



**DELIVERING THE RIGHT CARE,
AT THE RIGHT PLACE,
AND AT THE RIGHT TIME**

**Outcomes
from a digital
Cardiovascular
Prevention &
Rehabilitation
programme
delivered during
the COVID-19
pandemic, 2020**



A report prepared by Croí



Fighting Heart Disease & Stroke

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Sláintecare.



**Rialtas na hÉireann
Government of Ireland**

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“You have helped me understand what heart failure is and have taught me how to live with it and maintain my condition. Without this service I would be in a very different place right now. I feel confident that I can live with my condition with the tools and knowledge you have given me. The MySláinte programme really has saved my life.”

- Niall, Co. Galway

FOREWORD

As the Research & Medical Director with the National Institute for Prevention & Cardiovascular Health (NIPC) and the Medical Lead for the Croí MySláinte programme, I am both immensely proud of and very excited about this report. Over more than a decade, Croí has cultivated expertise that is unrivalled in Ireland in the design, delivery and evaluation of cardiovascular prevention and rehabilitation programmes. This expertise was recognized in 2021 when Croí became the first Irish organisation to be accredited by the European Association of Preventive Cardiology (EAPC) for its work in cardiovascular risk management and prevention. Croí is one of only eleven organisations across Europe to be awarded the status.

Croí MySláinte, a digital cardiovascular prevention and rehabilitation programme, truly represents the Sláintecare mission of providing the right care, in the right place, at the right time. Pivoting in response to COVID-19 in a very short space of time from an in-person to a virtual programme, Croí MySláinte provides a much needed benchmark for innovation in the care for chronic conditions.

The results of the Croí MySláinte programme are simply outstanding. In Ireland we desperately need to improve on our historically poor uptake of cardiovascular prevention and rehabilitation programmes. This report provides impressive preliminary evidence for the acceptability, feasibility and effectiveness of Croí MySláinte – for example, uptake of over 70% and retention of over 80%, significant rates of engagement by participants, and highly significant changes in key cardiovascular risk factors, including blood pressure, cholesterol, physical activity and psychosocial variables. Improving these risk factor will have positive knock-on effects on factors including return to work, healthcare utilisation and long-term cardiovascular outcomes.

In the context of unprecedented pressures on the Irish health system as we emerge from the worst impacts of the COVID-19 pandemic, innovative models of cardiovascular prevention and rehabilitation are more important than ever. The mainstreaming and scaling up of programmes addressing national priorities for shifting care away from hospitals and into the community and supporting people to stay well at home must now be escalated as the system and society deal with the staggering array of individual and service impacts of the pandemic, including waiting lists and delayed presentations for diagnosis and treatment.

Across my roles, including as a Consultant Cardiologist, I have seen how suboptimal cardiovascular prevention and rehabilitation can result in worse outcomes for patients. Given the outstanding success of Croí MySláinte, in terms of health outcomes, patient engagement and the implementation lessons learned by the Croí team, I believe we have the opportunity to leverage the outputs of this programme as part of local and national efforts to address cardiovascular disease, one of the most pressing health service problems. With further support and investment, the resources, protocols, materials and online programme delivery experience gathered through this Sláintecare Integration Fund project could go on to inform and shape services, for example, in the new community-based Integrated Care Ambulatory Hubs; thereby benefiting managers, service providers, and patients alike.

This report illustrates what can be achieved through partnerships with community organisations, and benefits to patients that are possible through support for innovation. I believe that, with ongoing support, Croí MySláinte can become a true, national exemplar of the impact of Sláintecare on heart and brain health among the Irish population.



Prof Bill McEvoy,
Professor of Preventive Cardiology at NUI Galway;
Consultant Cardiologist at University Hospital Galway;
Medical and Research Director of the National Institute for Prevention & Cardiovascular Health (NIPC)

INTRODUCTION

In September 2019, Croí, the West of Ireland Cardiac & Stroke Foundation, was awarded Sláintecare Integration Funding to develop an innovative, community-based, interdisciplinary, lifestyle intervention known as '**Croí MySláinte**'. Designed to improve risk factors across a wide spectrum of chronic diseases including cardiovascular disease (CVD), