With the planned redevelopment of the Central Mental Hospital and a reorganisation of the forensic mental health services in RoI, an opportunity exists to consider incorporating the needs of the NI mental health services in relation to forensic psychiatry. This would potentially yield economies of scale in terms of the provision of a larger facility than currently envisaged, partially funded from the NI mental health services. Promises of such funding might be an incentive to the health services in RoI to commit to and proceed with the project.

For the NI services, it represents an opportunity for closer and more accessible forensic psychiatric inpatient services without having to invest as much as would be required to establish a new high-secure unit in NI. It is doubtful whether the NI population justifies the investment in its own high-secure unit but it is equally difficult for patients and families when those requiring high-secure detention are transferred to Britain. Access to such facilities in RoI would be more accessible, with lower transport costs and greater ease for family and friends to support the detainee.

Decision: There are potential benefits in considering all-island forensic psychiatric services, particularly relating to high-security facilities.

11.5.5 Barriers

There are a number of likely challenges to the development of an all-island forensic psychiatric service. One considerable barrier, as mentioned earlier, is the different legal frameworks within
which the mental health services function in the two jurisdictions. With an inability at present to seamlessly transfer those with detention orders from NI to RoI and vice-versa, it is difficult to envisage a forensic psychiatry service operating successfully across the border. In order for this to be considered feasible, the legislative differences need to be addressed and resolved to facilitate the movement of patients across the border within the mental health services.

Previously-mentioned obstacles such as disparities in staff titles, grades, and pay would need to be considered, as well as the ability of clinicians to move between jurisdictions in terms of registration and indemnity. The latter issue is likely to be compounded by the mental health legislative differences.

The need to have clear care pathways: forensic mental health patients can and should move between the different levels of security and should have a care plan to enable them to eventually move to community-based care should that be appropriate. This will complicate any plan for a single inpatient service as there will need to be considerable liaison between clinicians and services based in different locations across the jurisdictional boundary.

There are obviously considerable financial barriers to any reform or development of services at present in both jurisdictions. An analysis of the potential costs to establish an all-island service and a comparison of how these might be recouped in the form of reduced running costs to both health services would need to be undertaken. It is clear that it costs the NI service considerable sums to transfer its high-secure patients to facilities elsewhere in the UK, but whether an all-island service could provide these services at less cost would need to be investigated.

Decision: There are considerable issues and challenges to the development of a single forensic psychiatric service. Legislative changes are required to facilitate any progress.

11.5.6 Champions

This area, like orthopaedic surgery, is one that we cannot assess in a theoretical fashion from an external perspective. We do not know whether there are clinical or managerial individuals with the mandate, authority, knowledge, and willingness to drive an initiative to establish an all-island forensic psychiatry service. This would have to be carefully considered by those involved in formulating a proposed project.

Indeed, whilst there are clearly some committed organisations and individuals working in the forensic psychiatric services (e.g. Mental Health Commission; Prof Harry Kennedy, Chief Psychiatrist and Director of the Central Mental Hospital), pushing for reform and development of the services, as we have outlined above, the progress in the implementation of mental health service reform in RoI has been very slow. This implies that it may be difficult for those campaigning for change or championing projects to get such reforms and developments implemented in a timely fashion. This is ominous for anyone contemplating proposing new initiatives.

Decision: There may be champions willing to drive forward an initiative to establish an all-island forensic psychiatric service but this cannot be established and is in doubt given the difficulties in implementing previous planned developments and reforms.
11.5.7 Select Benchmarks

Predicting the need for forensic psychiatric services is complex and research has indicated a number of factors in estimating the admission rates to secure beds. These include variables such as age and sex; significant correlations have been found with deprivation and population density (i.e., rates of admission to forensic psychiatric services are higher in urban deprived areas). Some UK research suggests that the availability of low-secure facilities in local areas also influences admission rates. The evidence also suggests that inter-country comparisons are difficult given the variance in the definition of deprivation and the differences in service provision.

It has been suggested that the requirement for RoI’s forensic psychiatric service is a 200-bed unit and that many other countries have services of this nature for populations of three to five million. This would be supplemented by acute low-secure units for populations of 350,000 or similar. Units smaller than 100 beds, on the other hand, cannot support the full range of relevant therapies and services required to support the facility.

Outcome: While predicting forensic psychiatric requirements is complex, there is information to allow for the planning of appropriate services for RoI and NI.

11.5.8 Choice of Model

Given the considerable challenges posed in the “Barriers” decision stage, and especially as the key obstacle is legislative and cannot be “worked around” by individual managers or clinicians, this is one service area that cannot realistically proceed to more detailed analysis. This is compounded by the recognition that while there may be champions who can push forward the changes needed, the pace of reform has been such that it is clearly a very difficult proposal to establish any new or changed structure in the mental health services.

We therefore recommend that this be given fresh consideration when legislative differences have been ironed out and there is evidence of a high-level commitment to strategic reform and implementation of recommendations. In the absence of these, it is unlikely that a proposal to combine the forensic psychiatric services in RoI and NI would be capable of being implemented.

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33 “Predicting admission rates to secure forensic psychiatry services”, Coid et al, Psychological Medicine 2001, 31:531-9
34 “Deprivation: Different implications for forensic psychiatric need in urban and rural areas”, O’Neill et al, Social Psychiatry and Psychiatric Epidemiology 2005, 40:551-556
35 Coid et al, op. cit.
11.6 Lessons for the prototype modelling tool

- Consider services on an all-island basis where the investment requires a critical mass that is higher than that of one or both jurisdictions to be worthwhile;

- Where barriers are significant or insurmountable at present, the process must move towards addressing those before attempting to build a model for a new service;

- In the absence of champions or evidence that they are likely to be effective, the process must address this before moving forward, otherwise valuable resources and time will be wasted developing a model for a service that cannot be realised.
12 Overall assessment

The preceding sections have highlighted a number of significant issues which need to be taken into account when the possibility of developing cross-border acute services is being considered. These issues will be built into the prototype modelling tool which will be presented in Part IV of this document. In developing the tool, the following learning messages from our preceding analysis (Sections 5 – 11 inclusive) will be taken into account:

- qualitative factors within the planning toolkit are of primary importance, and will act as the starting point for any later qualitative analysis involving the use of modelling data;
- the planning toolkit needs an initial qualitative assessment of why any proposed project could or should be considered suitable for development on a cross-border basis;
- the methodology must also include the ability to analyse quantitative demand data, where this is appropriate, available and relevant;
- the selection of comparative data is an important step in the planning process, as it will enable assessment of projected demand and will help to inform the design of service delivery structures;
- the use of existing projects as exemplars, or models for future development and expansion of services, should be closely considered, particularly where there are successful examples available through CAWT and other bodies;
- there is a clear need to use qualitative data so that it can be comparable and informative in the right ways;
- it is essential to consider whether effective champions exist who can drive cross-border projects to a successful conclusion;
- in some instances, the development of services on cross-border basis may not be justifiable, or maybe very difficult to analyse objectively, for example where the data is incomplete, or where there are external influences on the capacity to deliver a cross-border project successfully;
- financial constraints, and the affordability of any given cross-border venture, must be clearly considered as part of the planning and feasibility process;
- where barriers are significant or insurmountable at present, the process must move towards addressing those barriers before attempting to build a model for a new service;
- in the absence of champions or evidence of their likely effectiveness, the planning process should consider how this input might best be provided, as failure to secure an appropriate champion will significantly compromise the ability of the project to be a success;
- the consideration of highly specialised services on an all-island basis is worthwhile where the level of investment requires a critical mass that cannot be individually justified within a single jurisdiction.
These design factors will be taken into account within our description of the proposed prototype planning methodology in Part IV of this document.

Before that, however, we move on in Part III to look at a more visionary style of thinking which involves consideration of what hospital and health care planning would be like if the border was not a relevant factor.
PART III
13 Vision for 2030

13.1 Imagining the context

During our discussions with CCBS, we were asked to adopt a more visionary approach, and to consider what acute hospital planning would be like in Ireland, and how it might work in practice, if there were no jurisdictional frontiers, or if the border was simply not relevant in terms of healthcare planning and delivery.

This is, of course, rather different from much of the focus of our analysis as presented in the earlier sections of this report, which necessarily consider the current practicalities, barriers and facilitators to change: a more forward-seeking and visionary exercise, which aims to imagine what conditions might prevail in just under 20 years time, can operate without the shackles of current restrictions, and can suggest some ideas which might become useful food for thought and discussion now, with the capacity to prompt future changes in thinking, policy, planning and practice.

For the purpose of this exercise, we assume that some form of separation between the service commissioner role (inc. planning) and service providers will continue to apply in 2030. Under this scenario, the respective Central Government departments would be responsible for the formulation and enactment of health policy, and would hold ultimate responsibility for the commissioning of health and social care services, either directly or through an executive agency such as the current Health and Social Care Board in NI. The delivery of healthcare services would be carried out by organisations tasked specifically with this responsibility, for example acute hospitals within the public or private system, nursing homes, GP practices, etc. Service providers would be expected to operate in a businesslike fashion and to ensure that clinical quality and patient satisfaction remain a high level, whilst also managing their resources efficiently.

It would also be necessary to assume that all political obstacles would be removed within this scenario, and that there would be both political and public acceptance that services could be provided on a cross-border basis to a greater extent than at present. Anecdotally, we understand from CAWT that there is a (perhaps surprisingly) high degree of preparedness within the general public to access services on the other side of the Irish border, if that means quicker access, reduced waiting times and a higher level of clinical care. We therefore assume that this level of preparedness continues to apply or perhaps even increases, and that there is a general acceptance within the public that patients from one side of the border may be routinely booked to receive treatment in a hospital within the other jurisdiction.

(Until now, it would appear that some politicians tend to associate cross-border healthcare delivery with broader constitutional issues; there would also appear to be some degree of parochialism within the thinking of certain politicians and other stakeholders, whose primary interest appears to be the protection of services within their own jurisdiction or locality, with no wider thought being given to the affordability of services replicated across the border.)

We also assume that there are no financial or resource-related impediments to the provision of services on a cross-border basis, and that a mechanism exists whereby the money follows the patient, irrespective of whether the broader health system providing the service is publicly funded, or is funded by some form of universal health insurance scheme, or is resourced by other means.
Finally, our assumptions must include a clear expectation that the nature of the service delivery system will have changed quite significantly by 2030, and that a model similar to that advocated by McKinsey in its 2010 report to the Health and Social Care Board in NI has been adopted, with very similar arrangements pertaining in RoI (in line with many of the system design characteristics outlined by Horwath Consulting Ireland in its reports into the reconfiguration of acute healthcare in HSE Midwest and HSE South in 2007 and 2008 respectively37). This type of service configuration, in both NI and RoI, would typically entail:

- A smaller number of acute hospitals, offering the full range of inpatient acute medical and surgical services, A&E, ICU/high dependency care, diagnostics, and other services;
- A network of smaller local hospitals/care centres, providing local access to urgent care services (but not including major trauma), day procedures, local diagnostic services, outpatient clinics, etc;
- Integrated care centres that support multi-disciplinary team working across primary, community and social care, also offering some urgent care services, diagnostics, assessments and access to outpatient services;
- Ambulance (road and air) and patient transportation services that support the new service configuration, including the capacity to stabilise trauma patients at the scene of an accident, prior to their removal to the acute hospital;
- Reconfigured mental health and learning disabilities services that provide greater care in the community, using a reduced number of inpatient locations.

13.2 What would acute service planning be like if the border was not a relevant factor?

13.2.1 Planning at Service Level

Against the backdrop of the assumptions which we have set out above, we would expect that acute health service planning in 2030 would continue to be complex and to require the involvement of a range of stakeholders and professionals, not dissimilar to the current arrangements.

At the level of individual clinical specialties or sub-specialty services, we would anticipate that many of the components which are currently seen within the CAWT arrangements would continue to operate, and that the service planning process would be broadly comparable to that which has operated in the development of ENT services in the North West, for example, or (at a higher level of investment) in the case of planning the delivery of radiation oncology services in Altnagelvin Hospital in Derry.

