About the Irish Heart Foundation

The Irish Heart Foundation is the national charity dedicated to fighting heart disease and stroke. Today in Ireland more people die from heart and stroke-related illnesses than from any other cause of death. Against this background we work to bring hope, relief and a better future to families all over Ireland. We give vital patient support through our Heart & Stroke helpline and we provide high quality public information for all.

We support pioneering medical research, campaign for improved patient care, and promote positive public health strategies. We work in hospitals, schools and workplaces to support, educate and train people to save lives. As a charity we are dependent on the generosity of the public to continue our vital good work. You can fund our work by making a donation, give of your time to volunteer or learn the skills needed to save a life through our courses.
Cardiovascular disease and the health system

Recent developments in healthcare treatments and our ageing population mean that healthcare provision now primarily focuses on the management of chronic diseases and particularly on older patients with a combination of chronic diseases. It is essential that any changes in models of care are built around a proper system of chronic disease management. The IHF is primarily concerned with how the CVD patients we represent, many of whom have multiple care needs, will be served in any system and how resources will be directed.

The OECD\(^1\) has identified a number of significant challenges for countries seeking to reduce CVD: rising levels of CVD risk factors, including obesity; delays in diagnoses of CVD risk factors; lack of adherence to treatment; ageing population leading to more complex health needs; and gaps in timely access to specialised care. All of these challenges are apparent within the Irish system.

Part 1: Stroke Services

Stroke Audit 2015:

The 2015 National Stroke Audit is the second audit of stroke services, following the Irish National Audit of Stroke Care 2008. Findings from that report found:

- 27 hospitals in Ireland treat stroke patients during the acute phase of their care.
- 21 hospitals have a stroke unit, up from 1 stroke unit in the whole country in the 2008 audit.
- The 2015 audit found 150 stroke beds nationally. However, 61% of inpatients with a stroke at the time of the audit were being managed on a ward other than a stroke unit.
- 29% of patients are admitted directly to a stroke unit, whilst almost half do not receive treatment in a stroke unit at any point during their stay.
- The estimated national thrombolysis rate of 11% (clot-busting treatment) is comparable to international rates, with the 2014 UK rate being approximately 12% of all strokes.
- Only 36% of patients have a swallow screening in the first 24 hours, compared to over 80% in the UK.
- 23 hospitals (85%) have a consultant physician with specialist knowledge of stroke; up from one third of hospitals in the 2008 audit. 23 hospitals have a clinical nurse specialist (CNS) in stroke.
- There are large gaps in staffing of multidisciplinary stroke teams across the country. There is a staffing deficit of: 69% for clinical nutrition; 61% for occupational therapy; 50% for physiotherapy; and 31% for speech and language therapy.
- The length of time stroke patients spend in hospital has reduced from almost 30 days in the 2008 audit to just over 22 days in 2015.

• Only 8% of patients were newly admitted to nursing homes in 2015, compared to 15% in 2008.
• There are only three early supported discharge teams in Ireland, serving suitable patients in four hospitals.

Updates since 2015:

• In 2016 about 8,000-8,500 people suffered stroke in Ireland. 6,302 patients with a core diagnosis of stroke were discharged from Irish Hospital of whom 817 died. This is the lowest number of inpatient deaths on record.
• Mortality has dropped from 16.2% in 2009 to 13.0% in 2016, a 20% relative reduction.
• Since 2014 the rate of discharges to long term care has increased to 16%. The cost of these additional patients admitted to nursing homes is estimated to be €53 million.
• Average length of hospital stay for stroke patients dropped to 17 days in 2016
• In the June 2017 NHQRS report, the hospital with the highest stroke mortality in each group was without a stroke unit. ²
• Ireland will rank 22nd out of 43 European countries for thrombolysis rates in 2017³. The current national Key Performance Indicator (KPI) for Thrombolysis was recently increased to 12% to reflect the current European average but many Irish hospitals are only achieving rates of 3-5%.
• The National Stroke Programme proposes ESD roll out, over a three-year period, which will incorporate ESD teams already established in 3 sites and establishing new ESD teams in 11 hospitals, covering approximately 60% of the population

Outlook for the Future:

• The Cost of Stroke in Ireland study estimated a direct cost of stroke to the economy of up to €557 million per annum, with as much as €414 million being spent on nursing home care. When you exclude nursing home care, the healthcare cost of stroke is €153.8 million - €31 per capita. ⁴
• The Burden of Stroke in Europe report estimates that in the 20 years between 2015-2035, Ireland will experience percentage changes in stroke of 59% in incidence, 41% in prevalence, 84% in death and 57% in DALYs lost.⁵
• Increasing life expectancy which will mean an increase in very old people (85 years plus) living with chronic conditions, as well as prevalent risk factors, will mean that the direct costs of stroke will increase, as well as having implications for acute hospital services.

