National Disability Service Register
Briefing Paper 1: Summary of Context and Issues

Purpose of the paper

This paper outlines the rationale for a new management and information system for disability services. It further describes the legislation and policies underpinning the gathering and storage of health information and the standards to be met by the proposed Register. The document is written primarily with service users and providers in mind but it will form a report from Working Group 5 (WG5) to the Steering Group for the Implementation of the Value for Money Review.

Outline of the proposed Register[1]

The main features of a possible Disability Register are summarised in the Box. At this point, this description is indicative pending the consultations to be undertaken as part of the project and agreement of WG5. However it is intended to provide a succinct summary of what the Register could cover and how it might operate. *(Note: These features will be described in more detail in subsequent papers and possibly revised).*

Main features of the proposed Register

- The national Register will be managed and co-ordinated by the HSE on behalf of the Department of Health. It is primarily designed to assist with the management of service delivery and commissioning.

- The national Register is of persons who are receiving specialist disability services and supports or who may require a specialist disability service or supports.   It will include children and adults up to age 66 years.

- The definition of disability is as per the Disability Act (2005). The register covers people with intellectual, physical and sensorial disabilities including autism.

- The information for the Register will be extracted from 'live' records held by service providers holding service-level agreements (SLAs) with the HSE or directly provided HSE service units. The providers will obtain the information held on the register from persons to whom they provide a service or when the person is referred as needing a service. This will be done with the express consent of the person and/or their primary carer. Existing data systems may need to be upgraded to provide the required information.

- No identifying details will be held will be information is collated nationally.

- Anonymised information will be extracted on the demographic details of persons (as per HIQA guidance) and of their primary carer (for people living with families). Also information will be extracted on their assessed need for services, the services they are currently receiving, the outcomes from using the services, the services required to meet unmet need.

- The Register will link to an associated register of disability services provided by HSE or by agencies holding SLAs with the HSE. The service register will provide details of support staff and costs.

- The Register will be a 'live' system that can be accessed at various levels by all approved stake-holders: including people with disability, local service providers, HSE area managers, HSE national directorates and the Department of Health.

- Publically available annual reports analysing the information held on the register will be prepared by the HSE Director of Social Care. In addition ad hoc reports can be run by the HSE and Departmental personnel.

---

[1] This title is used in the interim and is intended to distinguish the proposed new information system from existing databases.   However it is in line with the terminology widely used by health services for discrete populations.

The definition of Disability given in the 2005 Act is: "a substantial restriction in the capacity of the person to carry on a profession, business or occupation in the State or to participate in social or cultural life in the State by reason of an enduring physical, sensory, mental health or intellectual impairment".

The new vision of support service for persons with disabilities

The Government in its policy review of disability services[2] has proposed a new vision for Irish disability services with two main objectives as outlined in the Figure below.

Vision

'To contribute to the realisation of a society where people with disabilities are supported, as far as possible, to participate to their full potential in economic and social life, and have access to a range of quality personal social supports and services to enhance their quality of life and well-being.'

Objective 1

The achievement of full inclusion and self-determination for people with disabilities through access to the individualised personal social supports and services needed to live a fully included life in the community.

Objective 2

The creation of a cost-effective, responsive and accountable system which will support the full inclusion and self-determination of people with disabilities.

The proposed register is essential to realising these objectives. Existing national information systems on people with disability were not designed for these purposes[3].

The register will enable the new approach of "*individualised personal social supports and services*" to be developed and monitored. It will assist in determining the cost-effectiveness and responsiveness of state-funded service and support systems.

The HSE National Service Plan (2014) identified improved management and information systems as a key priority for disability services (p.43).

Principles for gathering health information

HIQA[4] have identified four key principles relating to health information which are based on international best practice and which aim to maximise the health and social gains for the individual as well as for the wider population.

- Information is used to deliver and monitor safe and high quality care for everyone.
- Information should be of the highest quality and where appropriate, collected as close as possible to the point of care.
- Information should be collected once and used many times to deliver better outcomes for the public.
- Data collections should be 'fit for purpose' and cost-effective.