37 The report into acute service reconfiguration in HSE Mid-West was published in 2007 and is available for download at: http://www.hse.ie/eng/services/Publications/services/Hospitals/Review_of_Acute_Hospital_Services_in_the_Mid-West.pdf
The report into acute service reconfiguration in HSE South was published in 2008 and is available for download at: http://www.lenuis.ie/hse/handle/10147/70013
Other components of the planning process that would apply at specialty or subspecialty level would typically include the following:

- **Local expectations.** Service Commissioners will often be open to suggestions from local communities regarding the strengthening of service provision arrangements, including the establishment of new services in existing locations. Local pressure may be brought to bear as a result of perceived gaps in service provision or difficulties in accessing clinical services, and this may create the impetus for planners to look at the potential costs and benefits involved in establishing new services or strengthening existing arrangements.

- **Political input** may also have a bearing on the preparedness of service planners to look at new opportunities, and the involvement of local political representatives, and indeed other advocates or campaigners, may act as a focal point in mobilising demands within the community and initiating dialogue with service planners and commissioners.

- **Assessment of clinical need and current service provision.** Service planners will typically want to assess objectively the nature and means of current service provision, in order to determine whether any perceived gaps are of such magnitude that significant change and investment may be required. This may involve independent expert review of current services and comparison against international best practice, covering the full range of factors which may be seen to have an influence on future decisions, including the level and cost of resources deployed, the nature and level of involvement by clinical professionals, the location of services, relationships with other relevant clinical activities, clinical outcomes achieved, and any other pertinent factor relevant to the analysis.

- **Workforce.** Central to any consideration of proposed new clinical service developments will be an objective assessment of the capacity of the clinical and professional workforce to support proposed activity levels. This involves the need to conduct a review of the existing medical, nursing, and allied health professionals workforce relevant to the specialty or subspecialty involved, and consideration of whether the level of skill and professional experience within these clinical teams is capable of meeting any demands for new service development. It would be critical to ensure that the requisite clinical skill sets and adequate staff numbers are in place before any new service development can begin, in order that the clinical activity involved is professionally sustainable and that its delivery mechanisms are in line with benchmarks for clinical safety and best practice.

- **Public health considerations.** At some stage in the planning process, there will be a requirement for public health professionals to become involved in assessing population health needs, particularly where there may be a requirement for additional investment and/or for changes in service delivery configurations. Public health staff may undertake a formalised needs assessment, involving a comprehensive analysis of the existing health needs of the population with regard to the clinical specialty or subspecialty involved, and wider examination of other epidemiological and demographic issues which will have a bearing on future needs.

- **Health economics.** Depending upon the scale of the investment which may be required, it may be necessary for health economists to become involved in analysing the costs and benefits of any proposed changes or new service developments, and assisting the decision-making process with a robust analysis of the broader issues of cost, economics and affordability of planned services.
• **Business case.** In both jurisdictions, proposed investments in new or changed healthcare services will generally require a formalised business case to be produced, which sets out the costs and benefits (both quantitative and qualitative) of each option under review, and produces a reasoned analysis and recommendations for planners and policymakers to consider.

• **Location analysis.** Given the changing configurations of healthcare services and the increasing focus on clinical teams being mobile and capable of supporting the health needs of local populations in more than one hospital setting, it is important to consider the means by which services can be made optimally accessible to patient and client groups. This may require analysis of spatial factors, demographics, transportation, and other pertinent factors relevant to the individual clinical specialty.

In many respects, the planning components which we have outlined above are not very different from the current arrangements which CAWT operates when services are being considered for possible development on a cross-border basis. At a practical level, this is already involving managers and clinicians from both sides of the border working together in project teams to assess how services can be more effectively planned and delivered, and taking these initiatives forward in a manner similar to what has already happened within ENT services in the north-west.

Although the activities which we have described above are in many cases quite complex, there is already an acquired level of knowledge and experience within both the NI and RoI health systems in respect of going through these various stages, and successfully delivering real results at the end of the process. If we assume that the border ceases to be a significant factor in respect of the planning process, it does nonetheless need to be borne in mind that some of the above components may be slightly more complex to conduct on a cross-border basis than they would be in a single jurisdiction. For example, health economics involves not just analysing the intrinsic costs and benefits of the project, but also the wider societal benefits, expressed for example through Quality-of-Life Years (QALYs), which aim to put an economic value on the life of an individual (e.g. economic activity arising from prolonging of life through surgery not previously available, etc). Although not impossible, this is slightly more challenging to do when the societal benefits of two jurisdictions are being considered, and it may be an area where some further attention is required in terms of building suitable methodologies and case studies.

**13.2.2 Planning at the Hospital / Population Level**

We now turn to consideration of what the planning process might look like if a new hospital were being considered within the border region, rather than the development or strengthening of individual specialties.

For example, if population growth on the eastern seaboard were to result in a situation (at some point) whereby the existing healthcare facilities were no longer capable of meeting the acute care needs of the population, and where the existing hospital buildings in those locations
had reached the end of their serviceable lives, it may be necessary at that point to consider the construction of a new, large acute general hospital capable of meeting the needs of the populations of County Louth, East Monaghan, parts of East Cavan, South Down and South Armagh. As may be observed in the adjoining diagram, the present configuration involves major acute hospitals (plotted in red) located in Drogheda, Cavan, and Newry, with smaller local hospitals (plotted in blue) located in Monaghan and Dundalk.

If we consider the current population of the local authority areas within this part of the border region, we can speculate what the catchment population might be for an acute general hospital located (for example) on the border, adjacent to the M1 motorway and approximately one hour from both Dublin and Belfast. (We have plotted such a hospital in red on the adjoining map.)

Such a hospital would attract a resident patient population consisting of at least 250,000, if we include the full populations of County Louth and the Newry and Mourne District Council Area, plus half of Monaghan, half of Armagh, and small numbers from adjoining local authority areas such as Banbridge, Down, Cavan and Meath. Although we have not conducted any spatial analysis – this is, after all a speculative exercise which assumes future population growth – it is quite probable that the catchment population for such a hospital could exceed 350,000, providing it with a high degree of clinical sustainability across many of the major specialties, and making it economically justifiable.

The establishment of a new, high-tech hospital of this nature would represent a very exciting challenge and would be a highly innovative endeavour within the ongoing development of healthcare services in Ireland. By creating a border-based acute hospital designed to serve equally the populations on both sides of the border, the new institution would develop a level of critical mass which would not just ensure its future sustainability, but would also have the capacity to attract some of the best and brightest clinicians practising in Ireland (which smaller acute hospitals cannot do), through the establishment of academic links and the creation of centres of excellence in various clinical areas within the new hospital.

That is not to say that such a venture would not been without controversy, as local interests would inevitably dictate that the selection of a preferred location would become highly politicised and subject to much public debate and analysis (as has been seen in recent years with plans for the establishment of a new North-East hospital in Navan, and the selection of the Mater Hospital site in Dublin for the development of the new National Paediatric Hospital).

Many of the other planning components which we have outlined above in Section 13.2.1 would be equally relevant in the planning of a major new hospital involving a significant level of capital investment, and would also involve very significant political and inter-Governmental engagement, both nationally and at European level.
Consideration of a venture of this nature does, admittedly, involve much “blue skies” thinking, and in the current economic climate affecting both NI and RoI it is probably unlikely that any major new hospitals (other than the planned National Paediatric Hospital in Dublin) will be built in the next 10 to 15 years. Nonetheless, it is worth bearing this type of proposition in mind as something which might be achievable in years to come, given sufficient political will and determination to think innovatively, and to consider the wider costs and benefits on a cross-border basis, rather than simply within a single jurisdiction.
PART IV
14 Development of the planning methodology

14.1 Overview

As discussed in Section 5, the planning methodology or modelling framework has been developed over the course of the study, with input from stakeholder consultation, seminars and conferences, the specific learning outcomes from examining the exemplar service areas, and the data modelling Excel tool all contributing to the development of a holistic process for considering cross-border acute hospital services.

Part II has already illustrated the application of the modelling framework to five sample service areas, with the Excel data modelling being applied in two service areas.

The complex diagram overleaf illustrates the framework, and the pages following the graphic describe each aspect in detail. A brief overview is as follows (this was also presented in Section 5 as an introduction to the modelling of the exemplar service areas):

The process commences with an initial assessment of the key issue and whether a cross-border approach can address it. The question to be asked is “Why consider this cross-border?”

The decision cycle follows: a set of three key areas in which questions must be asked and decisions taken regarding the ability of the modelling process to move forward to the next phase. The decision elements are:

- **Benefits** – for a project to be feasible, there must be potential benefits (clinical, economic, patient-related, etc) in its implementation;

- **Barriers** – there must not be insurmountable barriers (e.g. regulatory, legislative, financial, etc) to the development of a project;

- **Champions** – there must be “champions”: key personnel with the capability, willingness, and authority to drive forward the initiative.

If these key decisions suggest that a project has merit in being modelled further, we proceed to the next phase of the process. The first element here is to select benchmarks or comparator information to ensure that a service model has a basis for its structure and a mechanism to measure outcomes against certain standards.

This is followed by more detailed analysis involving four strands of key factors, broadly grouped into quantitative (supply factors and needs analysis) and qualitative (access and service factors). The former group of elements is supported by a sample data modelling tool to look at some relevant data and compare to a selected benchmark.

The data modelling tool is an Excel-based model using in this instance (to illustrate how such tools can be used) activity data, benchmark data from another country, and bed utilisation figures to generate some expected resource requirements in terms of beds for a project to address the needs of the population. This is used for the orthopaedic and ENT surgery exemplar services and is discussed in detail in Part IV. As mentioned previously, this Excel tool is considered to be a small subset of the inputs required to build a model for a cross-border service and is not intended to be a stand-alone modelling tool.
14.2 The modelling methodology diagram

**Initial Assessment**
Why consider the service cross-border?

- **Benefits**
  - Is there clinical benefit in sharing capacity to boost volumes?
  - Would cross-border provision make service more resilient?
  - Is there potential to save costs?

- **Barriers**
  - Is there any factor likely to seriously disrupt or prevent an effective cross-border service, which cannot be overcome?

- **Champions**
  - Do leaders exist with sufficient collective mandate to commit to and champion a joint initiative?
  - Can political, managerial and clinical leaders be persuaded to champion creation of a mandate?

**Supply Factors**

- Critical mass requirements for safe treatment
- Physical infrastructure and resource requirements
- Proximity of relevant supporting clinical services
- Service appropriate to local provision
- Ability of patients to access similar services nearby
- Infrastructure of road and public transport options
- Travel requirements and willingness to travel

**Need Analysis**

- Population of relevant catchment
- Incidence/prevalence statistics
- Population health factors
- Actual patient numbers in relevant services

**Service**

- Service quality
- Outcomes

**Access**

- Use sample data modelling tool where applicable

**Choice of model**

- Identification or catchment area for clinical services
- Waiting lists for diagnosis and treatment

**Select Benchmarks**

- Resources available to deliver treatment
- Use sample data modelling tool where applicable

**Quantitative analysis**

- Waiting lists for diagnosis and treatment

**Decision**

- Reconsider assessment: what needs to change to address barriers?
- Can suitable or relevant benchmarks or models be found in other services areas other places?

**Reconsider assessment**

- Is there any factor likely to seriously disrupt or prevent an effective cross-border service, which cannot be overcome?

- Do leaders exist with sufficient collective mandate to commit to and champion a joint initiative?
- Can political, managerial and clinical leaders be persuaded to champion creation of a mandate?

- Reconsider assessment: can champions be found or developed?

- Reconsider assessment: what needs to change to address barriers?
14.3 Using the modelling methodology

14.3.1 Overview

The modelling process we have developed looks complex but is in fact designed to simplify and formalise the process of developing cross-border acute services by providing a framework and methodology to work through the various aspects and issues arising.