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³ Soon to be published European Stroke Organisation / European Society for Minimally Invasive Therapy report
⁴ Economic and Social Research Institute (ESRI) and the Royal College of Surgeons in Ireland (RCSI) for the Irish Heart Foundation. Cost of Stroke in Ireland: Estimating the annual economic cost of stroke and transient ischaemic attack (TIA) in Ireland. September 2010
**Introduction**

Evidence based stroke care reduces death and disability cost effectively\(^6\), however, effective stroke care will only occur if the organisational structure allows and facilitates the delivery of the best treatments at the optimal time\(^7\).

The Irish Heart Foundation/HSE National Stroke Audit 2015 is a national audit of acute stroke services in hospitals throughout Ireland. It is the second audit report on stroke services in Ireland following on from the Irish National Audit of Stroke Care (INASC) in 2008. Of particular importance for this Health Service Capacity Review, are findings related to stroke units, thrombectomy and thrombolysis, and Early Supported Discharge. We are uniquely placed, having access to this recent data audit, to provide insight into urgent changes needed in models of care and capacity requirements into the future to enhance the service to meet growing needs in this area. However, as we note, the use of epidemiological data to guide clinical practice is paramount and the resourcing of the stroke register is central to this.

### Stroke care in Ireland: Urgent Priorities and Investment Needed

<table>
<thead>
<tr>
<th>The Capacity Challenge</th>
<th>The Policy Priority</th>
<th>Investment Needed</th>
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<tr>
<td>Low patient access to stroke units that have been proved to save lives and money</td>
<td>Ensure that every hospital treating stroke has a properly functioning service whereby 90% of stroke patients spend 90% of their hospital stay in a stroke unit</td>
<td>€8.125m per annum in additional funding(^8)</td>
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<tr>
<td>Early Supported Discharge programmes which represent a basic standard of care for stroke patients internationally restricted to long running pilot programmes</td>
<td>Roll out of Early Supported Discharge programmes to 11 new hospitals over a 3-year period</td>
<td>€3,351,336 per annum after three years(^9)</td>
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<td>No formal thrombectomy service despite compelling evidence of human and cost benefit</td>
<td>Ensure that endovascular stroke centres providing thrombectomy are developed in conjunction with emergency services to provide access for all suitable stroke victims regardless of location</td>
<td>€7.2 million over 5 years(^10)</td>
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\(^8\) Parliamentary Question No 24315/17 to the Minister for Health

\(^9\) National Stroke Programme/Irish Heart Foundation Early Supported Discharge Business Case August 2015

**Stroke units**

- Stroke units were available in 78% (21/27) of sites.
- The number of stroke unit beds available nationally at the time of the audit was 150.
- For hospitals with stroke units in place only 29% of patients were admitted directly to a stroke unit on admission.
- No hospital in Ireland meets minimum stroke unit staffing requirements set down by the European Stroke Organisation.

Central to the model of best practice in stroke management is access to a stroke unit. Stroke unit care is recognised as the most fundamental element of stroke care. It is the only intervention that is deliverable to all stroke patients and such patients admitted to properly configured units have a 5%-7% lower risk of dying or becoming permanently disabled. Progress has been made since the development of the national stroke programme in the development of this key infrastructure. However, despite the progress made between the first audit in 2008, the 2015 audit found that only 29% of patients were admitted directly to a stroke unit.

Inconsistency exists in availability of features recommended in each stroke unit. Most notable inconsistencies included access to continuous physiological monitoring and in nurse training in stroke assessment, specifically swallow screening. Just over half of the sites reported undertaking a needs assessment identifying appropriate bed numbers for their population. However, a number of units were oversubscribed, with 61% of patients being managed outside of a stroke unit at the time of the organisational audit. This potentially created inconsistency in the care each stroke patient received. The discrepancy between available beds and the number of stroke inpatients was most marked in the larger hospitals.

The National Stroke Audit identified 150 stroke beds in Ireland, a deficit of around 250 beds nationally for the current population on the basis of recommendations contained in the UK National Clinical Guidelines for Stroke. It would cost €13 million per annum based on midpoint senior pay scales in 2016 to adequately staff a total of 400 stroke beds. Therefore, the additional cost on top of the existing 150 beds is €8,125,000 per annum.\(^\text{11}\)

The challenges in ensuring the necessary capacity for stroke units into the future are multiple and complex. However, recruitment of appropriately trained staff and ensuring appropriate staffing ratios according to BASP guidelines\(^\text{12}\) are key deficits hindering Irish stroke units meeting basic European standards for stroke units. No hospital in Ireland meets minimum stroke unit staffing requirements set down by the European Stroke Organisation, with deficits of 30% in nursing, 50% for physiotherapists, 61% for occupational therapists, 69% for clinical nutrition and 31%...
for speech and language therapists, whilst only 44% of hospitals have any access to a medical social worker and 19% have access to a neuropsychologist.\textsuperscript{13}

Going forward:
In all disciplines increased numbers of staff are required to allow them to provide appropriate care to their patients.