---

[2] Value for Money and Policy Review of Disability Services in Ireland, Dept of Health, 2012.

[3] HIQA provide an online catalogue of all known national datasets related to health. http://www.hiqa.ie/healthcare/health-information/data-collections/online-catalogue. A second report to Working Group 5 will examine the information gathered by existing national datasets and how their experiences can inform the development of the register and transfer of data from them to the new register.

[4] Recommendations for a more integrated approach to National Health and Social Care Data Collections in Ireland, HIQA, 2014.

Data Protection

In addition, the Data Protection Acts of 1998 and 2003, embody 'eight rules' of data protection to be followed when information on individuals are collected.

- Information must be obtained and processed fairly.

- Keep it only for one or more specified, explicit and lawful purposes.

- Use and disclose it only in ways compatible with these purposes.

- Keep it safe and secure.

- Keep it accurate, complete and up-to-date.

- Ensure that it is adequate, relevant and not excessive.

- Retain it for no longer than is necessary for the purpose or purposes.

- Give a copy of his/her personal data to an individual, on request.

A Guide for Data Controllers[5] (issued by the Office of the Data Protection Commissioner) details how these rules should be put into practice. This guidance will be followed in the development of the Register.

Improving health information

The proposed Register is a part of a broader initiative led by HIQA and HSE to improve the overall quality of information gathered about people using health and social care services and to overcome the deficiencies in current systems[6].   Ongoing initiatives covering the whole population include the following:

Individual Health Identifiers.

The Health Identifiers Act was enacted in July 2014 to allow for the establishment and maintenance of a National Register of Individual Health Identifiers and a national Register of Health Service Providers Identifiers.   The Minister for Health directed the HSE to undertake the establishment and maintenance of the registers and a Project Initiation Document has been issued (March 2015).   The primary aim is to identify each individual to whom "a health service is being, has been or may be provided".   This will enable patient records to be matched across different systems such as GPs, Community care and acute hospitals.

Appendix 1 lists the information to be gathered and held on each person who is given an individual health identifier.   It is clearly stated in the HSE Project Initiation Document that the Individual Health Identifiers "*will not deliver an electronic patient / client health record, and will not provide the infrastructure for access to or management of such records*" (p.9). The main use is to avoid unnecessary duplication in the collection of demographic information on persons using health and social care services and to facilitate linking of records across health and social care providers.

---

[5]http://www.dataprotection.ie/ViewDoc.asp?fn=/documents/guidance/Guide_Data_Contollers.htm&CatID=90&m=y

[6] HIQA (2014) noted that "*the current ICT infrastructure in Ireland's health and social care sector is highly fragmented with major gaps and silos of information which prevent the safe, effective, transfer of information. This results in service users being asked to provide the same information on multiple occasions. Information can be lost, documentation is poor, and there is over-reliance on memory. Equally, those responsible for planning our services experience great difficulty in bringing together information in order to make informed decisions. Variability in practice leads to variability in outcomes and cost of care. Furthermore, we are all being encouraged to take more responsibility for our own health and wellbeing, yet it can be very difficult to find consistent, clear and trustworthy information on which to base our decisions. As a result of these deficiencies, there is a clear and pressing need to develop a coherent and integrated approach to health information, based on standards and international best practice.*" (p 4-5).

National Standard Demographic Dataset and Guidance for use in health and social care settings in Ireland, 20 December 2013, HIQA.

In anticipation of the Health Identifiers Act, HIQA had issued guidance on the consistency in the recording of demographic information in order to remove the duplication and variation within and between service providers when collecting patients' and service users' demographic data. It will also assist all service providers to collect standard core data about patients and service users (see Appendix 1). The templates provided for defining the information to be gathered provide a useful model that could be used in the proposed Register.

Recommendations for a more integrated approach to National Health and Social Care Data Collections in Ireland, November 2014, HIQA.