14.3.2 Initial Assessment – Why Consider This Cross-Border?

The first step we suggest in the process of considering a cross-border project in detail is a high-level assessment of the drivers for the proposed collaboration. The key question here is why consider this on a cross-border basis? What is the underlying idea? What has prompted the proposal to establish a joint service?

This short and sharp assessment is designed to weed out any obviously inappropriate projects and focus the bulk of the modelling process on those with a better foundation and consequent chance of success.

14.3.3 Benefits

One of the most pressing challenges when exploring cross-border provision is to align the expectations of all parties to ensure that success will be defined in similar terms for each partner. The identified benefits will fall into a number of different categories.

Examples of benefits

The most obvious benefit arises when there is a potential shortage of capacity on one side of the border matched by excess capacity on the other. Joint working may provide a permanent solution, or provide transitional arrangements whilst new capacity is developed. In a variant of this theme, both sides could have a shortage, with joint development of a service providing a more efficient and effective way of boosting overall capacity.

Providing resilience and flexibility is a crucial part of any service design, and the opportunity to improve provision extends much wider than simply providing a common or integrated service. Individual service models in each country can still be improved through joint agreements on knowledge sharing, exchanges, and providing mutual cover when circumstances demand.

This mutual convenience might begin to be developed around specific aspects of service, such as joint research programmes, where access to trial subjects is invariably a challenge, or shared training opportunities. The benefits need not be constrained to direct service delivery.

Another family of obvious benefits arises from issues of economy of scale, where there are potential cost savings from joint working (though there may also be cost increases associated with the additional infrastructure requirements of operating within two different regimes). These cost savings may come simply from improved buying power for commodity items, driving down prices, or may come from the inherent efficiencies of amortising fixed costs across a greater volume of activity.

Benefits can also accrue if there is a need to create or defend sustainable services where one jurisdiction or the other, or indeed both, does not have the critical mass to ensure safety and optimal clinical outcomes. If a joint approach, either regional or national, can maintain a service that meets
the needs of the patients without compromising clinical safety, there are evident benefits to patients and to the health services.

**Benefits to different stakeholders**

In assessing whether there are benefits accruing from a collaborative approach, it is important to align the expectations of all parties. Whilst this does not mean that all stakeholders must want the same thing – projects can benefit different stakeholders in different ways – it does mean that the definition of success for each must be explored, and that a vision for how the project can achieve success is one to which all can subscribe.

**What if the benefits are not evident?**

In the decision cycle, at various stages the outcome of the assessment may be negative. It may be that the perceived benefits are not achievable once some initial assessments are undertaken, or that the benefits to one party are at too great an expense to the other.

This does not necessarily entail calling off the entire initiative. What needs to happen at this juncture is a re-assessment of what might need to change in order for a benefit to accrue from joint working:

- Could this be done another way?
- Expanded to a larger area?
- Reduced to a smaller one for piloting?
- Merged with another project?
- Might there be a spin-off that could work instead?

**14.3.4 Barriers**

As we have explored in the preceding chapters of this report, there are inhibitors which prevent the potential benefits from being achieved. These inhibitors cover a mix of genuine barriers which will reduce the scale of benefits, and perceived barriers, where the anticipation of problems is often exaggerated – whether a barrier is “real” or “perceived” can be entirely dependent on the project and stakeholders involved: what is a real stumbling block to one project might be easily overcome on another.

On occasion, barriers may require more expensive or complicated workarounds to overcome than the potential benefits available, and on other occasions, the perceived barrier may be entirely caused by issues as simple as differences in semantics.

In addressing this stage of the checklist, it will be important to engage in greater depth with a number of stakeholders, to work through and define the scope, the aims and some detail of the proposition to reach a mutual understanding and create shared expectations.

Once the problem is fully and clearly defined and a shared understanding has been created, it will be much easier to differentiate between real and perceived barriers. This is the starting point for exploring strategies to reduce the impact of any barriers and inhibitors, and assess whether these indicate that progress will be possible or not.
What if the barriers appear significant or insurmountable?

Again, we do not suggest that the presence of an obstacle or obstacles that appear difficult or impossible to overcome should derail a collaborative process entirely. This should, instead, prompt more questions:

- What is the key issue?
- What needs to change in order to address the problem?
- Who needs to address it?

If these questions can be answered and a pathway found to deal with the specific issue, then it may be simply a question of deferring the project or dealing with as many other aspects of it as possible while awaiting a resolution of the particular barrier.

14.3.5 Champions

One of the keys to unlocking these barriers will be the extent to which there is a genuine mandate to proceed, and whether there is a sufficiently small group of people (potentially one champion from each jurisdiction) who have the freedom and accountability to make meaningful decisions which commit the necessary resources, and drive the necessary changes and agreements, be they in policy, clinical design, or within the financial/legal/regulatory operational frameworks.

As the report from the first strand indicated, community involvement in hospital planning is a vital part of the process, and establishing the support of the public in the catchment area and on a wider scale is part of the “champion” aspect of the process. Attempting to move forward a proposed project in the absence of a clear mandate from the local and wider community will be problematic in the least and pose significant barriers at worst.

Our review to date has shown the potential for successful improvement in both the quality and experience of care services where there is leadership and commitment at political, managerial and/or clinical level, where those committed champions collectively hold sufficient jurisdiction to create a mandate.

For specific local services, where greatest success has been achieved, this mandate may require nothing beyond an operational decision between peer groups. Where major investment or policy decisions are required, such a mandate will increasingly cross over into the territory where differences in approach (either perceived or real) can become increasingly significant barriers. Our review has also exposed the ease with which initiatives with potential to deliver considerable benefits can be suppressed in the absence of a champion.

Key ingredients in reducing these risks include the scope and scale of change, levels of confidence in the ability to achieve the claimed benefits, and the support of those who do ultimately make the decisions. Schemes which begin small in scale, gathering credibility and momentum as they evolve and grow, are much more likely to succeed than those which propose radical change with dramatic impact (and significant risks). Even where strong champions exist, approaches which begin on a small scale, demonstrate real benefit, and then build on experience and learning to up-scale rapidly are more likely to command widespread support and effective engagement in the roll-out processes.
Ultimately, the most important influence must come from within the community itself, especially in a service which is increasingly expected to be driven from perspective of patient/carer, with a strong emphasis on the “customer service” aspects of care. It is rare for such community groups to have direct control of the necessary levers which govern the extent of the mandate which can be created. The direct levers are generally divided between the political, clinical, and managerial leaders, each one of whom has the duty to consult and consider the wishes of the community. We therefore suggest that the ideal model for creating the mandate to proceed harnesses the power of the community to drive the clinical, political and management leaders to a common purpose, as shown in the figure above.

The community aspect has been demonstrated to be important in the first strand of this study, the role of community involvement in the planning of hospital services, and as mentioned above it is within the “Champions” element that it is crucial to find community support in the first decision-cycle phase of the process.

**What if champions cannot be found?**

As with previous key decision-cycle questions, the absence of defined champions, whilst a significant difficulty, need not spell the end of the line for a project. Again, this is a cue to ask whether champions can be developed to drive the process forward. The role of CAWT, for example, in supporting the development of and managing cross-border projects, can act as a champion and help to promote other champions within the system on either side of the border.

### 14.3.6 Select Benchmarks

By this point in the decision cycle, a number of key milestones have been reached: the proposed project has been identified as having the potential to deliver benefits; any barriers have been considered as capable of resolution; and champions have been identified to drive the process forward. It now becomes important to consider how to measure the project against some standards or benchmarks to ensure that firstly it is in line with good practice, and secondly that there is a way of measuring the success of the initiative.
Benchmarks may come from external sources such as international evidence and research, or from internal sources such as existing practice, or similar projects in other service areas or geographic areas. They may be from other countries, or within NI or RoI.

Selecting a comparator or benchmark, or as is likely with some projects, a number of them, may serve a number of purposes. Outcomes from another project or programme can indicate the kind of benefit that could be anticipated from implementing such an initiative here. Clinical evidence and research may be the driver for change in the service design from the perspective of patient safety and outcomes. Specific standards can be used to demonstrate both why things need to change and how the project in question can help to achieve that change. Additionally, a benchmark allows for the progress and outcomes of the project to be measured against the aims and objectives of the original proposal.

### 14.3.7 Choice of Model

Once the aims and scope are clear, the barriers identified, suitable strategies in place to reduce their impact, mandate created with the backing of key champions and the necessary community support, and some input from comparator and/or benchmark data has been selected, then the choice of service model becomes the dominant focus. This stage will explore not only the type of partnership from both patient and provider perspectives, but will also seek to agree the practical issues such as locations, catchment areas, and design issues such as the balance between in-reach and outreach of services.

Feeding into the choice of model will be a number of factors. We must reiterate that this is a process that involves significant judgement to be brought to bear at all stages. Qualitative assessment of the various factors throughout the process is crucial. Whilst for some clinical areas, with sufficient data, some statistical modelling can be done as part of the methodology, as demonstrated in the orthopaedic and ENT exemplar services, this is a small piece of the overall design and can only fit into a holistic fully-considered process.

The factors that feed into the modelling decisions should be seen as generating questions to be asked rather than providing answers. Going through the process will aid decision-making but will not replace it.

#### Quantitative factors influencing the choice of model

<table>
<thead>
<tr>
<th>Supply Factors</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Resources</strong></td>
<td>This requires an assessment of the resources available, including staff, clinical skills, beds, equipment, technology, drugs, etc.</td>
</tr>
<tr>
<td><strong>Critical Mass</strong></td>
<td>What is the critical mass for the service area? Is there a minimum number of cases to sustain a safe and optimal service? How many clinicians are required? This often relates to the benchmarking or comparator selection.</td>
</tr>
<tr>
<td><strong>Infrastructure</strong></td>
<td>What physical infrastructure is available? Do the units in question have the right structure to support the service as proposed? Are the theatres, for example, at the appropriate level for conducting the procedures?</td>
</tr>
<tr>
<td><strong>Supporting services</strong></td>
<td>What supporting services are required? For example, to deliver a particular service, does the hospital need an ICU? 24-hour trauma cover? Paediatric support? Does it need specific co-located service areas? How close does it need to be to related services?</td>
</tr>
</tbody>
</table>
By assembling a picture of what is available and/or what is required to provide the proposed service, decisions can be made about how to configure the cross-border service. For example, it may indicate that one location provides a better option than using two, or conversely that a service can be delivered in a location that currently does not provide it, such as establishing day-case surgical procedures in a hospital without ICU beds.

### Needs Analysis

<table>
<thead>
<tr>
<th>Category</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catchment</td>
<td>What area is intended to be served by the service?</td>
</tr>
<tr>
<td>Population</td>
<td>What is the population of the catchment area?</td>
</tr>
<tr>
<td>Incidence</td>
<td>How many cases can be expected to occur in the given population? (This can often refer to comparator and benchmark information.)</td>
</tr>
<tr>
<td>Population Health</td>
<td>Are there specific factors that influence the numbers presenting with a particular condition? (E.g. the genetic factors in cystic fibrosis.)</td>
</tr>
<tr>
<td>Patient Numbers</td>
<td>How many patients are currently being treated in the service as it stands? How does this break down between different categories? (E.g. elective versus emergency cases; day case versus inpatient cases; different procedures within the specialty, etc.) Does this correspond with the expected incidence? What can explain the difference?</td>
</tr>
<tr>
<td>Waiting Lists</td>
<td>Are there waiting lists for the service in question? How many people are awaiting treatment? For how long? How many are awaiting outpatient appointments pre-diagnosis? How many have been referred for treatment? Are they awaiting a day-case or inpatient procedure? Are there factors such as clinical decisions impacting on waiting lists?</td>
</tr>
</tbody>
</table>

It is essential to collate as much information as possible on the need for the service and the expected activity levels. Not only can a needs analysis underpin strongly the case for a cross-border project, but it is a planning tool to assess how much of the need the project can address and how many cases it can treat. A needs analysis can indicate where there is significant unmet demand; can suggest a level of latent demand; can illustrate capacity issues; and flag future increases or decreases in demand – all vital to planning a service that will be resilient, flexible, and capable of meeting the real needs of the population.