The role of the clinical nurse specialist should continue to evolve, with support for the development of more advanced nurse practitioners.

Doctors, both at consultant and NCHD grade, should be adequately supported to provide best patient care, service development, clinical training and research for the benefit of the stroke services.

**Thrombectomy**

The *ESCAPE trial*\textsuperscript{14} and other clinical research has demonstrated that thrombectomy is a highly effective treatment, with a potential to almost double the number of stroke victims recovering to complete independence and also reducing stroke mortality in half. HIQA, in their January 2017 Health Technology Assessment of thrombectomy\textsuperscript{15} found that a national emergency endovascular service providing mechanical thrombectomy would be cost-effective. It found that the five-year budget impact of developing a national service treating 300-400 patients a year is estimated at €7.2million.

However, allied to their assessment was the recognition of significant organisational and resource implications in providing a national service. Of particular concern was the need to ensure timely, efficient delivery of safe and effective care by addressing a series of pre-hospital, hospital and system-wide factors including “public awareness and timely presentation of patients at hospitals delivering acute stroke care, prompt access to diagnostic imaging and specialist stroke care at these units, and formalizing arrangements for the efficient transfer to and management of eligible patients at comprehensive stroke centres resourced to provide this procedure.”\textsuperscript{16}

Therefore, the ongoing development of thrombectomy must be supported by increased capacity and resources. Key to this is increased capacity in ambulance and air ambulance services to admit eligible patients countrywide up to 12 hours after symptom onset, so that all hospitals admitting a patient with acute stroke will have access to a referral pathway, with rapid assessment and transfer of suitable patients.

\textsuperscript{13} McElwaine, P., McCormack, J., Harbison, J. on behalf of the National Stroke Programme. *Irish Heart Foundation/HSE National Stroke Audit 2015*. December 2016

\textsuperscript{14} Trial, http://calgaryherald.com/health/the-great-escape-how-calgary-doctors-forged-a-new-weapon-against-stroke


\textsuperscript{16} Ibid p9
Thrombolysis

The development of a national strategy for thrombolysis delivery has seen an improvement in pre-hospital care, where all 27 sites have specific arrangements in place for the rapid transfer of acute stroke patients to hospital. In the 2015 audit the estimated national thrombolysis rate of 11% was comparable with international rates and a clear improvement from the Irish National Audit of Stroke Care 2008 in which thrombolysis provision was virtually non-existent. However, in the 2015 audit, treatment delays were shown to be frequent given that the recommended Door to Needle time in Ireland is 45 minutes. The current national Key Performance Indicator (KPI) for Thrombolysis has been 9% for the last 5 years and this has recently increased to 12% to reflect the current European average. Many Irish hospitals, however, are only achieving rates of 3-5%. Moreover, in a soon to be published European Stroke Organisation / European Society for Minimally Invasive Therapy report Ireland will come only 22nd out of 43 European countries in thrombolysis rate in 2017.

The National Stroke Audit 2015 was clear in the need for to embed the culture of hyperacute management of stroke. To increase thrombolysis rates some priority capacity and investment actions include

- Public education and raising awareness of stroke symptoms in the general population so that pre-hospital care has the opportunity to transfer patients to centres which provide this treatment
- Ensuring stroke services have the staff and infrastructure to offer patients the best treatment possible in an equitable and consistent way. As highlighted by the former head of the National Stroke Programme, Professor Joe Harbison however, working out a way to increase the rate of thrombolysis in smaller hospitals will be challenging.

Access to stroke services

Central to stroke management and recovery is that people who develop symptoms of stroke recognise these symptoms, and in doing so are then admitted to a hospital with the expertise and facilities to provide the right care. However, while it is essential that the organisation of stroke services is structurally consistent throughout Ireland, it is important that recognition is given to the effects of staff recruitment and retention, population, infrastructure and location on ability to access services. Indeed, the National Stroke Audit have identified a number of barriers that must be overcome to ensure that people have access to stroke services.

Many Hospital Groups are experiencing significant problems in opening and maintaining stroke units. In the first instance, many hospitals have problems recruiting appropriately trained professionals to staff their units. There are clear inconsistencies and inequity in access to specialist knowledge throughout the country, with some areas more affected than others. Currently, only two units (Beaumont and Kilkenny) meet British Association of Stroke Physicians Stroke Service Standards criteria for appropriate staffing ratios. The National Stroke Programme has noted that a number of hospitals including Tralee, Ballinasloe and Navan do not have adequate staff to provide the daily senior ward rounds and cover expected of a
stroke unit. Other hospitals, including Tralee and Letterkenny have had difficulty in getting nursing cover for units. In his review of stroke services, Professor Harbison has identified a number of examples where the lack of staff has meant closures of stroke units, the introduction of ambulance bypass protocols and delays in opening stroke units.17 Allied to this are critical deficits in allied health professionals.