HIQA have made six recommendations to the Minister of Health for a more integrated approach to National Health and Social Care Data Collections in Ireland. These are listed in Appendix 2. They build on themes identified in a detailed survey using a semi-structured interview format of a representative sample of 10 key health information sources in the country (HIQA, 2011). The implementation of these recommendations should reduce fragmentation and duplication and ensure a more consistent approach to improving the quality of data collected. These recommendations will likely inform the provisions of a much delayed Health Information Bill on which the Department first consulted in 2008. These recommendations will be used to guide the development of the proposed Register.

eHealth Strategy for Ireland (2103)

The Strategy for eHealth proposed that under the aegis of the HSE, a new entity called *"eHealth Ireland"* will be established, initially on an administrative basis within the System Reform Group (SRG) of the HSE. In time this new organisation will be formed as an independent entity within a new institutional framework for shared services for the health sector as a whole. *eHealth Ireland* will be headed up by a new Chief Information Officer (CIO) who will work closely with all of the key business organisations within the health service, in order to drive forward the eHealth strategy and ensure that key IT systems are implemented on time and to budget. A new IT strategy for the health system as a whole was due to be published in early 2014 by *eHealth Ireland* working closely with the SRG, the Department of Health and other relevant departments/organisations. It is unclear when this will become available. The proposed Register could become a work stream within this new organisation.

The benefits for service users

The main beneficiaries of the Register will be people with disabilities and their family carers. The benefits are: (adapted from HIQA, 2011)

- Persons can access and contribute to all the registry information held on them by services.

- The security and privacy of their information will be better assured as national standards for information gathering will have to be followed by all health providers.

- Information can be quickly shared across health and social care service providers to avoid people having to repeat information and reduce the duplication of information held. This should also encourage greater collaboration across health providers.

- A person's need for services will be registered along with the supports needed by their family carers.

- Information will be collated on all the support services people with disabilities are receiving from the same or from different providers. People will be better informed

about the service options available in their locality. Also equity of access to services can be ascertained locally and regionally.

- The outcomes for persons from the services/supports they receive will be documented so that the performance of services can be compared.

- The costs of supporting individuals will be more easily identified and when related to the outcomes, the cost-effectiveness of services can be more readily ascertained.

The benefits for service providers

A national Register is also intended to benefit service-providers[7].

- A common electronic system and information gathering procedures will be available to all service providers for collecting core information on people to whom they provide, or may provide a service. However services should have the option of extending the information they collect to suit their own requirements independent from the core Register. Moreover providers can continue to use their existing software systems as long as it is capable of providing registry information to a prescribed format through automatic electronic uploading.

- The time spent by service personnel in accessing, recording and sharing information on individuals or groups of individuals will be reduced.

- The Register information will replace manual systems currently used by service providers for reporting to HSE and HIQA.

- Improved access to information will allow greater comparison and collaboration between healthcare agencies.

In addition, the Register will benefit the HSE and Government as noted in the following section.

How the information from the register will be used

Information on the Register can be used by all stake-holders. In particular:

- The Register will assist individuals to monitor and obtain the support services they require.

- Providers will be able to describe the services they provide and assist them in planning and reshaping their future provision.

However the Register has particular significance for the Department of Health and the HSE in terms of monitoring policy implementation and service commissioning.

Monitoring the implementation of Government Policy[8]

The role of the Disability Unit in the Department of Health is to**:**

- set policy in relation to disability services and supports;

- monitor and evaluate the efficiency and effectiveness of policy implementation;

- monitor expenditure;

- report to the Minister on the operation of the Disability Services Programme ("State of the Nation");

---

[7] This includes all services who have service-level agreement with HSE as well as directly provided services by the HSE.

[8] The content of this section is drawn from National Disability Strategic Information framework prepared by the Disability Unit in the Department of Health (2015).

- liaise with other Departments and agencies to deliver on the National Disability Strategy;
- plan for the future through reviewing policies and consulting with stake-holders.

