

Croí, the Heart & Stroke Charity

Pre-Budget Submission 2023



Focus: Heart Valve Disease

PRE-BUDGET SUBMISSION TO SUPPORT THE EXPANSION OF
ECHOCARDIOGRAPHY SERVICES TO IMPROVE TIMELY DIAGNOSIS
AND TREATMENT OF HEART VALVE DISEASE

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Summary

The headline recommendations from the Croí report on its *National Survey on Echocardiography Services* are:

- Ireland needs a National Cardiovascular Health Strategy and one which specifically addresses the issue of Heart Valve Disease
- The critical diagnostic test for Heart Valve Disease (and most other cardiac conditions) is an echocardiogram. Target waiting times should be less than 18 weeks for all referrals and 2 weeks for urgent referrals (defined as “symptomatic valve disease”). Ireland is failing its citizen and not meeting recommended test timelines.
- A key solution is workforce upskilling, training and recruitment.

The fastest means to achieve these headline recommendations is through the following steps, which we have outlined and costed below, based on case studies and existing examples from Sláintecare and the Higher Education Authority.

GP Direct Access to Echocardiography Services

GP Direct Access to Echocardiography Services – Ambulatory Care Hubs		
Item	Details	Cost Calculations
Chronic Disease Ambulatory Care Hubs	Cost per hub	€212,817
	Phase 1 (18 Hubs)	€3,830,708
	Phase 2 (14 Hubs)	€2,979,439
Total	Nationwide provision	€6,810,147

Structured Post-Graduate Programme

Post-Graduate Programme in Technological Universities		
Item	Details	Cost Calculations
Cost per student	Based on HEA review	€10,379
Cost per institution	30 students per class cohort	€311,370
Total	Two institutions (TU Dublin & ATU Sligo)	€622,740

A funding allocation of €7,432,887 will quickly address challenges of waiting lists and workforce planning, in the long term, with enormous impact on patients’ quality of life and with significant savings for the exchequer through more optimal outcomes in the patient pathway.

Introduction

Croí's aim is to lead the fight against heart disease and stroke, to prevent disease, save lives and promote recovery & wellbeing. We do this at the centre of our communities, raising awareness on a local and national level about the risk factors for heart disease and stroke. We develop and deliver education, prevention and healthy lifestyle programmes to individuals, families and communities.

Croí's work is practical and effective, across all our areas of operation. We provide accredited education and training for healthcare professionals and deliver CPR and defibrillation training to the general public. We provide accommodation and support at the Croí Heart and Stroke Centre for the relatives of those receiving heart or stroke care at Galway University Hospitals.

Croí represents the voice of the patient and carer. We amplify the patient voice, advocating for improved services and empowering patients to advocate for themselves. We do this through a values-led and evidence-based approach, to engage with decisionmakers for the best interests of heart and stroke patients. It is in this spirit that we have prepared this year's pre-Budget submission.

Among the wide array of conditions affecting our patients, this document focuses solely on heart valve disease, a serious heart condition which can be fatal if left undetected and untreated. It is largely (but not exclusively) a condition of ageing and as the global population is steadily getting older, heart valve disease is on the rise. Through our work we have identified numerous inequities in the diagnosis and treatment of heart valve disease.

To achieve practical progress in addressing these inequities, we compiled the *National Survey on Echocardiography Services*, with responses from 92% of hospitals in Ireland. Echocardiography is a critical diagnostic test for the discovery of heart valve disease. Drawing on our expert respondents, this survey provides practical and tangible recommendations to improve access to echocardiograms and bring greater equity to the healthcare received by patients.

The pre-Budget submission that follows provides a financial underpinning to the survey's recommendations, with our key immediate recommendations costed and cross referenced.

Section 1 outlines the headline challenges and recommendations – namely the renewal of the now elapsed National Cardiovascular Health Strategy and the reduction of waiting times. Section 2 demonstrates address our key recommendation to provide direct GP access to echocardiography services, something which currently exists for 80% of private patients but only 19% of those in the public system. We demonstrate how achievable and affordable it is, through a pilot scheme run by our colleagues in Galway University Hospital, and we look at how best to expand access through Ambulatory Care Hubs.