As a consequence of the lack of qualified professionals present particularly in under-resourced and under-serviced regions, providing quality healthcare is challenging. The challenge of delivering care to smaller hospitals and regions can be tackled by providing specialist medical services using information and communication technologies. The National Cardiovascular Health Policy recommended that “Emergency stroke treatment by a consultant stroke physician should be available 24/7...Where it is not feasible to transfer... within the time-frame for emergency treatment, telemedicine supported by an on-call consultant stroke physician should be available...”18 Telemedicine is well suited to extending the reach of specialist services particularly in the pre-hospital care of stroke where treatment delays may affect clinical outcome.

A number of pertinent points on this issue must be recognised: Such on-call is quite restricting because of the need to stay close to a computer and calls in anti-social hours are frequent and time consuming. Therefore, there must be an incentive for consultants to participate and the HSE must recognise this.

The Telestroke devices currently in use in Ireland19 are becoming increasingly obsolete, dated and may need replacement into the future. More recent mobile technology, high speed WiFi, communication software and the development of the National Integrated Medical Imaging System may allow for a better means of delivering telemedicine support to peripheral centres. Capacity considerations must be given to this given the potential of telemedicine to improve care in smaller centres.

**Community services, Home Care & Rehabilitation**

Most policy to date has focused on care in the acute end of the stroke pathway. This is understandable, given the strength of the evidence for the effectiveness of care in specialist stroke units, thrombolysis and thrombectomy treatment. Services further down the stroke pathway have been more neglected, particularly once a stroke survivor is discharged from the acute service.

Of importance to stroke survivors is early supported discharge (ESD) and the provision of home help and home care services given “their clinical impact and

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17 Kerry University Hospital lacks both sufficient consultant cover, and a Clinical Nurse Specialist despite funding being provided by the programme for a CNS in 2011. Letterkenny is still struggling to open a unit. Ballinasloe lost their stroke unit following the departure of their consultant. Tullamore remains on ambulance bypass for acute stroke until staffing and funding issues can be resolved. An ambulance bypass protocol exists for Portlaoise and Blanchardstown and is to be introduced for Navan in the near future.


19 The Tallaght /Naas network adopted the devices last year
ability to reduce the risk of downstream medical morbidity resulting from immobility, depression, loss of autonomy, and reduced functional independence. The provision of comprehensive rehabilitation programs with adequate resources, dose, and duration is an essential aspect of stroke care and should be a priority in these redesign efforts."  

Previous research has indicated that more than 50% of stroke survivors require support with instrumental activities of daily living (IADL), which include housework such as cleaning and cooking as well as shopping tasks. The research highlighted that 1 to 5 years after a stroke episode, a high proportion of stroke survivors use community services, with the most frequently accessed being household services and then therapy services. With access to home help and home care services, as well as supported discharge rehabilitation, many more people would continue to live fulfilling lives after a stroke. The lack of access to home care and post-discharge therapies are major quality of life issues for stroke survivors and their families. But this also represents significant cost to the State in potentially unnecessary nursing home and hospital care. The National Stroke Programme has estimated that between 2011-2014 savings to the State of €128 million were achieved in reduced nursing home costs alone. However, with an ageing population and more prevalent risk factors that are driving a major increase in younger strokes, the incidence of the disease is already rising by 4-5% a year and is predicted to increase by 59% by 2030.

Community rehabilitation is an important part of stroke care but there continues to be a shortage of community rehabilitation services for stroke patients. The estimated cost of community rehabilitation for stroke patients in 2007 was estimated at €7 million. Furthermore, as highlighted by the National Stroke Audit, assessment of community rehabilitation for stroke patients in Ireland is limited by the absence of systematically recorded, centrally pooled data, and by large gaps in service provision. Indeed, it was noted in the audit that rehabilitation units had challenges in obtaining accurate data around number of admissions and discharge destination of patients due to a lack of a system support, such as HIPE (Hospital Inpatient Enquiry).

The 2016 audit of rehabilitation units found deficits in both the structure and volume of community services, with only 19% of sites having access to Early Supported Discharge Teams and 39% of sites having access to community rehabilitation teams. The implications for health service capacity are clear: greater access to community

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22 Economic and Social Research Institute (ESRI) and the Royal College of Surgeons in Ireland (RCSI) for the Irish Heart Foundation. Cost of Stroke in Ireland: Estimating the annual economic cost of stroke and transient ischaemic attack (TIA) in Ireland. September 2010
23 McElwaine, P. McCormack, J. Harbison, J. on behalf of the National Stroke Programme Irish Heart Foundation/HSE National Stroke Audit Rehabilitation Units 2016. October 2016
rehabilitation may lessen the burden on other services (e.g., in-patient and acute hospital services).