In order to fulfil these functions, the Disability Unit requires information on people with disabilities and specialist services so that it can:

- manage its business; fulfil its objectives and meet its targets;
- monitor progress on implementing its policy decisions and assess the effectiveness of those policies;
- enable it to make evidence-based decisions;
- assess the efficiency and effectiveness of the operational system by doing the following:
- monitor the quantum of services provided;
- monitor the quality of services provided;
- monitor the cost, efficiency, effectiveness of services provided;
- monitor service need;
- monitor the health and wellbeing of people with disabilities in Ireland;
- monitor the effectiveness of the delivery system at crucial milestones and transition points in the lifecycle;
- monitor the implementation of major policy initiatives;
- identify risks, plan for contingencies, plan for the future;
- report to the Minister, the Oireachtas and the public on the performance of the Disability Service Programme.

Service commissioning

The HSE, like all leading healthcare systems, places patient/client safety and quality of care at the heart of service provision and delivery. The delivery of high quality, evidence based, safe, effective and person-centred care is a key objective for the health service.

The HSE National Service Plans 2015, identified the following priorities under the Implementation Framework for the VFM and Policy review in Disability Services – see Box.

Person-centred Model of Services and Supports
- ***Strategic Planning:*** Establish process to identify and assess the health and social needs of people with disability over the next 5-10 years and determine the capacity of existing and reconfigured services to respond to these needs. The process will evaluate demonstration projects, service models and evaluate and report on good practice which will give effect to the implementation of the future model of person centred care on a sustainable basis.
- ***Implementation, Oversight and Support:*** Oversee the national implementation of *Time to Move on from Congregated Settings, New Directions and Progressing Disability Services for Children and Young People (0-18s).* Provide support and guidance to the delivery system with the associated significant change management requirements

People with Disabilities and Community Involvement: Build on existing national and local consultative processes to develop a Participation Framework which meets the changing needs of service users and has the intent of enabling persons with disabilities, carers, families and the wider community to have a meaningful role and voice in service design and delivery.

> *Quality and Standards:* Enhance the quality and safety of services for people with a disability and improve their service experience by putting in place a Quality Framework and Outcomes Measurement Framework.
>
> *Management and Information Systems:* Determine business and information requirements to be enabled by IT systems, including the development of a web based system which will act as a single point of information and advice on disability services for service users, their families and the community. The process will also develop proposals on the use of performance indicators.
>
> *Governance and Service Arrangements:* Support maximisation of efficiencies and further development of enhanced governance and accountability throughout disability services, using service arrangements to embed implementation of the change programme linked to funding provided.
>
> *Page 53. National Service Plan 2015.*

The HSE Strategic Plan for 2015 describes the new accountability frameworks that are to be put in place including "*a new Service Arrangement and Grant Aid Agreement that will continue to be the principal accountability agreement between the Divisions, Hospital Group CEOs and Community Healthcare Organisation Chief Officers and Section 38 and 39 funded Agencies. Revised processes will also be in place for managing the contractual relationship with each individual agency*" (p. 4).

The HSE will presumably define the information requirements under these agreements but it is likely that these will include those noted above for the Department of Health plus the following:

- To identify and report on pertinent Key Performance Indicators (KPIs) for services as outlined in the service level agreements;

- To assess the cost-effectiveness of current service provision;

- To assist with the commissioning services in response to unmet need.

Thus the proposed Register will enable the Department and the HSE to meet their requirements as outlined above.

How the Register will be developed

A Steering group has been set up to oversee the implementation of the recommendations in the Value for Money Review (as approved by Government Decision of 17July 2012). Its remit is to:

- implement a more effective method of assessing need, allocating resources and monitoring resource use in the Disability Services Programme; and

- migrate service provision from an approach which is predominantly organised around group-based service delivery towards a model of person-centred, individually chosen, supports.

The steering group is now chaired by Ms. Frances Spillane, Assistant Secretary, Department of Health with members drawn from the Disability Unit in the Department, HSE and voluntary service providers.