We have developed an Excel data modelling tool (see below) to take some of these supply and demand factors, such as ratio of day-case procedures, length of stay, and bed requirements, compare them to a benchmark set of data, and assess the impact on bed capacity and patient numbers arising from an initiative to address the demand. This is explained in further detail below.
Qualitative factors influencing model choice

<table>
<thead>
<tr>
<th>Access</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriate for local provision</td>
<td>An assessment of whether a service is appropriate to be delivered in the suggested locations, i.e. whether it requires to be centralised in tertiary centres or requires specific resources unavailable locally</td>
</tr>
<tr>
<td>Ability to access similar services</td>
<td>Can patients access similar services or have their needs met within a certain radius of the proposed sites?</td>
</tr>
<tr>
<td>Transport infrastructure</td>
<td>How can patients access the proposed service and the alternatives? Are there good road and transport links? What is the travel time? Is travel time critical to the delivery of appropriate care? Are there traditional or natural pathways in terms of regular travel for other purposes, such as work or shopping?</td>
</tr>
<tr>
<td>Willingness to travel</td>
<td>Are patients willing to travel to receive the service, or to access a higher quality of service or better outcomes? Is there a history of travelling to access services? Are there specific factors influencing willingness to travel?</td>
</tr>
</tbody>
</table>

The issue of access is obviously one that drives many border-region projects, not just on the island of Ireland but in many other countries. Many border regions are at a considerable distance from the main centres of population and centralised services. Cross-border initiatives are often founded on the concept of providing access to those living in border regions to healthcare services that they would otherwise have to travel further to access in their own jurisdictions.

These factors are therefore important to feed into the decisions in relation to the configuration of the service and the location(s) of the delivery of care. However, it should be noted that anecdotally, travel time is less of an issue for many services than, for example, timely access and quality considerations. Patients are willing to travel if they can access treatment sooner rather than waiting for longer periods to be treated locally. They are also willing to travel to access services with high quality and good clinical outcomes.

Travel times become more of an issue in relation to emergency care, where accessing appropriate care is critical within a short time, and in relation to long-term repeated treatment such as cancer chemotherapy, where patients who have to travel long-distances find it impacting significantly on their quality of life and where families can also find it difficult to provide support.

Access factors featured significantly in the concerns of patients in the first strand of the study, the role of community involvement in planning hospital services. Patients were angry when services were perceived to have been taken away from local areas and were concerned about the potential risks in increased travel times. These concerns must be factored into access issues in the consideration of the location of cross-border services.
The service factors relate to quality and experience. Any new service or collaborative project will need to take into account the patient experience and outcomes, and should aim to develop and design a service that not only meets the needs of the patients in terms of access to care but also in terms of providing a higher quality of care with better outcomes than the previous structure. For example, developing an all-island specialised tertiary service might increase travel time for many patients, but it might also reduce risk and improve outcomes, whilst also enhancing care, thus improving the patient experience overall.

The service factors also align closely to the first strand of this study, the role of community involvement in planning hospital services. Patient perceptions of the quality of care and the experience of accessing cross-border services are important factors in assessing the suitability of any proposed model of service delivery. Quality of care is highlighted as a key consideration in the community involvement strand of the research, with the public having concerns regarding the quality of care, especially in the situations where healthcare services are reconfigured.

### 14.3.8 Excel Data Modelling Tool

The project team has built a sample data modelling tool to illustrate the ways in which quantitative data can typically be combined with benchmark information to suggest potential models for cross-border services. This Excel tool is part of the overall modelling process and forms a key element where specific data analysis is required to inform the modelling, and where reliable and standardised quantitative data is available.

Whilst the Excel data modelling tool is a useful aide to the overall modelling process, we emphasise that this does not constitute the modelling methodology in itself and consider it a relatively small component of the wider framework. We have used it in two of the exemplar service areas, i.e. orthopaedic surgery and ENT, where data modelling was a useful aspect of the methodology to inform the overall decision-assisting process. It is not intended to be used in isolation as the quantitative aspects of the modelling of cross-border services cannot be considered separately to the qualitative in a holistic fashion.

It should also be noted that this tool has been built to examine bed requirements purely as an example and it can be adapted and modified to look at other key data elements for different service areas using the same principles. For example, it could be adapted to examine the impact of new cross-border services on theatre session requirements or staffing, if the relevant current and target metrics were known.
The following screenshots illustrate the working of the model, using the data from the orthopaedic surgery exemplar service (see Section 7 in Part II of this report). We also used this to examine some figures in respect of ENT earlier in the report.

**Activity data**

The model starts by collecting the relevant data for the specific activity in the service area under examination. In this example, the first sheet looks at the NI data for orthopaedic surgery in the north-west, including details on elective, emergency, and day-case numbers and the lengths of stay. The same data is collected for RoI in the next sheet.

![Activity data screenshot](image)

**Benchmark data**

Following this, a suitable set of benchmark or comparator data is selected, in this case activity in orthopaedic surgery in England, using the same breakdown as that for NI and RoI.

![Benchmark data screenshot](image)
Using benchmark data to estimate demand and compare to activity levels

For each jurisdiction, the model then looks at what one would expect to see in terms of activity if the same activity levels as the benchmark were to apply in population terms.
This analysis starts to demonstrate where there are gaps in the current service provision by identifying discrepancies between what we would expect the need to be in a population of the size in question and what is actually being provided in the hospitals.

In this instance, it also shows up a lower day-case rate in NI and RoI by comparison with England’s overall rates. This is the kind of information that can help when looking at innovative and less costly ways to address demand.

**Calculating bed-days**

Using the information regarding length of stay and the activity levels, we can calculate the bed requirements to provide additional capacity to the service. By allowing the user to specify whether the model should look at existing lengths of stay and day-case percentages as the guideline, or to move towards shorter lengths of stay and higher day-case rates, the bed requirements and activity levels can be calculated. In addition, there is an option to address only part of the unmet demand in the system.

Using this method, one can choose to shorten the length of stay, increase the day-case percentage, and address 100% of the unmet demand, or can estimate what requirements would arise if one were to go half-way towards these options.
### Republic of Ireland Beddays

Assumes LoS for DC of: 0.5

<table>
<thead>
<tr>
<th>Type of admission</th>
<th>Total beddays</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day case</td>
<td>497</td>
</tr>
<tr>
<td>Inpatient admission</td>
<td>7,503</td>
</tr>
<tr>
<td>Non-elective</td>
<td>6,311</td>
</tr>
<tr>
<td>Overall</td>
<td>14,310</td>
</tr>
</tbody>
</table>

#### Scenarios

<table>
<thead>
<tr>
<th>LoS inpatient</th>
<th>LoS non-elect DC %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
<td>5.67</td>
</tr>
<tr>
<td>Benchmark</td>
<td>3.25</td>
</tr>
<tr>
<td>Proposed</td>
<td>3.25</td>
</tr>
<tr>
<td>Applied</td>
<td>3.25</td>
</tr>
</tbody>
</table>

*Benchmark data selected unless proposed contains info*

% of unmet demand met: 100%

#### Proposed

<table>
<thead>
<tr>
<th>Type of admission</th>
<th>Current beddays</th>
<th>Proposed beddays</th>
<th>Change in beddays requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day case</td>
<td>497</td>
<td>1,337</td>
<td>841</td>
</tr>
<tr>
<td>Inpatient admission</td>
<td>7,503</td>
<td>7,734</td>
<td>231</td>
</tr>
<tr>
<td>Non-elective</td>
<td>6,311</td>
<td>9,410</td>
<td>3,099</td>
</tr>
<tr>
<td>Overall</td>
<td>14,310</td>
<td>18,481</td>
<td>4,171</td>
</tr>
</tbody>
</table>
Putting it all together

The tool then combines the findings from analysing the NI and RoI data to generate an overall assessment of bed requirements and activity rates should there be an increase in service provision to meet the demand in the system.

What this can tell us

Whilst this is a specific example, based on some assumptions, it can be expanded and used in more detail and more capacity variables could be factored in (such as theatre sessions) once a comparator or target can be identified.

The tool is designed to prompt thinking around the current provision of a service in the relevant areas and what might be required to meet any demand that might not be met at present.

Whilst it will generate useful data for consideration and for presenting to those who might have the mandate to change the structure, it is only part of the overall process of planning new service structures and designs.
Potential to Adapt the Tool

Whilst we have opted to illustrate the Excel tool with bed data, it could be adapted to other metrics such as theatre session requirements, staffing impacts, etc, where such metrics are known and can be compared.

Access to the Excel Tool

The Excel data tool will be available to download from the Centre for Cross-Border Studies website www.crossborder.ie.
15 Opportunities arising from development of the new South West acute hospital

15.1 New South West acute hospital

The ongoing development of the new acute hospital in Enniskillen presents a significant opportunity for fresh thinking in respect of service provision on a cross-border basis. The new South West acute hospital, costing £276 million, is due to open for patients on 22 June 2012. The new hospital will be located at Wolf Lough, approximately 1 mile north of Enniskillen town, off the main A32 Enniskillen-to-Omagh Road. It will replace the existing Erne Hospital in Enniskillen town.

The new South West acute hospital will provide up to 312 inpatient and day-case beds (compared with the present bed complement of 232 inpatient beds plus 16 day-case beds at the Erne). The new hospital will deliver a wide range of services including:

- acute medicine;
- surgery (day and inpatient);
- older people services;
- paediatric services;
- critical care;
- accident and emergency services;
- imaging and diagnostics;
- consultant-led maternity services;
- outpatients;
- allied health services.

Also included in the new development is accommodation for staff and key workers at the hospital.

The Western HSC Trust, which will operate the new hospital, places great emphasis on the fact that the model of care will promote the delivery of safe, accessible, sustainable, equitable, affordable, high quality services, working in a network with other hospitals. At the core of the Trust’s new model is a focus on providing a better patient experience and improved patient outcomes, the capacity for which is to be delivered through better clinical facilities within a new, high-quality building offering 100% single-room accommodation (the first in NI).

15.2 Plans for Omagh

In addition to the new South West acute hospital in Enniskillen, Ministerial approval was granted in March 2011 for construction of an Enhanced Local Hospital in Omagh. The Omagh Hospital complex is expected to be completed within 48 months of full business case and funding approval (i.e. probably opening in 2014-15, depending on approval).

The Enhanced Local Hospital will be located on a 100-acre site within the grounds of the Tyrone and Fermanagh Hospital, approximately 1.5 miles from Omagh town centre, and will help to deliver a wide range of health and social care services on one site. This will enable integrated working among health professionals with linkages to regional and national healthcare networks. The Western HSC Trust expects that the result for the patient will be better access to a wider range of services, fewer trips to hospital, and reduced waiting times.
The business case for the new Omagh Hospital Complex includes a 90-bedded facility, incorporating a wide range of services such as:

- urgent care and treatment services;
- cardiac assessment;
- day case surgery;
- imaging and diagnostics;
- clinical investigations;
- women’s health unit;
- GP out-of-hours;
- intermediate care;
- renal services;
- palliative care;
- general outpatients;
- children’s centre;
- allied health services;
- mental health services.

15.3 Exploring future cross-border opportunities

The opening of the new South West acute hospital in mid-2012, and to a lesser extent the probable coming on stream of a new Enhanced Local Hospital in Omagh two or three years later, will present clear opportunities for the development and strengthening of acute hospital services for the benefit of patients on both sides of border.

Given that current economic circumstances in both jurisdictions dictate that it is unlikely that any major new acute hospital construction projects will be approved in the foreseeable future (other than refurbishment or modification projects in existing facilities), it is timely to consider whether developments of the type seen in Enniskillen will offer the prospect of improving access to services for those living in adjoining counties in the Republic of Ireland.