The uncertainty for patients around ongoing rehabilitation access is compounded by the lack of awareness of the unmet need for community rehabilitation. Indeed, the audit acknowledged the reliance being placed on the voluntary sector by rehabilitation units and the role of voluntary organisations in providing services such as functional assessments, provision of specialist neurorehabilitation services, and community support and education. The National Stroke Programme has highlighted the crucial role of development of community stroke support and the role these groups can play in terms of rehabilitation, psychological and emotional support and financial advice.

There is a large body of evidence underpinning the role of stroke support, including 2013 research conducted by the Irish Heart Foundation and the Royal College of Surgeons in Ireland which revealed a population of stroke survivors who largely feel abandoned after discharge from hospital.

The research stated: “The systematic review described how a sense of belonging could promote community re-integration after stroke while perceived stigmatisation could have the opposite effect. Several of our respondents reported feeling a lack of understanding from family, friends and strangers especially in relation to invisible symptoms. In contrast, respondents mostly spoke about a sense of belonging when they described their involvement with a stroke support group. Our respondents reported many benefits of the groups including increasing self-confidence, social interaction and being a link for help.”

While tentative work has been undertaken to assess the cost of community rehabilitation, further work is needed to calculate service levels in the community and to ensure joined-up delivery of post-acute services. This will involve increases in the number of community rehabilitation teams and assistance for patient support groups.

**Early Supported Discharge**

International studies show that 25-40% of all stroke patients can benefit from Early Supported Discharge (ESD) programmes. As far back as 2010, a UK National Audit Office report concluded that ESD programmes then delivered to 20% of stroke patients were value for money and that more than doubling ESD provision would be cost effective over a ten-year timeframe. In their 2012 Cochrane Review of Early Supported Discharge (ESD), Fearon, Langhorne & the Early Supported Discharge Trialists also concluded that: ‘appropriately resourced ESD services provided for a selected group of stroke patients can reduce long-term dependency and admission to

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24 *Experiences and long-term needs of stroke survivors living in the community in Ireland* http://epubs.rcsi.ie/sphysiorep/1/
institutional care as well as reducing the length of hospital stay ....with no observed adverse impact on the mood or subjective health status of patients or carers.\textsuperscript{27} The 2014 Economic and Social Research Institute (ESRI), Royal College of Surgeons in Ireland (RCSI) and Irish Heart Foundation report Towards Earlier Discharge, Better Outcomes, Lower Costs: Stroke rehabilitation in Ireland concludes that almost half all of stroke sufferers in Ireland – over 3,000 people each year, could avail of ESD, resulting in annual savings of some 24,000 bed days.

Pilot ESD programmes in Ireland have also proved to be effective, despite operating with less than the minimum recommended human and financial resources. The data from the three ESD pilot hospitals – Mater Misericordiae University Hospital, Tallaght Hospital and Galway University Hospital indicate bed day savings along with improvements in self-reported quality of life ranging from 9.5\% to 19.4\%.

There are a number of challenges in meeting the full potential of ESD in Ireland. To date, the establishment of these teams has occurred in a phased way and no team has a full complement of staff, which creates challenges and teams often cannot take on new patients. Teams consist of Occupational Therapy, Physiotherapy, Speech and Language Therapy with some access to Medical Social Work. To date there has been no dedicated nursing resource for these teams. Access to wider multi-disciplinary teams may only be available on an ad hoc basis. This means that there are limitations in the dependency of the patients able to be discharged, reducing the utility of the teams. Furthermore, the Acute Hospitals Division of the HSE has acknowledged that limitations exist in the number of patients accessing ESD because of limited home care packages to support patients with more moderate dependency to return home and avail of ESD.

**Prevention**

The importance of appropriate screening and management of the causes of stroke in the secondary prevention setting cannot be underestimated. Allied to capacity improvements in acute and community rehabilitation is the need for improvement of prevention of cardiovascular disease via management of hypertension and atrial fibrillation, and increased information on risk factors and lifestyle management issues (exercise, smoking, diet, weight, alcohol, and stress management).

Much of the reduction in mortality from heart disease and stroke has been from increased awareness of the hazard associated with high blood pressure and the ability of doctors in Primary Care to identify and treat it, thus highlighting the importance of preventative measures for diseases that have identifiable and modifiable risk factors. The two biggest causes- hypertension and Atrial Fibrillation - can be easily detected in a pre-clinical phase making both highly appropriate conditions for screening.

Compensating General Practitioners for performing and interpreting ambulatory Blood pressure monitors should greatly improve their ability to manage blood pressure; however, this must be accompanied by public education about the risks of high blood pressure and the importance of having it checked. Recommendation 5.27 of the National Cardiovascular Policy makes a call to “increase the proportion of the public who are aware of the major signs and symptoms of acute cardiovascular events (e.g. ACS, TIA and stroke)”, however, the number of campaigns since 2010 on these issued have been limited. In particular sustained efforts must be made to target those most at risk -men in middle age who are least likely to have their Blood Pressure checked and in whom we have seen a rise in the incidence of stroke.