A number of working groups have been established to progress the implementation plans. Working Group 5 (WG5) is tasked with implementation of two of the strategic aims (4 and 5) of the National Implementation framework: namely:

- The development of a resource allocation model;

- The establishment of an information infrastructure;

Working Group 5 have commissioned an external consultant – Professor Roy McConkey - recruited through the NDA, to assist them in the second task. The figure below summarises the steps they propose to follow in the development of the Register. These activities will be undertaken in the period July – October 2015.
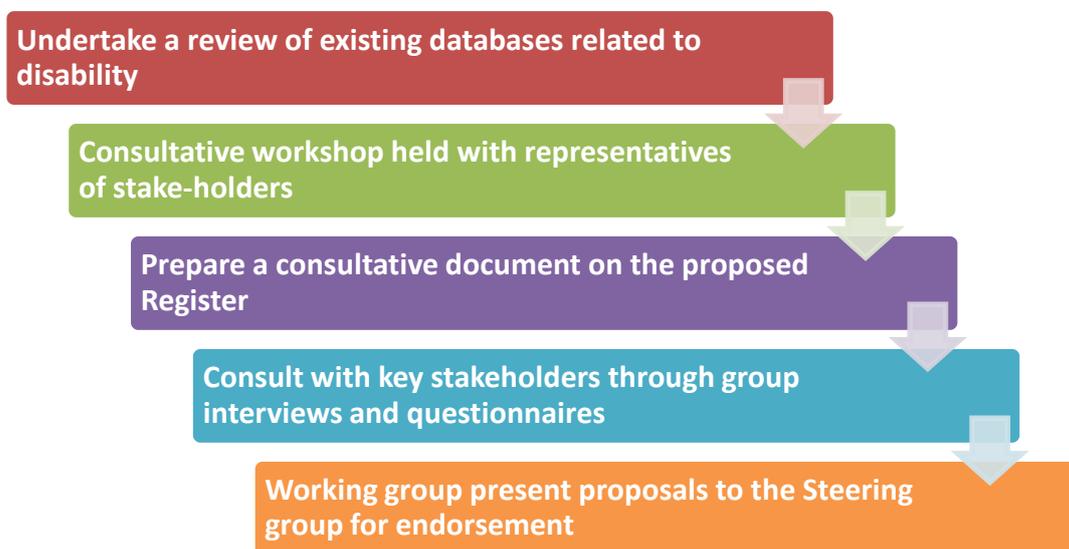
Once the Steering group have approved the proposed Register, an implementation plan will be developed by the appropriate officers within the HSE.

Developing the Register

The development of the Register needs to take cognisance of the experience of creating electronic health systems. The report on the *eHealth Strategy for Ireland* undertook a review of eHealth experiences in eight countries. Twelve key lessons were identified and these are summarised in Appendix 3.

In particular, the Strategy outlines the enabling actions that are required. "*These actions are crucial to enabling the successful deployment of the various eHealth Programs and ensuring maximum public engagement and associated benefit. They are termed 'Common' as they span the work of the proposed function. To a large extent the success of the programs carried out by the functions will depend on the 'Enabling' actions being in place*" (p. 53). The table below, reproduced from the eHealth Strategy (p.54), lists the main categories of enabling activities with examples of each, although some of the activities will not be applicable for the proposed National Register.

Categories of Enabling Activities	Examples of enabling activities
Stakeholder Engagement	- Ensure public engagement and uptake is strong from the outset. - Ensure strong clinical engagement and leadership in all deployment and programs. - Ensure the main impacted stakeholder groups are represented in the various eHealth programs. Examples include mental health, ageing and disability groups.
Technical Interoperability	- To ensure that technical programs are deployed to recognised interoperability standards. - To introduce (with HIQA and others) an 'eHealth Compliance' function that certifies developed solutions as fully interoperable. - To build on the work already underway by the HSE ICT Directorate, HIQA, Irish Medicines Board and others in order to proliferate technical interoperability of eHealth systems.