This issue is particularly pertinent given that there is increasing pressure on the HSE to manage its resources more carefully, particularly in respect of the delivery of acute hospital services. For certain specialties, particularly cancer, this has meant centralising surgical services and certain diagnostic activities within a network of eight large academic teaching hospitals, mostly located in cities, for reasons of clinical safety and sustainability. Considerable attention has also been paid to the capacity of smaller accident and emergency departments to be viable from both clinical and economic/resourcing perspectives, with 24 hour A&E services either removed or significantly downgraded in hospitals such as Monaghan, Dundalk, Roscommon and elsewhere in recent years.

In this context, it is noteworthy that the new South West acute hospital will be within reasonable proximity of a number of major population centres in the Irish Republic (by “reasonable proximity”, we mean a typical car journey of under 90 min). Included within this general potential catchment area are the following towns:
Section 15 Opportunities arising from development of the new south west acute Hospital

<table>
<thead>
<tr>
<th>Town</th>
<th>County</th>
<th>Population*</th>
<th>Travel time**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Castleblayney</td>
<td>Monaghan</td>
<td>4,612</td>
<td>1hr 25min</td>
</tr>
<tr>
<td>Monaghan Town</td>
<td>Monaghan</td>
<td>8,401</td>
<td>1hr 2min</td>
</tr>
<tr>
<td>Clones</td>
<td>Monaghan</td>
<td>3,048</td>
<td>43min</td>
</tr>
<tr>
<td>Bundoran</td>
<td>Donegal</td>
<td>2,848</td>
<td>47min</td>
</tr>
<tr>
<td>Killybegs</td>
<td>Donegal</td>
<td>2,343</td>
<td>1hr 27min</td>
</tr>
<tr>
<td>Manorhamilton</td>
<td>Leitrim</td>
<td>1,786</td>
<td>35min</td>
</tr>
<tr>
<td>Leitrim Town</td>
<td>Leitrim</td>
<td>1,122</td>
<td>1hr 21min</td>
</tr>
<tr>
<td>Carrick-on-Shannon</td>
<td>Leitrim</td>
<td>3,991</td>
<td>1hr 29min</td>
</tr>
<tr>
<td>Belturbet</td>
<td>Cavan</td>
<td>1,360</td>
<td>31min</td>
</tr>
<tr>
<td>Cootehill</td>
<td>Cavan</td>
<td>2,646</td>
<td>1hr 17min</td>
</tr>
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*Figures from the preliminary 2011 Census (CSO), inc. urban, rural and mixed electoral districts

**Information compiled using AA Route Planner (most direct route)

The above figures are within the context of the new South West Acute Hospital potentially being able to serve:

- South County Donegal (total 2011 county population as per CSO Census: 160,927);
- North & East Co. Leitrim (total 2011 county population as per CSO Census: 31,778);
- North & Mid-Co. Cavan (total 2011 county population as per CSO Census: 72,874);
- North & West Co. Monaghan (total 2011 county population as per CSO Census: 60,495);
- North Co. Sligo (total 2011 county population as per CSO Census: 65,270).

It is not unreasonable to expect that a possible catchment population of between 200,000 and 250,000 persons in the adjoining five RoI counties may be able to benefit from the services planned for the new hospital in Enniskillen.

Particular opportunities may arise in areas such as day-case surgical procedures in orthopaedics, serving patients not just in Fermanagh and Tyrone but also in the surrounding cross-border areas. (We assume that some or all of the theatres in the new hospital in Enniskillen will be configured to cater for the particular demands of orthopaedic surgery, in terms of clean air flow and temperature control.)

The new South West acute hospital can therefore have a valid and significant role to play as part of a managed clinical network which also involves the acute hospitals in Altnagelvin, Letterkenny and Sligo, and can help to increase the percentage of surgical procedures carried out on a day-case basis (currently less in Ireland than in England and Wales) and a corresponding reduction in the need for acute surgical in-patient beds.

**15.4 Further research**

Against this backdrop, we believe that further research is merited into the potential for the new South West Acute Hospital to serve a cross-border catchment area (i.e. in addition to the population of...
Fermanagh and Tyrone, its primary catchment). This research might include, for example:

- detailed modelling of existing patient flows into Enniskillen;
- assessment of transport links, journey times etc between Enniskillen and the primary population centres in Counties Monaghan, Cavan, Leitrim, Sligo and Donegal;
- more detailed analysis of the clinical specialties provided at the South West Acute Hospital (supply), and of the population health requirements on a specialty-by-specialty basis in the adjoining counties of RoI (demand);
- analysis of the supply-demand factors regarding these specialties in the acute hospitals in Sligo, Letterkenny, and Cavan, and in Monaghan General Hospital (which no longer offers inpatient acute services);
- development of forward-looking models to show how patient demand might be satisfied in future by service provision from the new South West Acute Hospital (e.g. services delivered in situ, or via clinical networks based in Enniskillen working on an outreach basis in other locations in adjoining counties);
- the factors required to enable the above to happen.
16 Conclusions

Arising from the analysis presented in this report, we reach the following conclusions:

- The two health and social care systems in NI and RoI are jurisdictionally separate entities, with each system funded to provide only for its own population and on the basis of very different eligibility systems. This inevitably produces a situation in which neither system is incentivised to plan, fund or deliver services on a cross-border basis.

- Linked with this, there is an absence of any agreed strategic framework covering both health and social care systems which might facilitate cross-border co-operation, a situation exacerbated by the apparent lack of political will to commit to cross-border co-operation on a mutually agreed agenda of work.

- Despite these restrictions and limitations at strategic and policy levels, significant work has been done to enhance cross-border collaboration in health service delivery in recent years, much of it facilitated through CAWT and local health agencies in NI and RoI. Clear benefits have been achieved, particularly in providing access to services for communities within the border region, much of it on a South-to-North basis. In most instances where such initiatives have been pursued, funding has been time-limited and services have not been mainstreamed, although it would appear that the provision of radiotherapy services at Altnagelvin Hospital for patients within Donegal and adjoining areas of RoI will shortly commence on a permanent basis.

- A number of potential barriers and inhibitors may create problems for the development of acute care and other health services on a cross-border basis. These issues include professional standards, clinical guidelines, service definitions, professional accreditation, regulatory matters, legal protection and indemnification, data standards and data transfer, and funding and finance. Not all of these factors will apply with equal weight in every instance where cross-border developments are being considered, and it is likely that some will prove quite problematic in certain circumstances (perhaps even to the point of rendering some projects incapable of proceeding). Nonetheless, our preliminary assessment is that in the majority of instances, any potential barriers in these areas should be able to be overcome, given appropriate attention and careful planning.

- In those areas where progress has been made, it is very apparent that the input of local “champions” (frequently clinicians, sometimes managers, and quite often both) has been absolutely essential in order to provide the necessary drive, direction and enthusiasm for getting things done. In many instances, this has been supported by pressure from within local communities, including patients, families, and the general public. Without such local involvement (clinical, managerial and community-based) it is highly improbable that any cross-border service development would have taken place. The same can be said regarding the facilitation provided by CAWT and the funding support available through various European channels.

- Against this backdrop, our preliminary conclusion is that there is likely to be reasonably significant scope for further development of acute hospital and other health care services on a cross-border basis. Given recent progress and the cohesion achieved across the various agencies in NI and RoI, we would expect such development work to be taken forward by CAWT, an approach which we would strongly endorse.
• At present we see this development work being more at the level of individual projects within specific specialties and subspecialties, to meet the needs of particular populations and communities around the border region where there are current problems or challenges regarding service provision, accessibility and the need for investment.

• Ideally, such development should be planned and delivered on a mainstreamed or permanent basis, rather than through time-limited projects (other than where an initiative is commenced to clear a backlog and does not need to be continued beyond a specific project lifetime).

• Given the apparent lack of political will on both sides of the border, we see little potential at present for any large-scale development of acute hospital services on a cross-border basis (such as the planning and development of a new acute hospital within the border region to serve catchment populations in both jurisdictions). That is not to say that we do not believe that such a scheme would be unjustifiable or unviable; rather, we believe that the current political and administrative climate in both jurisdictions is not geared towards proper consideration of an initiative of this nature, and that as a consequence the time is not right to give serious consideration to such a prospect.

• Notwithstanding the above, there is significant potential in the development of cross-border services based in the already-commissioned and in-build new South West Acute Hospital in Enniskillen in terms of serving the population on both sides of the border in the region. We recommend the commissioning of research into the potential for the new South West Acute Hospital to provide services to a wider cross-border catchment population.

• At a more immediate level, the prototype planning tool which has been presented in Section 15 of this report, and which is drawn from actual exemplars detailed earlier in the document, provides a real opportunity for policy-makers, service planners, managers, clinicians and other stakeholders to examine whether services might be better organised on a cross-border basis, and how this might be achieved at a practical level.

• The planning tool is presented not as a prescriptive model, or as one which is heavily driven by quantitative data. Rather, it is a decision tool which enables balanced judgements to be reached on both the qualitative issues affecting a given service, and – where available – the data which can help to determine clinical sustainability within a geographical area.

Health planning is a highly complex matter, as is consideration of the economic issues associated with health service delivery. Every clinical service has different characteristics in terms of professional skills, cross-disciplinary interworking, mortality and morbidity factors, technology, service delivery requirements, patient and carer expectations, and so on: this being the case, it is simply not possible to design a modelling tool which can fit every circumstance. Nevertheless, we hope that the work we have done in preparing this report will be of genuine assistance and provide insight to those engaged in the sensitive and complex business of health service planning within the Irish border region.
Appendix A: Persons and organisations consulted during the research phase of this study

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Organisation</th>
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<tbody>
<tr>
<td>Lorcan Birthistle</td>
<td>Chief Executive</td>
<td>Our Lady’s Children’s Hospital Crumlin</td>
</tr>
<tr>
<td>Dr Regina Buckley</td>
<td>Cancer Network Manager East</td>
<td>HSE National Cancer Control Programme</td>
</tr>
<tr>
<td>Brenda Byrne</td>
<td>Mental Health Service Improvement Co-Ordinator</td>
<td>Southern Health and Social Care Trust</td>
</tr>
<tr>
<td>Dr Patricia Clarke</td>
<td>Senior Policy Analyst</td>
<td>Health Research Board</td>
</tr>
<tr>
<td>Paula Clarke</td>
<td>Acting Assistant Director, Planning and Development</td>
<td>Southern Health and Social Care Trust</td>
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<tr>
<td></td>
<td>Director-General (from Oct 2010) Corporation Services Manager</td>
<td>Cooperation and Working Together Health Service Executive, West</td>
</tr>
<tr>
<td>John Compton</td>
<td>Chief Executive</td>
<td>Health and Social Care Board</td>
</tr>
<tr>
<td>Dr Diane Corrigan</td>
<td>Consultant in Public Health Medicine</td>
<td>Public Health Agency NI</td>
</tr>
<tr>
<td>Dr Rachael Cullivan</td>
<td>Consultant Psychiatrist, Monaghan Health Service Executive, Dublin North-East</td>
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<tr>
<td>Tom Daly</td>
<td>Director-General (from Oct 2010) Corporate Services Manager</td>
<td>Cooperation and Working Together Health Service Executive, West</td>
</tr>
<tr>
<td>Dr Paul Darragh</td>
<td>Chair of Library Committee</td>
<td>Royal College of Physicians in Ireland</td>
</tr>
<tr>
<td>Colm Donaghy38</td>
<td>Director-General (to Oct 2010) Chief Executive</td>
<td>Cooperation and Working Together Northern Health and Social Services Trust</td>
</tr>
<tr>
<td>Dr Patricia Donnelly</td>
<td>Director of Acute Services</td>
<td>Belfast Health and Social Care Trust</td>
</tr>
<tr>
<td>Dr Brid Farrell</td>
<td>Consultant in Public Health Medicine</td>
<td>Public Health Agency NI</td>
</tr>
<tr>
<td>Dr Orla Franklin</td>
<td>Consultant Cardiologist</td>
<td>Our Lady’s Children’s Hospital Crumlin</td>
</tr>
<tr>
<td>Sinead Freeman</td>
<td>Examinations Manager</td>
<td>Royal College of Physicians in Ireland</td>
</tr>
<tr>
<td>Valerie Hall</td>
<td>Cystic Fibrosis Nurse Consultant</td>
<td>Belfast Health and Social Care Trust</td>
</tr>
<tr>
<td>Glynis Henry</td>
<td>Assistant Director of Nursing</td>
<td>Southern Health and Social Care Trust</td>
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<tr>
<td>Glenn Houston</td>
<td>Chief Executive</td>
<td>Regional Quality and Information Authority</td>
</tr>
<tr>
<td>Dr Mary Hynes</td>
<td>Cancer Network Manager West</td>
<td>HSE National Cancer Control Programme</td>
</tr>
<tr>
<td>Dr Anne Jackson</td>
<td>Executive Clinical Director for Mental Health Services (Louth-Meath)</td>
<td>Southern Health and Social Care Trust</td>
</tr>
<tr>
<td>Janet Little</td>
<td>Assistant Director (Service Development and Screening)</td>
<td>Public Health Agency NI</td>
</tr>
<tr>
<td>Joe Lusby</td>
<td>Deputy Chief Executive / Director of Acute Services</td>
<td>Western Health and Social Care Trust</td>
</tr>
<tr>
<td>John Magner</td>
<td>Head of Operations</td>
<td>Royal College of Physicians in Ireland</td>
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38 At the time of interview, Mr Donaghy was Acting Chief Executive of the Northern HSC Trust, having transferred from his substantive position as Chief Executive of the Southern HSC Trust. Our interview with him focused on his Southern HSC Trust and CAWT roles. Mr Donaghy is now Chief Executive of Belfast HSC Trust.
Unlocking the Potential of Cross-Border Hospital Planning on the Island of Ireland