Section 3 relates to workforce planning and is relevant to both the Department of Health and the Department of Further and Higher Education. As our survey shows the challenges of reducing waiting times and providing GP direct access without the workforce to implement it, we have also exposed the vulnerabilities that exist. Cardiac physiologists are the key professionals who provide echocardiography services, and we have provided costed recommendations to educate, hire and accredit enough new graduates to meet our ever-growing need.

1. Headline Challenges & Recommendations

1.1. National Cardiovascular Health Strategy

The Department of Health urgently needs to commission a new National Cardiovascular Health Strategy which specifically includes heart valve disease. The absence of an updated national strategy for cardiac care since the previous plan expired in 2019 greatly hampers the speedy diagnosis and effective treatment of heart conditions. Furthermore, heart valve disease was not mentioned in the previous strategy, and it remains a relatively overlooked condition – one which impacts an ever-greater proportion of our population, and which is treatable. When it comes to the allocation of echocardiography services, other conditions with an up-to-date national strategy, such as oncology, receive greater priority than structural heart conditions.

Our costed recommendations below will help expand access for all patients in need of echocardiograms, whether in oncology or cardiac care. However, the cost estimates we provide for specific measures must be underpinned by a National Cardiovascular Health Strategy, which provides a cohesive framework for governance and resource allocation.

The new National Cardiovascular Health Strategy should be linked to a multiannual budgetary framework to be reviewed against ambitious targets and regularly updated throughout its period of implementation. The most urgent starting point is to provide targeted funding in Budget 2023 to expand GP direct access and community-based echocardiography services. This submission provides the key cost estimates to implement these first tangible and achievable measures.

1.2. Waiting Times

Croí's National Survey on Echocardiography Services shows wide disparities in routine referral times across hospital models, groups and depending on whether a department is public or private. Six out of the ten private hospitals in our sample have routine waiting times of under one month, while only one of them has a waiting time in excess of three months. By contrast, 4-6 months is the starting point for routine referrals in all public hospitals. Worryingly, 67% of Model 3 public hospitals and 38% of Model 4 public hospitals have waiting times of over one year.

When compared to international guidance, we see that most public hospitals have waiting times that exceed expert recommendations. The UK's National Institute for Health and Care Excellence (NICE) recommends a turnaround of six weeks for the provision of routine echocardiograms and that urgent referrals should be completed within two weeks. Within the Irish public system, 62% of public hospitals exceed the six-month benchmark for routine referrals.

While waiting lists are a regular point of discussion in Irish media and politics, Croí's survey and recommendations, outlined and costed in Section 2 and Section 3, provide a tangible framework for a relatively quick win.

2. GP Direct Access to Echocardiography Services

2.1. Hospital & Community Diagnostics – Case Study

In 2018, Galway University Hospital launched a programme under Sláintecare to increase GP direct access to echocardiography and spirometry diagnostics. It covered the full geographical area for patients whose GP practices traditionally refer them to GUH, including Galway, north Clare, and parts of Mayo. With the expansion of capacity in the pilot programme, GUH was able to deliver 2,000 diagnostic slots per year.

The effective delivery of a programme such as this requires the provision of sufficient equipment and resources, as well as a wraparound team to fulfil the service requirements. The outlay for equipment was as follows:

- Portable echo machine €50,000
- 10 Holter monitors €20,000
- 4 Height adjustable echo stands €10,000
- Electrodes, Gel, Batteries, Gowns and other consumables cost approximately €5000

There were additional mileage costs of €5,120, while the hire of clinical space cost €39,000. This was due to lack of space in available HSE facilities in the community. Aside from this, there were no capital works required, and the service could be delivered very effectively within the above parameters.

The team to provide this service consisted of three professionals, each with a varying time allocation.

- Senior Cardiac Physiologist (1 whole time equivalent)
- Administrator/Grade IV Clerical Officer (0.5 whole time equivalent)
- Consultant Cardiologist (0.2 whole time equivalent)

The full calculations are provided below for the two-year pilot programme. Salaries are calculated based on the average midpoint on the scale for each of the professionals outlined. It should also be noted that costs reduce considerably in Year 2 as the initial outlay for equipment is no longer necessary.