A HIQA Health Technology Assessment of a national screening programme for atrial fibrillation found that it would result in the detection of one additional atrial fibrillation case for every 22 people screened from age 65 onwards, and one stroke avoided for every 270 people screened over the same period. The total incremental cost to the HSE was found to be approximately €3.7 million over the first five years, inclusive of the additional costs associated with screening ECGs and atrial fibrillation drug therapy in diagnosed cases, as well as the cost savings resulting from a gradual decrease in stroke incidence over a period of five years. The merits therefore of having routine AF screening should as part of the new primary care contract under negotiation are clear.

**Using epidemiological data to guide clinical practice**

Of pressing concern is the lack of data on quality measures and patient outcomes, which is vital to ensuring quality of care, monitoring costs and planning for future health needs. Patient registries which operate across all healthcare settings are required to ensure effective service planning and quality care for patients across the healthcare system. Given the volume of CVD patients and future projections of growth in CVD, there is a pressing need for the establishment and maintenance of registers for acute coronary syndrome, stroke and heart failure.

**Stroke Register**

The Irish National Audit of Stroke Care 2008 recommended the creation of a stroke register, which has been implemented with varying uptake. The Register is currently used by 23 of 27 hospitals admitting acute stroke and, in the last annual report, data for 19 hospitals were included. The Register data is used to generate data for Key

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28 Parliamentary Question to the Minister for Health 28770/17: “The HSE has implemented a number of campaigns to promote awareness and prevention of cardiovascular diseases in Ireland. Initiatives such as the Quit (www.quit.ie) campaign has been successful in helping people stop smoking. The National Ambulance Service’s One Life Project is focused on systematically improving outcomes for patients who suffer an out of hospital cardiac arrest in Ireland. The One Life Project not only represents our commitment to improve standards of care, it also represents our commitment to measure and publicly report on clinical outcomes of patients. The FAST awareness campaign has also been very successful in the early recognition of symptoms in stroke patients. Voluntary First-Aid Organisations such as the Order of Malta, Irish Red Cross as well as CFR Ireland and the Irish Heart Foundation have provided CPR training to thousands of people young and old including school children in performing CPR and in the use of Automated External Defibrillators (AEDs)”

Performance Indicators but the National Stroke Programme has highlighted that hospitals that don’t collect data or meet the 80% level of consistency with HIPE data are not represented in the final KPIs. This means then that the annual KPI report is slightly inaccurate.

This essential tool can provide real time information on stroke care, thus facilitating clinical audit in a more accessible and reproducible manner. Data capture and review is an essential element of any clinical and as such the stroke register should be supported and strengthened. In that regard, the staffing requirements for the stroke register need to be assessed, or governance arrangements of, and responsibility for, the stroke register must be placed within a structure that ensure the stroke register is maintained to the highest standards.
Part 2: Heart Failure & Heart Disease

With the timeframe of the National Cardiovascular Health Policy 2010-2019 coming to an end, deficiencies in cardiology services merit the development of an overarching programme in cardiology to cover the full spectrum of cardiovascular care ranging from highly specialised hospital based to community based preventative care. A coherent strategy on implementing priorities within any new programme is essential, as individual recommendations are of no use if they are implemented in an ad hoc manner. To develop such a strategy, an audit of all cardiac services is urgently required prior to the establishment of a cardiovascular register providing constant real-time information to health service planners.

Summary of Heart Failure in Ireland:

- The overall prevalence rate of heart failure in Ireland is approximately 2% which equates to approximately 90,000 people with a five year mortality rate of 36%.
- In 2012, Heart Failure accounted for 231,042 total hospital bed days; readmission rates for heart failure range between 24% to 44%; and the direct cost of heart failure to the HSE in 2012 is estimated at €158 million, 47% of which was hospital related costs.
- Over 10,000 cases of Heart Failure are diagnosed annually in Ireland.
- The total cost of heart failure in Ireland is estimated to amount to €660 million each year.
- Delayed diagnosis mainly due to difficulties for GPs in accessing diagnostic testing is estimated to lead to an increase of 23% in hospitalisation of patients with heart failure symptoms.
- Current cardiac rehabilitation services are only meeting 22% of the population’s need, with the capacity existing for only 5,000 cardiac rehabilitation course places when there is a need for 13,000 places each year.