### Name | Role | Organisation
--- | --- | ---
Alan Moore | Associate Director of Strategic Capital Development | Western Health and Social Care Trust
Dr Deirdre Mulholland | Head of Professional Standards | Health Information and Quality Authority
Hugh Mullen | Director of Performance Management & Service Improvement | Health and Social Care Board
Stephen Mulvany | Regional Director | Health Service Executive, Dublin North-East
Seán Murphy | General Manager | Letterkenny General Hospital
Mairéad McAlinden | Chief Executive | Southern Health and Social Care Trust
Dr Catherine McDonough | Consultant Psychiatrist, St Davnet's Hospital, Monaghan | HSE Dublin North-East
Gerry McKiernan | Regional Director of Operations | HSE Dublin Mid-Leinster
Domhnall McLoughlin | Assistant General Manager | Sligo General Hospital
Mr Lars Nolke | Consultant Cardiothoracic Surgeon | Our Lady's Children's Hospital Crumlin
Orla O'Brien | Divisional Nurse Manager | Our Lady's Children's Hospital Crumlin
Pat O'Byrne | Chief Executive Officer | National Treatment Purchase Fund
Una O'Rourke | Head of Registration | Medical Council
Dr Gillian Rankin | Medical Director | Southern Health and Social Care Trust
Dr Jackie Rendall | Consultant Respiratory Physician; Specialist in Cystic Fibrosis | Belfast Health and Social Care Trust
Francis Rice | Director Mental Health and Nursing | Southern Health and Social Care Trust
Dr Anne-Marie Ryan | Chief Education Officer | An Bord Altranais
Jo Shortt | Senior Project Officer | Sligo General Hospital
Dr David Stewart | Medical Director | Regional Quality and Information Authority
Dean Sullivan | Director of Commissioning | Health and Social Care Board
Val Wade | National Paediatric Hospitals Network | HSE
Philip Watt | Chief Executive Officer | Cystic Fibrosis Ireland
Elaine Way | Chief Executive | Western Health and Social Care Trust
Dr Jane Wilde | Chief Executive | Institute of Public Health in Ireland

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Mr Sullivan attended a meeting which had been requested with Dr Janet Little of the Public Health Agency for NI. His involvement was separate to that of John Compton and Hugh Mullen, his colleagues at the HSC Board.
Appendix B: Previous work on cross-border health collaboration

Overview

The topic of cross-border collaboration in healthcare provision in Ireland has been much debated and discussed over many years, and a significant body of literature has been published exploring the policy issues, practicalities and geographical/demographic factors associated with making hospital services in particular more accessible to border communities. Indeed, the Centre for Cross-Border Studies has been actively involved in much of this analysis and debate, and some of its recent publications have contributed significantly to the ongoing debate, as outlined in the following paragraphs.

“Cross-border Co-operation in Health Services in Ireland” (2001)

A substantial report commissioned by the CCBS in 2001 examined the then-current state of cross-border relations in health services, identified barriers, gaps, opportunities, and challenges in relation to cross-border health service co-operation, and formulated proposals for upgrading co-operation and enhancing its effectiveness.

The findings of the report can be summarised as follows:

- Considerable differences existed between the two health systems in relation to policy, structure, funding, and eligibility, whilst having core principles, key challenges, and similar approaches in common.

- EU law at the time had little relevance to cross-border healthcare in Ireland.

- Stakeholder views were positive towards cross-border co-operation in health services, including beliefs such as:
  - co-operation would address disadvantages in the border regions;
  - that the border region was a “natural” geographic area;
  - there would be benefits in planning healthcare on an all-island basis;
  - co-operation would ensure faster emergency responses;
  - benefits to patients would accrue in terms of best practice exchange;
  - benefits of improved collaboration would enable the sharing of expertise and the development of critical mass and economies of scale in a number of areas.

- Initial comparative analyses of mortality and utilisation data failed to confirm some of these beliefs, such as that regarding problems of unmet demand specifically in relation to hospital services in the border region.

- Evidence in relation to the benefits of rationalising services for critical mass and economies of scale suggested that these might be offset by the consideration that utilisation of services can drop when such services are further away from many of the catchment population.

- Cross-border co-operation could take a number of forms, including training and professional development, commissioning services from the opposite side of the border, joint service development, and research and policy work.

- A number of barriers to cross-border co-operation were identified in the report, including:
  - potential loss of services in some areas if similar services are developed in other areas;
Unlocking the Potential of Cross-Border Hospital Planning on the Island of Ireland

- differences in eligibility for services;
- professional training, accreditation, registration, and indemnity issues;
- differences in pay and conditions of employment of those in the respective health services;
- funding structures differ between the jurisdictions;
- differences in professional and clinical standards and protocols;
- referral pathways
- public/private mix and insurance coverage difficulties

The report recommended that greater clarity be sought about the objectives of improving cross-border co-operation and the barriers impeding it. It was suggested that the barriers were not insurmountable but that considerable efforts would be required to address the issues.

The report also recommended a number of other actions, including:

- a thorough assessment of the potential for co-operation in relation to tertiary referral services such as transplant surgery and paediatric cardiac surgery;
- an assessment of how emergency services might co-operate in the border region;
- more joint studies commissioned in relation to areas mentioned in the Belfast Agreement;
- greater collaboration regarding evaluation and research;
- expansion of activities such as staff secondments and joint training programmes;
- greater co-operation in health technology;
- consideration of service reviews with a cross-border element, the involvement of clinicians and managers in relevant studies, cost-benefit analysis of cross-border projects, and economic research.

The report also gave consideration to the future development of CAWT, including the setting of clearer objectives, suggested areas of research, and eliciting greater input from health professionals in its work. The report suggests that the wealth of experience of cross-border working developed within CAWT should be used to drive the implementation of cross-border services.

“Removing the Barriers” (2007)

In 2007, CCBS published a report authored by Dr Jim Jamison and Dr Michelle Butler, entitled “Removing the Barriers: an Initial Report on the Potential for Cross-Border Co-operation in Hospital Services in Ireland”. This report reviewed past initiatives to rationalise hospital services on each side of the border, and noted the significant difference in the criteria applied for rationalisation in each of the two jurisdictions:

- In NI, the requirement was applied that “no element of the population should be more than 60 minutes driving time from a consultant-run A&E or obstetric unit”.

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40 Removing the Barriers: an Initial Report on the Potential for Cross-Border Co-operation in Hospital Services in Ireland, p21, CCBS 2007
• In RoI, “the standards used reflect those in England, where the over-riding factor is the size of the catchment population, with 300,000 to 500,000 seen as being essential to the maintenance of a modern acute hospital”\(^{41}\).

The authors state that “these criteria are not compatible” and suggest that if the criteria for each jurisdiction were to be applied in the other, the results would be quite different, with only four or five acute hospitals serving NI and many people being more than one hour’s drive away from the nearest acute site, and similarly RoI having a larger number of hospitals in border areas than are currently planned.

Importantly, the report notes that whilst there have been constructive initiatives undertaken in cross-border hospital care over the previous decade, a number of fundamental difficulties can be observed:

• Major hospital rationalisation exercises in NI and RoI have, for the most part, “proceeded independently of one another, as if each jurisdiction were ‘an island unto itself’ rather than conjoined along an increasingly permeable border. This means that it is most unlikely that resources available for health care on the island are being used to maximum benefit for the population concerned, particularly in the border region”\(^{42}\);

• In the North-West, “where there is very considerable potential for co-operation, a long-standing agreement effectively prohibits any beneficial initiatives that might be seen to diminish the status of either Letterkenny or Altnagelvin hospital. It is at least arguable that the interests of particular institutions are being placed ahead of the health and safety of the population”\(^{43}\);

• The review of acute hospitals services in the North-East of RoI, published in 2006, did not take account of cross-border patient flows: the authors of “Removing the Barriers” suggest that a potentially viable option would be “to locate the new (North-East) hospital in the northern part of the region, where it would cater for a portion of the residents of South Down and South Armagh”. They recommend further detailed study of this option, whilst noting that “there would be major implications for Daisy Hill Hospital in Newry”\(^{44}\).

• Similarly, it is suggested that there might be a thorough examination of the roles of Letterkenny and Altnagelvin hospitals, and the existing and planned acute facilities at Sligo and Enniskillen\(^{45}\).

Ultimately, the authors of “Removing the Barriers” pose the challenge that “a fundamental prerequisite for further work would be to resolve the differences in strategic policy between the two jurisdictions” with specific regard to the accessibility / catchment population criteria, which they acknowledge would “involve an unwelcome reconsideration of the requirement in Northern Ireland for every component of the population, no matter how small and how remote, to be within 60 minutes driving time of the nearest inpatient maternity of A&E unit”.

The report concludes with the statement that “there are widespread doubts among health service planners and practitioners about whether the application of such a rigid metric will result in expensive attempts to maintain a range of acute inpatient services in locations where the population size is insufficient to sustain these even in the short term.”\(^{46}\).

\(^{41}\) Ibidem, p21  
\(^{42}\) Ibidem, p22  
\(^{43}\) Ibidem, p22-23  
\(^{44}\) Ibidem, p24  
\(^{45}\) Ibidem, p24  
\(^{46}\) Ibidem, p25
“Surveying the Sickbeds” (2008)

In March 2008, the Centre for Cross Border Studies published a further paper – *Surveying the Sickbeds: Initial Steps Towards Modelling All-Island Hospital Accessibility* – in which it examined the possibilities of spatially exploring the accessibility of present and future hospital provision, with particular attention paid to the cross-border region.

As part of the preparation of “Surveying the Sickbeds”, CCBS commissioned the National Centre for GeoComputation at NUI Maynooth to critically explore the potential for developing a GIS-based spatial model of access to hospitals on an all island basis. This research included analysis of demographic data in both NI and RoI to show the accessibility of acute hospital beds, which (not surprisingly) showed a strong clustering of high accessibility around urban centres, and low levels of accessibility in much of the western seaboard and in upland areas of Northern Ireland. A second phase of the modelling process looked at the road network and travel times and analysed the impact of the border to show that whilst 52% of the population in border areas were disadvantaged by the presence of the border by less than 5 min, 26% of residents were disadvantaged by 15 min or more, a factor which it was believed “could make the difference between life and death” for a patient suffering serious trauma or requiring urgent inpatient care.