Legal and Regulatory	▪ Bring legal clarity on issues such as personal identity, digital rights and signatures, trust and privacy. ▪ To define a framework for data ownership and data protection within an eHealth environment. ▪ Develop innovative solutions to issues of insurance reimbursement for eHealth programs particularly in the context of citizens traveling around the EU and US.
Human Resources and Change Management	▪ Proactively work with public and private organisations to minimise the disruption of eHealth deployments on organisations. ▪ Promote proactive involvement from public and private delivery groups in national eHealth deployments.
Brand Identity and Promotion	▪ Ensure *eHealth Ireland* has a strong recognised brand identity. ▪ Develop suite of promotional print and online material to build trust, increase awareness and ensure strong public uptake.
Individual Health Identifier	▪ Work with the various responsible groups to ensure the Individual Health Identifier is deployed as a priority eHealth enabler.
Training and Skills Development	▪ Support the development of eHealth-feeder courses such as Healthcare Informatics within the third level sector. ▪ Work with healthcare delivery groups and others to develop series of up-skilling programmes for existing staff. ▪ Work with medical training institutes to develop eHealth specific training modules and ensure eHealth is a core course requirement for medical training. ▪ Collaborate with EU/US on building eHealth training and skills modules involving student placements, online and mobile learning modules.
eHealth Ireland Observatory	▪ To develop an eHealth Observatory to assess overall return of investment and benefits analysis. To partner with existing academic funding streams to implement.

Conclusions

The development of a National Disability Services Register is a governmental priority and HSE has the authority to require all service providers in receipt of state monies to maintain and report on the people to whom they provide services or who have been referred to them as needing services. It will bring benefits to persons receiving services and to providers of services as well as a tool for monitoring and shaping future service delivery.

eHealth systems are coming into place that will assist the development of a reliable, robust and efficient Register that meets European and International standards. Moreover Ireland has experience of national disability datasets with financial and personnel resources invested in them. In many senses there has never been a better time to plan for the introduction of a National Register.

That said there are a number of cautions that need to be entered.

▪ Given the range of stake-holders involved, it may be difficult to achieve consensus around the data to be held on the register. It is vital though that the views of all stakeholders are sought and their suggestions and reservations noted.

▪ The resources to implement a national register are likely to be limited and it may be safer to assume that this development may need to be cost-neutral with resources coming through redeployment of existing investments in data systems relating to disability.

▪ The time-scale for the implementation of the Register is hard to predict especially if other health information systems are given priority within the HSE. Delays would jeopardise other parts of the Implementation of the Value-for-Money and Policy Review.

- Public confidence in state-led information systems needs to be built as evidenced in recent reaction to the proposed primary school online database (http://www.education.ie/en/Circulars-and-Forms/Active-Circulars/cl0025_2015.pdf).

Report compiled by Roy McConkey,

Revised: 28th August, 2015 following WG5 Subgroup meeting.

Disclaimer:

The views expressed in this report are those of the author and do not represent those of Working Group 5 and the Steering Group for the Implementation of the Value for money and Policy review.

Appendix 1: Information to be held on Individual health identifier.

1. Surname

2. Forename

3. Date of Birth

4. Place of Birth

5. Sex

6. All former surnames

7. Mother's surname and all former surnames of his or her mother) including mother's surname at mother's birth)

8. Address

9. Nationality

10. Personal Public Service Number (if any)

11. Date of death

12. Signature

13. Photograph

14. Subject to *section 3(3)* of the act, any other particulars (excluding clinical information relating to the individual) prescribed for the purpose of this paragraph that, in the opinion of the Minister, are relevant to identifying the individual.

Note*:* For the Register, no identifying information about individuals would be transferred to the National. For example names would not be recorded; ages or year of birth would be used and the address would be reported as electoral division (as an indication of social deprivation using the All-Island HP Deprivation Index developed by AIRO).

Appendix 2: Recommendations from HIQA (2104) on National Health and Social Care Data Collections

1. **The development of a strategic framework for national health and social care data collections in Ireland should be prioritised, setting out a roadmap and informing policy development for these collections.**

▪ A detailed roadmap should document the current health information landscape and identify where deficiencies and areas of duplication exist, clearly establishing how existing data collections fit into the framework in order to lead to greater integration.

▪ A national steering committee involving all relevant stakeholders should be established to develop this roadmap and oversee its implementation.

2. **Oversight for all national health and social care data collections should be assigned to a specific organisation at a national level.**

▪ A decision should be taken to determine the most appropriate agency or organisation to provide oversight for all national health and social care data collections and the most appropriate means to achieve this.