Pertinent issues for consideration in the capacity review:

- There are considerable deficiencies in existing cardiac infrastructure to allow timely provision of equitable access to diagnostic testing and cardiovascular care in the face of ever increasing demands (For example - limited access to Coronary computed tomography angiography and Cardiac MRI in hospitals;
  National and regional deficiencies in access to specialist EP services for treatment of arrhythmias; Cardiac catheterization lab infrastructure still

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34 K M. Irish Cardiac Society calls for rapid Community Heart Failure diagnosis. Irish Cardiac Society 2016.
35 Parliamentary Question No 17259/19 to the Minister for Health
There is a lack of reliable epidemiological data, with inadequate data available currently, including validation of waiting times. This inhibits appropriate strategic planning for service needs and development. Access to Heart failure services are not nationally equitable due to lack of services in all parts of the country and the national advanced heart failure/transplant services is under resourced and understaffed to provide service with growing demands. Many patients with cardiac presentation who attend regional centres may have their care delivered by non-cardiologists. The current waiting times for cardiac surgical patients is excessive – currently there is a limit of 15 months for non-urgent patients while in the UK and Northern Ireland, there is a maximum wait time of 18 weeks for cardiac surgery.

Four areas have been identified for developing heart failure services in Ireland:

1. Explicitly mention HF within existing cardiovascular disease policies and ensure there are sufficient resources to implement the National Clinical Programme for HF (HSE) (adequately funding both general practice and hospital care)
   a. HF needs much greater recognition within Ireland’s National Cardiovascular Health Policy
   b. Dedicate more resourcing to the implementation of national plans and strategies
   c. Demand reliable epidemiological data on HF for the whole country, and develop a national audit on HF

2. Ensure that patients with symptoms of HF are diagnosed without delay
   a. Improved strategies for detecting HF earlier in its development can delay its progression. Diagnosis of HF is often late or suboptimal due to inadequate availability of diagnostic tools, particularly at general practice level.
   b. Develop a national rapid access community diagnostic service, for new onset HF – making better use of diagnostics, such as natriuretic peptide testing and echocardiography. Enable greater access to specialist opinion for GPs and other healthcare professionals.
   c. Provide high quality information and support on the particular issue of symptom recognition (i.e. to the public) and diagnosis (i.e. to medical professionals)

3. Create a co-ordinated national programme between the hospital and community to provide greater continuity of care and encourage patient self-management
   a. Better models of shared care, and clinical programmes and guidelines that set out roles and responsibilities of GPs, outpatient departments,

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emergency rooms (ERs) and specialist services, can help provide greater continuity of care.

b. We need the best available care to be consistently provided to all patients with HF through the efficient use of resources.

c. Specialist HF units offering multidisciplinary care should be the standard of care for HF patients.

4. Support a national HF prevention programme by raising public awareness of the risk of developing HF, and ensuring access to high quality information and support

a. Invest in public campaigns to raise awareness of HF and its risk factors (e.g. high blood pressure, high cholesterol, diabetes or a prior heart attack) to enable better prevention and lifestyle changes to prevent the progression to HF.

b. People with risk factors for developing HF should be screened and optimally managed as this can reduce the overall cost of care that occurs once patients develop HF

Heart failure units

Heart failure is a debilitating condition and once a person has been admitted to hospital with it there is a high chance of readmission. At present it’s estimated that some 24% of all heart failure patients are being readmitted to hospital within 12 weeks of discharge, with the figure rising to 44% after a year. The introduction of heart failure units, which provide structured, co-ordinated and multidisciplinary care, is reducing these figures. Twelve have been opened in the last five years around the country and the rates of readmission are reported to have already been halved in these units with estimated readmission at 12-15% after 12 weeks and 20% after 12 months. Mortality rates are also reported to be lower among patients treated in these units.

The HSE has advised that the cost of establishing a heart failure unit in a hospital with no pre-existing service is approximately €375,000. The funding would cover the appointment of a Consultant Cardiologist with an interest in heart failure, two Clinical Nurse Specialists and the provision of B-type Natriuretic Peptide testing facilities. This cost does not include capital costs or set up costs.

However, of the 12 heart failure units, there is just one in the whole of Munster located in Limerick, compared to six serving Dublin. The inability of patients in counties Cork and Kerry in particular to access what is internationally regarded as a basic standard of care has been described as a ‘gaping hole’ in services by the clinical lead of the HSE’s national heart failure programme, Professor Ken McDonald. Priority must be given to overcoming geographical gaps in the Model of Care for Heart Failure and a planned review of the model of heart failure care, along with an audit of existing service levels and the speedy delivery of the promised service gap analysis.