The report concluded that a more developed version of the model was required, which would incorporate analysis of population data at small area level along with health service data by specialism. It was also acknowledged that qualitative research would be required to take full account of up-to-date information on service utilisation, referral patterns, links between acute and primary care, the role of private insurance and private hospital care, and so on.

**Strategic Framework Study Commissioned by the Two Departments of Health**

**Introduction**

In 2007, the two departments jointly commissioned a study to develop a strategic framework for taking forward on a North-South basis future collaborative work in health and social care and in planning and delivering health and social care services. Although the study was concluded in 2009, it has not yet been published, and our assessment is that publication is unlikely in the immediate future.

**Issues Addressed in the Joint Study**

Although the report commissioned by the two Departments is as yet unpublished, a draft copy of extracts from the strategic framework study (dated February 2009) has been reviewed by HBC. The report lists a number of key drivers for co-operation in the future, with specific focus on the opportunity to achieve mutual benefits from any initiative proposed: it stresses that “there has been a consistent commitment at both Ministerial and Departmental level in both jurisdictions to work jointly on issues whether our mutual benefits to be gained”. The various dimensions of this which the report recognises include:

- the impact on and benefit for patients and clients;
- improved access to a high quality of care;
- impact in terms of shared knowledge and economies of scale;

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• impact on practitioners to learning and professional development;
• scope for collaboration on arrangements for service provision, particularly in the area of highly specialised services.

The report recommends increased collaboration in addressing public health issues, recognising that both jurisdictions face similar challenges in terms of health inequalities. Recommendations are also made on substance misuse, obesity, communicable and non-communicable diseases, mental health promotion and suicide prevention, lifestyle issues, sexual health and teenage pregnancy.

Amongst the initiatives suggested within the report are:

• support for the examination of the potential to develop joint paediatric and congenital cardiac services;
• additional radiotherapy provision in the north-west, with specific focus on collaborative work between the two departments and relevant agencies to plan and develop radiotherapy capacity in Altnagelvin Hospital, in order to improve access to radiotherapy for populations in the north-west of the island of Ireland;
• transplantation services, with work needing to be undertaken to explore the potential to develop, on a joint basis, a service for those organ transplants which are less common and which may require the critical mass of a combined population to be sustainable;
• brain injury services;
• children’s services such as child protection and fostering.

It is suggested that a number of these recommendations offer the opportunity for a more immediate impact on patient and client care and should be taken forward as a matter of priority, including the proposed initiatives in the areas of paediatric and congenital cardiac services, radiotherapy in the north-west, and transplantation services.

We are cognisant of the fact that the extracts from the document which we have reviewed present only a partial picture, and that the thinking of the two Departments may well have changed in the intervening period. Nonetheless, it presents an interesting snapshot of the internal thinking in early 2009, and helps to contribute to the overall general debate on the efficacy of developing health and social care services on a cross-border basis.

It must be recognised at this juncture that this study was commissioned in 2007 and consequently, especially in light of the dramatic changes in economic circumstances in both jurisdictions in the meantime, may well be outdated and somewhat irrelevant to the current situation and the imperatives and drivers for cross-border collaboration at present. Whilst the suppression of the publication of the report may be indicative of a lack of high-level support for the overall principle of cross-border healthcare provision (something discussed in Section 4 Barriers), the actual content may not now be as pertinent to the way in which the process can and should move forward henceforth.

This is not to suggest that further high-level strategic reports or studies should not be undertaken; if anything, the changed economic environment is a sound reason to consider a new examination at Departmental level of the potential for sharing resources to deliver healthcare services at lower cost to the health authorities whilst continuing to address the needs of the population of the island.
Radiotherapy Services for the Donegal Population

Current Service Provision in NI and RoI

At the moment, all radiotherapy services in Northern Ireland are located in the Cancer Centre within Belfast City Hospital. The centre was planned and built to meet the radiotherapy needs of the population of NI up to 2015. An assessment of projected cancer incidence and demographics conducted by DHSSPS\(^48\) suggested that a combination of radiotherapy services in Belfast and Altnagelvin would best meet the needs of the population of NI beyond 2015, in order to ensure that 90% of the population is within one hour of radiotherapy.

Within the Republic of Ireland, the National Cancer Strategy\(^49\) - A Strategy for Cancer Control in Ireland - published in 2006, recommended that Cancer Centres should be networked together in Managed Cancer Control Networks, and that there should be a broad aim of equipping each of the HSE’s four regions with broad self sufficiency of services in relation to the more common forms of cancer.

At a practical level, this has resulted in the HSE establishing two Specialist Cancer Centres as part of a Managed Cancer Control Network within each of its four administrative regions. The Cancer Centres would:

- be well supported by general medical and surgical infrastructure (including all general consultation services, including pathology, lab-medicine and radiology/imaging as well as support services e.g. respiratory, physiotherapy, occupational therapy, rehabilitation, nutrition, palliative care);
- require availability of critical surgical subspecialty services to support cancer control activity;
- require availability of medical oncology/systematic therapy support – consultation, therapy, curative and palliative therapies, clinical trials, etc.

It was envisaged that hospitals hosting the Specialist Cancer Centres would have the capacity to sustain a multi-disciplinary team environment engaging health professionals across common clinical services and academic endeavours, and would also offer academic teaching and research facilities (which in practice means linkage to a major academic institution).

The selection of the two host hospitals for the HSE West region (which stretches from Donegal to Limerick) posed particular challenges for the north-west border region, as the two hospitals chosen were the Mid Western Regional Hospital in Limerick and University College Hospital, Galway. The distance between Galway and Letterkenny is 250km and the journey time approximately 4 hours by road, making the service in UCH Galway very difficult to access for patients and their families living in Donegal and indeed parts of Sligo and Leitrim.

The eastern border region (including counties Cavan, Monaghan and Louth) was less affected by the selection of locations for the Specialist Cancer Centres, as four Dublin hospitals (including Beaumont and the Mater on the northside) were chosen, and road connections are generally good between these counties and Dublin, making the Dublin centres reasonably accessible.

\(^{48}\) DHSSPS Press Release, 16 April 2008

Outreach between Galway and Letterkenny

The National Cancer Strategy recognised that there are particular and unique geographical circumstances applying to Donegal. Accordingly, it was agreed “on a sole exception basis” that the Managed Cancer Control Network in the West would be permitted to enter into outreach service delivery in Letterkenny as an additional activity. This exception is subject to several criteria which essentially require any outreach services provided in Letterkenny to be delivered by Galway clinical staff, subject to clinical governance arrangements in Galway, and under the same quality assurance measures and arrangements for process and outcome audit as those applying at Galway.

In developing the Cancer Control Network in the West, the HSE noted the potential to meet the needs of cancer patients in Donegal through North-South initiatives, including the existing arrangements whereby access is provided to the Belfast Radiation Oncology service.

Existing Cross-Border Arrangements

In recent years, there has been significant North/South collaboration on radiotherapy provision, and patients from Donegal have been able to access radiotherapy services at the Cancer Centre within Belfast City Hospital since November 2006. This followed a feasibility study commissioned by the two Departments of Health and undertaken by CAWT, which examined the viability of changing Donegal patients’ then pathway to St Luke’s Hospital in Dublin and the operational arrangements required to support such a change. The study found that patients would benefit significantly as a result of shorter journey times, in some cases a reduction of up to 3 hours.

The first year review of the service reflected positively across all aspects, and patients found the service convenient for both themselves and their families. The implementation phase was initially slow, with only one or two patients at any one time choosing the Belfast location. However, as service users became more aware of the options, uptake increased, with three or four patients receiving their treatment at any one time.

As a result, the HSE committed resources to extend access to the Belfast radiotherapy services. However, with service capacity at the NI Cancer Centre predicted to reach saturation point by 2015, it was recognised that more locally based radiotherapy services in the North West would need to be developed.

Development of Radiotherapy Services in the North-West

Against the above backdrop, it is intended that a new radiotherapy centre will be developed at Altnagelvin Hospital in Derry, to serve patients from the Western HSC Trust area and from Donegal. Consequently, the Trust has been working in close collaboration with the NI Cancer Centre in developing a Stage 1 Outline Business Case for the proposed development.

The Outline Business Case was completed and submitted for consideration and approval to both DHSSPS and the Regional Health and Social Care Board in early April 2010. Following approval of this business case, work will then progress to prepare the proposed site including the repositioning of some existing facilities, development of detailed design proposals of the new radiotherapy facility, and finalisation of the full business case.

It had been expected that this would facilitate early tendering and award of contract for the radiotherapy facility, with construction work anticipated to commence by Spring 2012 and

50 Source: National Cancer Control Programme description on HSE website, July 2010
completion by late Autumn 2015. However, the final sign-off by the NI Minister for Health, Michael McGimpsey was delayed, and it was then announced that the project had been postponed. The Minister claimed that funding cutbacks have forced this decision, but there was strong disagreement within the NI Assembly in relation to this decision and questions were raised regarding the previously ring-fenced funding for this service to be developed.

The RoI Minister for Health, Dr. James Reilly, publicly stated that his Department was still committed to the project and to providing the partial revenue funding for the service once it was up and running.

The delay in the final go-ahead for this project also had implications for other similar proposals, given that many of these were using this project as a blueprint for cross-border collaboration and agreement.

However, shortly after the May elections for the Northern Ireland Assembly, the new Minister for Health, Edwin Poots of the DUP, announced that he was reversing his predecessor’s decision and authorising the go-ahead for the radiotherapy unit at Altnagelvin. The RoI government signed the agreement committing their share of the funding (€19 million) to the development of the centre at the end of June 2011.

Given the scale of the health services budget cuts and reforms in both jurisdictions to date and anticipated in the coming years, it remains to be seen whether the radiotherapy unit will be fully operational by the original target date.
Appendix C: Detailed examination of potential inhibitors and barriers

Professional Standards

Concerns Regarding Consistency between NI and RoI

A number of consultees within the Northern Ireland health and social care system expressed the view that there are significant differences between North and South in terms of professional standards and guidelines. The prevailing view was that standards are more clearly defined and operate under tighter regulatory regimes within the UK (including Northern Ireland) than is the case in the Republic of Ireland. Specific mention was made of the wide range of work done by the National Institute for Health and Clinical Excellence (NICE) in the UK, which describes itself as being “a world leader in setting standards for high quality healthcare and... the most prolific producer of clinical guidelines in the world”.

Whilst many of the individuals whom we consulted were broadly supportive of the concept of better collaboration between North and South in the planning and delivery of care, a significant concern amongst stakeholders in Northern Ireland is that the existence of two different sets of standards (one well-developed, the other less so) between the two jurisdictions may create difficulties if clinicians are expected to operate on both sides of the border, or if services are provided in one jurisdiction to patients from the other.

Current Position within NI

The Regulation and Quality Improvement Authority (RQIA) is the independent health and social care regulatory body for NI, and forms an integral part of the new health and social care structures. In its work RQIA encourages continuous improvement in the quality of these services through a programme of inspections and reviews.

RQIA’s main functions are:

- to inspect the quality of services provided by Health and Social Care Services (HSC) bodies in NI through reviews of clinical and social care governance arrangements within these bodies;
- to regulate (register and inspect) a wide range of services delivered by HSC bodies and by the independent sector, based on minimum care standards to ensure that service users know what quality of services they can expect to receive, and service providers have a benchmark against which to measure their quality; and
- to discharge various duties transferred from the Mental Health Commission to RQIA relating to people with a mental illness and those with a learning disability. These duties include preventing ill treatment, remediying any deficiency in care or treatment, terminating improper detention in a hospital or guardianship, and preventing or redressing loss or damage to a patient’s property.