3. **National health and social care data collections should be included in national information and ICT strategies, and also in the implementation of key ICT projects.**

▪ The secondary use of information for national purposes should be considered when major national ICT projects are being planned and consideration of current and potential national data collections should be included in ICT strategies and plans.

▪ The legislation underpinning the identifier for the individual, professional and the organisation is a major enabler for national data collections. Therefore national data collections need to be included at the planning phase of this major project.

4. **All national health and social care data collections should comply with legislative and regulatory requirements, such as national health information standards.**

▪ Compliance with these requirements should be monitored and all national collections should be supported to achieve compliance.

5. **The organisation responsible for the oversight of national data collections should develop a data quality framework to drive improvements in the data quality of all national data collections.**

▪ All national collections should be required to demonstrate a commitment to assessing and improving the quality of the data they collect.

▪ A national health data dictionary should be developed and maintained in order to ensure standard data definitions and therefore data comparability between national data collections.

6. The use of, and access to, information from national data collections should be optimised to deliver better outcomes for the public, while protecting the privacy and confidentiality of personal data.

- The organisation responsible for the oversight of national data collections should develop a national health information portal as a central repository of national health information.

- There should be a requirement that all eHealth initiatives give consideration to the secondary use of information to maximise health gain.

- Where possible, data should be captured accurately once, near the point of care, and then used for both primary and secondary purposes, such as research, within the appropriate safeguards.

Appendix 3: Key Points from International Experiences of Implementing Health Information systems

(Taken from *eHealth Strategy for Ireland*, Dept of Health and HSE, undated)

1 Focus and Scope. Deployment of eHealth Systems is a complex task and needs to be planned properly. Best practice recommends that a dedicated implementation entity can work best. eHealth is increasingly being viewed as having impact to more than just health delivery services alone. The economic development potential of eHealth investment and execution is now also widely accepted. An implementation strategy needs to take ownership for all aspects of eHealth programs and work with stakeholders as appropriate to maximise the return of investment across *all* areas (patient wellbeing, health services, economy, R&D etc).

2 Governance. Strong governance and leadership is required and clear operational models/ roadmaps need to be agreed by all early on in the execution phases. The delivery entity should have overall governance for implementation and manage funding allocations. The funding should be allocated on a milestone/deliverable stage-gate basis, held centrally and awarded to local delivery organisations as an innovation incentive.

3 Deploy in Phases. Using a phased approach to implementation based on national priorities and building up to scale makes more sense than larger 'big bang' deployments.

4 Standards. Deployments should be based where possible on proven international standards such as HL7, CEN and ISO which have been successfully implemented.

5 Infrastructure. Development of a secure network infrastructure is important and this should be shared across public and private healthcare systems. Public investment in these 'building blocks' is warranted and is a key 'enabler' to the applications that will be deployed on top.

6 Process Re-Engineering. eHealth deployments should be viewed as process re-engineering and change management enabling through the use of information systems rather than ICT projects per se. Much up front effort needs to be directed at organisational impact analysis and change management aspects.

7 National Oversight, Local Innovation. A national oversight approach for key aspects such as standards and interoperability combined with local innovation and incentivisation should be adopted.

8 Stakeholder Engagement. Front line and clinical engagement is critical and these stakeholders should be 'champions' of eHealth solutions. Engagement with further stakeholders including patient groups, advocacy organisations and standards bodies should be factored in early in the process.

9 Health Identifier. A unique identifier is a cornerstone of most eHealth systems. What needs to be decided is the format this takes. Smart cards have proven to be troublesome to date in terms of privacy and security. Ideally re-use of existing public infrastructure is advisable. Proper legislation needs to account for privacy and security issues.

10 Leverage existing investments. Leverage existing investments wherever possible: for example in Ireland the Integrated Services Framework (ISF).

11 Branding and Awareness. The delivery entity should be strongly branded and there should be strong and early engagement with the public. Campaigns of public awareness, education and benefits should be launched.

12 Skills. The deficit of adequate health informatics skills needs to be addressed. Skills development and training are therefore necessary parts of an implementation program.