GUH found that, at that time, it was possible to have this service up and running within three months of funding approval. This represents a tangible and quick means to address detrimental waiting times for such a key diagnostic test. Their fast progress was facilitated by the existing

GUH Community Cardiac Diagnostics Service under Sláintecare, which had commenced in November 2020 and now sees 35-40 patients per week in centres in Galway, Tuam, Claremorris and Gort. This is fully integrated within the hospital system, and all images and reports are uploaded to the hospital IT system and electronic chart. GP summaries with guideline driven recommendations form part of all reports, and onward referral pathways are agreed.

Some of the barriers identified include the challenges and delays in recruitment and recruited staff becoming available. This is an element we address in Section 3 on workforce planning. Added to this, securing space in primary care centres has proven difficult, particularly post-COVID as these centres reconfigure to provide care. A cost for hire of clinical space 5 days per week has been included in the cost but this may not be required in full depending on access to HSE Primary Care Centre space

Year 1					
Staffing WTEs	Units	Salary	Pro rata pay	PRSI	Unit Cost
Consultant Cardiologist	0.2	€155,353.00	€31,070.60	€3,340.09	€ 34,410.69
Senior Cardiac Physiologist	1	€49,000.00	€49,000.00	€5,267.50	€54,267.50
Grade IV Clerical Officer	0.5	€34,050.00	€17,025.00	€1,830.19	€18,855.19
Item	Narrative	Unit Cost		Units	Subtotal
Portable Echo Machine		€50,000.00		1	€50,000.00
R Test Monitors		€2,000.00		10	€20,000.00
Height Adjustable Echo Stands		€2,500.00		4	€10,000.00
Clinical Room Rental					€39,000.00
Mileage	4 x 80km roundtrips per week				€5,120.00
Consumables	Electrodes, batteries, ultrasound gel				€5,000.00
Total Cost Year 1					€236,653.38
Year 2					
Staffing WTEs	Units	Salary	Pro rata pay	PRSI	Unit Cost
Consultant Cardiologist	0.2	€155,353.00	€31,070.60	€3,340.09	€ 34,410.69
Senior Cardiac Physiologist	1	€49,000.00	€49,000.00	€5,267.50	€54,267.50
Grade IV Clerical Officer	0.5	€34,050.00	€17,025.00	€1,830.19	€18,855.19
Item	Narrative	Unit Cost		Units	Subtotal
Clinical Room Rental					€39,000.00
Mileage	4 x 80km roundtrips per week				€5,120.00
Consumables	Electrodes, batteries, ultrasound gel				€5,000.00
Total Cost Year 2					€156,653.38
Total Overall Cost					€393,306.75

2.2. Chronic Disease Ambulatory Care Hubs

A key element of Croí’s proposals to provide for GP direct access is the provision of Chronic Disease Ambulatory Care Hubs. Each will serve several Primary Care Centres and will have oversight from the relevant Model 4 hospital.

The *Integrated Care Programme for Chronic Diseases* envisages each Chronic Disease Ambulatory Care Hub will serve a population of approximately 150,000 people. Phase one plans for 18 hubs associated with 11 hospitals while Phase 2 envisages a further 14 hubs associated with 14 acute hospitals.

Croí’s estimate, based on the case study in Section 2.1 and on previously documented experience, and an assumption of a 09:00-17:00 Monday-Friday service is that each hub would require the following staff allocation:

- Senior Cardiac Physiologists (1.2 whole time equivalent)
- Administrator/Grade IV Clerical Officer (0.5 whole time equivalent)
- Consultant Cardiologist (0.3 whole time equivalent)

For ambulatory care hubs, the outlay for equipment will be:

- Portable echo machine €50,000
- 10 Holter monitors €20,000
- 4 Height adjustable echo stands €10,000
- Electrodes, Gel, Batteries, Gowns and other consumables cost approximately €5000

This approach will bring additional travel costs, estimated at 240 clinics per year, and an average of 30km from base per clinic. Travel costs will range between €3,000 and €10,000 per hub.