It should be noted that RQIA has very specific functions established in its governing legislation, and is not intended to replicate NICE. The vast majority of clinicians across NI follow clinical the extensive guidelines developed by NICE, although in some instances these have needed to be adapted to suit the particular circumstances of the NI health and social care sector (such as the fact that public administration structures differ between NI and the rest of the UK, where local authorities undertake some of the functions carried out by HSC Trusts in NI).
Current Position within RoI

By contrast with the UK, the Republic of Ireland does not have a significant history of developing national guidelines for the provision of clinical services. However, this position is changing, with the creation of the Health Information and Quality Authority (HIQA) in 2007, with the express purpose of driving continuous improvement in Ireland’s health and social care services. Reporting directly to the Minister for Health and Children, HIQA has statutory responsibility (inter alia) for setting standards for health and social services – “developing person centred standards, based on evidence and best international practice, for health and social care services in Ireland”. HIQA’s remit excludes mental health services, but covers all other forms of health care.

HIQA is undertaking extensive work in the field of standards and guidelines at present, in close liaison with other relevant bodies, including the HSE, voluntary providers, regulatory bodies, academic institutions, advocacy groups and others.

It is also worth noting that very many healthcare professionals in RoI have studied, trained or practised in the UK and in other countries where clinical standards are at a more mature and developed level, and may employ that experience in their practise in Ireland, seeking to comply with high standards of international best practice. Thus, whilst the development of clinical standards, pathways and governance arrangements has not been formally mandated in RoI in a standardised format, it is clear that many clinicians within the Irish system are familiar with the standards and guidelines promoted by NICE, and anecdotal evidence would suggest that levels of voluntary compliance with those standards and guidelines are reasonably high amongst those practitioners.

In September 2010, HIQA published a consultation document entitled “Draft National Standards for Safer Better Health Care”. These draft national standards are designed to be applicable to all healthcare services (excluding mental health), and set expectations for how clinical care is delivered. The consultation document makes it clear that the standards “do not describe the detail of clinical practice in each individual specialty or service area, as this detail will change and develop and so should be set out in guidelines that are developed and regularly reviewed by clinicians”⁵¹. The standards are built around eight themes:

- person centred care;
- leadership, governance and management;
- effective care;
- safe care;
- workforce;
- use of resources;
- use of information;
- promoting better health.

The rationale being applied by HIQA entails getting standards in place which cover as many services as possible, thus avoiding unintended distortion of practice (for example, arising from some

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⁵¹ HIQA, Draft National Standards for Safer Better Health Care (2010), Section 5, p7
services receiving additional resources or preferential priority as a result of being covered by the standards, to the disadvantage of services not covered). It also recognises that “detailed clinical standards could fall out of step with evidence-based clinical practice, which is subject to continuous development and change. Evidence-based practice is better addressed through clinical guidelines that can be kept up to date more easily, with standards driving the adoption of guidelines.” 52

As a separate stream of work (which is nonetheless closely related to the standards published by HIQA), it is intended that service providers and clinicians within each clinical area will implement and audit good clinical practice, in line with the best available evidence on what works and what is safe. Overall, it is likely that this process will aim to make use of best international practice and clinical guidelines from other jurisdictions (e.g. those produced by NICE), where relevant. The guidelines on clinical practice, care pathways and clinical audit will be submitted to a proposed national Clinical Effectiveness Committee (including representatives from the HSE, HIQA, the Department of Health and Children, academic institutions etc) and will be recommended to the Minister for approval and adoption.

Service Definitions, Roles and Grades

Related to the matter of professional standards and clinical guidelines is the fact that some differences exist between North and South regarding the definition of certain clinical procedures or services, and the allocation of responsibilities for the performance of these procedures. For example, the creation of Nurse Consultant roles within the UK has permitted these highly trained nursing professionals to undertake some duties which were previously carried out by medical staff, whereas such posts are less in evidence within the health system in the Republic of Ireland. On the other hand, Advanced Nurse Practitioner posts are being developed in RoI as a post-specific title rather than a qualification, which again makes it difficult to equate the role definitions between the two jurisdictions.

Where roles and service delivery can be somewhat correlated, another issue is the grade at which the clinicians are practising. There are differences in how staff progress through grades between the two jurisdictions, making defining equivalent positions difficult. The increment policy in RoI differs from the competency-based structure in NI. This also has an effect on salary scales, which already differ considerably given the differences in cost of living and the benchmarking and other agreements that led to public sector salary increases in RoI in recent years.

Accreditation/Regulatory Issues.

European Directive 2005/36/EC

Similarly, concern was expressed by a number of stakeholders on both sides of the border that different systems for the professional accreditation of medical, nursing and allied health professional staff, and different regulatory regimes, could create significant challenges with regard to clinicians practising outside their “home” jurisdiction.

The European Directive 2005/36/EC on the mutual recognition of professional qualifications does allow for healthcare professionals to move to other jurisdictions within the EU/EEA and be entitled to practise there. This Directive was transposed into both Irish and UK legislation and therefore there are few barriers to healthcare professionals’ moving from one jurisdiction to another and maintaining the right to be registered to practise.

52 HIQA, Draft National Standards for Safer Better Health Care (2010), Section 9, p12
However, there are a number of issues that the Directive in itself does not address. The first is that this does not provide a framework for healthcare staff to move back and forth across the border while remaining under the registration framework of only one jurisdiction. In other words, with the exception of temporary short-term emergency arrangements, NI healthcare professionals cannot practise in RoI and vice-versa unless they re-register. This raises questions over the ability to establish cross-border clinical networks and teams when the clinicians involved would be moving between jurisdictions to deliver services. It creates a barrier if all the healthcare professionals involved have to be simultaneously registered in both NI and RoI, at financial cost and inconvenience, in order to deliver a cross-border service.

The Directive in question also specifies that its provisions relate to EU/EEA citizens, not merely to qualifications awarded or recognised by or registrations in EU/EEA countries. Given the high ratio of non-EU-citizen clinicians, doctors especially, working in the RoI health system particularly, there are additional barriers in registering or certifying them to work in the NI system.

Difficulties may arise in the potential to allow practitioners registered in one jurisdiction to practise without re-registration in the other. For example, the lack of a formal register as yet for allied health professionals in RoI is likely to create problems as it is consequently difficult to ensure equivalence in registration procedures and to inspire confidence in allowing such AHPs to practise in NI.

**Doctors Undertaking Higher Specialist Training**

There is a specific problem in relation to doctors undertaking higher specialist training under the auspices of the Royal College of Physicians of Ireland (RCPI). Three years ago the mutual recognition of one part of the admission examination to the College, a precursor to such specialist training, was withdrawn by the UK Royal Colleges. The RCPI continues to recognise the entrance to the UK Colleges but has had recognition of their examination refused since 2007. This creates problems in accessing training rotations for certain specialties for RoI doctors within the UK, including NI. This is tied into registration with the General Medical Council, which seeks confirmation from UK Colleges that the RCPI’s membership examination represents an equivalent qualification to that in the UK. Such confirmation has been withheld by the UK Colleges (with one or two exceptions), leading to limitations on the ability of doctors training in areas such as cardiology to access training in the UK. This may impact on the ability to develop services on a cross-border basis, especially in relation to highly specialised tertiary services.

**Legal and Indemnity Issues**

Legislative differences, such as the differences in mental health legislation on both sides of the border, create barriers to cross-border healthcare initiatives. Unless mechanisms are developed, such as in Scotland, to overcome differences in legislation and to facilitate specific or indeed general aspects of cross-border healthcare, there will remain limitations on how far such services can be developed.

Indemnity of healthcare professionals, related as it is to the accreditation/registration issues mentioned in Section 5.5 above, also needs careful consideration in the development of cross-border services. On both sides of the border, healthcare professionals are indemnified by the health authorities on the basis of their registration and/or certification or accreditation in their particular field. If such registration or accreditation is not easily obtainable in the other jurisdiction, this creates significant problems in maintaining professional indemnity for such healthcare professionals. It is impossible to deliver healthcare services in the absence of clear indemnity of the clinicians involved, and the questions as to what cover can or will be extended to cross-border healthcare professionals by either health authority would need to be resolved in advance of developing such services.
Data Standards and Data Transfer

Frequent mention was made of potential difficulties regarding data and information, both at the level of individual patients or cases, and at macro level. Many stakeholders saw considerable difficulty regarding the sharing or holding of patient information between the two jurisdictions, both in terms of data protection legislation and the physical and technical issues associated with sharing data. This is also closely connected with the matter of service definitions, which was felt to have a significant bearing upon the ability of the two health systems to gather, analyse and report macro level statistics on such issues as disease prevalence, procedures carried out, treatment outcomes, etc.

Costs, Funding and Finance

Many stakeholders in both jurisdictions expressed the belief that funding and finance issues might prove difficult to address in the context of more services being provided on a cross-border basis. Given the differences between the two systems in terms of eligibility for free treatment, and the existence in RoI of the medical card scheme operating alongside private health insurance arrangements, it was generally felt that significant work would have to be undertaken to provide for an effective means of payment/reimbursement.

A further matter identified by a number of stakeholders was the relatively high cost of medical treatment in RoI, which might limit the potential for services being provided in that jurisdiction for patients from Northern Ireland.
Appendix D: Excel data modelling tool

This tool uses current activity and selected comparative/benchmark data to estimate the impact of addressing unmet demand by means of cross-border collaboration. In the illustrations, a dotted circle indicates an automatically-calculated set of figures, as opposed to raw data entered by the user.

Activity data

The model starts by collecting the relevant data for the specific activity in the service area under examination. In this example, the first sheet looks at the data for orthopaedic surgery in the north-west, including details on elective, emergency, and day-case numbers and the lengths of stay. This diagram uses the NI data to illustrate how the data is entered:

The process is repeated for the relevant RoI data.
Benchmark data

Following this, a suitable set of benchmark or comparator data is selected, in this case activity in orthopaedic surgery in England, using the same breakdown as that for NI and RoI:

Note that benchmark data, although commonly drawn from other countries or areas as in this example, can be from within the system being examined, e.g. if one jurisdiction’s data indicates a more effective model, the benchmark data could comprise these figures for an estimate of the impact on the entire area if it were all to conform to the same standard. Another source of sample data might be a particular hospital whose system is proving effective.
Using benchmark data to estimate demand and compare to activity levels

For each jurisdiction, the model then looks at what one would expect to see in terms of activity if the same activity levels as the benchmark were to apply in population terms.

This analysis is then repeated for the RoI data as before. This analysis starts to demonstrate if and where there are gaps in the current service provision by identifying discrepancies between what we would expect the need to be in a population of the size in question and what is actually being provided in the hospitals.
Calculating bed-days

Using the information regarding length of stay and the activity levels, we can calculate the bed requirements to provide additional capacity to the service. By allowing the user to specify whether the model should look at existing lengths of stay and day-case percentages as the guideline, or to move towards shorter lengths of stay and higher day-case rates, the bed requirements and activity levels can be calculated. In addition, there is an option to address only part of the unmet demand in the system.

Using this method, one can choose to shorten the length of stay, increase the day-case percentage, and address 100% of the unmet demand, or can estimate what requirements would arise if one were to go halfway towards these options.
Putting it all together

The tool then combines the findings from analysing the NI and RoI data to generate an overall assessment of bed requirements and activity rates should there be an increase in service provision to meet the demand in the system.
What this can tell us

Whilst this is a specific example, based on some assumptions, it can be expanded and used in more detail and more capacity variables could be factored in (such as theatre sessions) once a comparator or target can be identified. The tool is designed to prompt thinking around the current provision of a service in the relevant areas and what might be required to meet any demand that might not be met at present.

Whilst it will generate useful data for consideration and for presenting to those who might have the mandate to change the structure, it is only part of the overall process of planning new service structures and designs.

Potential to adapt the tool

Whilst we have opted to illustrate the Excel tool with bed data, it could be adapted to other metrics such as theatre session requirements, staffing impacts, etc, where such metrics are known and can be compared.
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