Heart Failure & the community setting
A lack of access, or problems in accessing tests from the community, leads to delays in diagnosis and emergency hospitalisations. Indeed, the head of the HSE’s National Heart Failure programme, Professor Ken McDonald has noted previously that a 6-month delay in diagnosis is estimated to lead to a 23% increase in emergency hospitalisation for people with suspected heart failure. 37

Rapid access to relevant diagnostics within a 2-6 week period, dependent on the severity of presentation, and subsequent specialist opinion within a further 4 weeks would result in speedy accurate diagnosis, careful planning of a treatment plan and significant reduction in subsequent Emergency Department attendance and emergency hospitalisation. 38

In a 2016 Report, Impact of living in the community with heart failure 39, allied healthcare professionals identified a significant need for more community resources, referral systems and education for healthcare professionals. The National Clinical Programme on Heart Failure currently operates a number of successful pilot projects on virtual clinics- a facility to support GPs to manage heart failure patients in the community. At a time of a “growing community of often unsupported heart failure sufferers trying hard to cope with inadequate services, barriers to proper care, [and] a dearth of community supports”40, a service to enable specialists and GPs to discuss cases is hugely important. The aim of the virtual clinics is stated to “reduce need for referral to outpatient department, increase confidence of GPs in managing heart failure in the community and improve GP-specialist team interaction.”41

In order to provide this service nationally for heart failure, as well as the provision of clinical nurse specialists in the community to support GPs to manage heart failure patients, €4.8million is required.42

Cardiac Rehabilitation

A HSE needs assessment for cardiac rehabilitation research completed in November 2016 showed capacity to provide cardiac rehabilitation for fewer than 5,000 patients compared with a need to accommodate almost 13,000 annually following an admission with coronary heart disease or heart failure alone – equating to an ability to meet 39% of need.

Geographical disparities are also apparent with need compared to capacity by

38 Ibid
39 Department of Psychology, Division of Population and Health Sciences, Royal College of Surgeons in Ireland (RCSI) for the Irish Heart Foundation. Impact of living in the community with heart failure. Experience of heart failure patients, their families and allied healthcare providers. 2016
40 Ibid p5
41 See Heart Failure Virtual Clinic: http://www.ehealthireland.ie/Case-Studies-/Heart-Failure-Virtual-Clinic/
42 Parliamentary Question No 21042/17 to the Minister for Health. €2.4million is required for the hospital aspect of the heart failure virtual clinic and €2.4million is required for the community aspect (clinical nurse specialists).
county varying from 9% to 75%. Referrals for cardiac rehabilitation were 41% below their target figure and HF patients were a particularly under-represented group comprising only 5% of referrals.

There were significant reductions in staffing; whole time equivalent posts had fallen by 62.7% since 2009. Some of the centres with the lowest capacity compared to need were operating nearly single handed and had minimal other services available to them, or were reliant on good will only to provide a service. Requirement for services is likely to increase due to population factors which are driving a predicted increase in cardiovascular disease of 4-5% per annum. This equates to an additional 25% of unmet need in the next 5 years alone.

The study concludes that not only does cardiac rehabilitation reduce mortality and hospitalisations, it is cost effective and has the potential to save money and reduce pressures on acute services by saving an estimated 6,090 inpatient bed days.

A 2015 HIQA health technology assessment of chronic disease self-management support interventions also found that cardiac rehabilitation can reduce re-hospitalisations in selected patients with heart failure over periods of six to 12 months.43 Similarly, research on the experiences of heart failure patients has shown that those patients who had attended cardiac rehabilitation valued it greatly.44 In order to provide adequate national capacity for cardiac rehabilitation for patients for whom cardiac rehabilitation is recommended, €8.7million will be required annually. Similarly, a €1 million once off capital cost will also be required.45

**Cardiac Surgery**

Excessive waiting lists of Cardiac surgery need to be addressed – currently there is a limit of 15 months for non-urgent patients while in the UK and Northern Ireland, there is a maximum wait time of 18 weeks for cardiac surgery. It is important to differentiate patients awaiting cardiac surgery from other conditions that have less impact on patients’ life expectancy. This is particularly important when you consider that a fifteen month waiting time is inadequate in a situation where a patient has a lifetime expectancy of two years.46

From a health capacity perspective, long waiting lists for cardiac surgery have repercussions for acute hospital capacity through lengthy and repeated hospitalisations. Similarly, the Irish Cardiac Society have noted that it is more resource-efficient to have a shorter waiting timeframe because there will be fewer emergency room visits and admissions for patients on the wait list.

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43 Health Information and Quality Authority (HIQA). *Health technology assessment of chronic disease self-management support interventions*. 16 December 2015
44 Department of Psychology, Division of Population and Health Sciences, Royal College of Surgeons in Ireland (RCSI) for the Irish Heart Foundation. *Impact of living in the community with heart failure. Experience of heart failure patients, their families and allied healthcare providers*. 2016
46 As can be the case where the patient has severe aortic stenosis with dyspnoea
In line with the 2014 European Society of Cardiology and the European Association for Cardio-Thoracic Surgery guidelines on myocardial revascularization, the issue of shorter waiting times for cardiac surgery need to be addressed. In that regard, the proposal of the Irish Cardiac Society that eighteen weeks as a maximum waiting time for cardiac surgical patients is introduced should be prioritised.