Ambulatory Care Hubs					
Staffing WTEs		Salary	Pro rata pay	PRSI	Unit Cost
Consultant Cardiologist	0.3	€155,353.00	€46,605.90	€5,010.13	€51,616.03
Senior Cardiac Physiologist	1.2	€49,000.00	€58,800.00	€6,321.00	€65,121.00
Grade IV Clerical Officer	0.5	€34,050.00	€17,025.00	€1,830.19	€18,855.19
Item	Narrative	Unit Cost	No. of Units	Subtotal	
Mileage	240 clinics average 30km from base	€13.44	240	€3,224.88	
Portable Echo Machine		€50,000.00	1	€50,000.00	
R Test Monitors		€2,000.00	10	€20,000.00	
Consumables	Electrodes, batteries, ultrasound gel	€4,000.00	1	€4,000.00	
Cost per hub			No. of Units	€212,817.10	
Total Cost Phase 1			18	€3,830,707.83	
Total Cost Phase 2			14	€2,979,439.42	
Total				€6,810,147.26	

Depending on existing levels of integration, there may be some costs in integrating Cardiovascular IT in the associated hospitals with the hubs. Equipment costs would also need to include a service contract after year 2. These are in place already across many systems and typically amount to 10% of purchase price. Some funding has been allocated for cardiac physiologists within the hubs but given the current lack of trained workforce, there is a high risk that this will remain unspent.

As the table above shows, based on current projections, the full implementation of Phase 1 will cost €3,830,707.83 while Phase 2 will cost a further €2,979,439.42. Our earlier case study demonstrated the improvements in efficiency and speed of access to echocardiography services when GP direct access was provided by Galway University Hospital. This proposal for ambulatory care hubs provides a means to replicate this approach nationwide for a comparatively small capital outlay.

3. Workforce Planning

3.1. Workforce Analysis & Development Plan

Croí's *National Survey on Echocardiography Services* provides tangible and achievable recommendations to improve access to echocardiography services. Yet their achievement is hugely dependent on the key workforce in the provision of echocardiography – Cardiac Physiologists. Therefore, the survey also assessed the demands placed upon Cardiac Physiologists, as well as their experience levels and qualifications.

Given Ireland's ageing population and the growth in the number of patients experiencing heart valve disease, it is apparent that longer-term planning is crucial to the success and sustainability of these services. When vacancies arise, waiting times are exacerbated as hospitals struggle to find replacements in a timely manner.

Currently, there are no cardiac physiologists with under five years' experience in any of the Model 2 hospitals surveyed. The supervisory and on-the-job training model will need to be reassessed to ensure the ongoing viability of these units, while pay, conditions and optimal career paths should be assessed to put it on a sustainable footing.

There is significant demand for Cardiac Physiologists, not only in Ireland, where there is a large number of vacancies, but also in the UK, Australia, and the Middle East. The projected demand is outside the scope of this document but as a marker, the Enhanced Community Care Programme for Chronic Disease Management is looking to recruit 48 Senior Cardiac Physiologists immediately. Staff of this calibre and seniority are not freely available, and if filled, from the current workforce, could simply decimate the hospital-based services.

Of the current workforce, only 35% are fully accredited in echocardiography. Croí recommends supporting cardiac physiologists in their training and accreditation needs through the British Society of Echocardiography (BSE) and the European Association of Cardiovascular Imaging (EACVI). Those seeking accreditation should be afforded the time and scope necessary to complete any additional work required. This initial certification, and further recertification at 5- and 10-year intervals needs to be factored into training and continuous professional development budgets. Accreditation through the EACVI costs €582, while through the BSE it costs £275.

3.2. Structured Post-Graduate Programme

To fulfil the needs of the Irish health system and provide a sufficient cardiac physiologist workforce trained in echocardiography, Croí's report on the National Survey on Echocardiography Services recommends that the Department of Further and Higher Education launches a structured graduate programme which would support the 35% of Cardiac Physiologists who are not trained in echocardiography and bring them to the point of certification.

In the UK, there are useful examples of such courses in Swansea University and the University of Leeds, where the student fees are £3,800 (£9,500 for international students). In Ireland, the Technological Universities have ample capacity to provide these courses, with appropriate faculty staff available in ATU Sligo and TU Dublin.

Per the Higher Education Authority's Review of the Allocation Model for Funding Higher Education Institutions Working Paper 6: Cost Drivers and the Costing System Underpinning Higher Education, the cost of providing a course is approximately €10,379 per student, while student fees for post-graduate courses in ATU Sligo are charged at €2000-3800 per year. Based on a cohort of 30 students per year in each educational institution, this will cost the state up to €312,000 per institution, in the event that student fees are waived as an incentive to new students. With student fees added, the cost would be much lower.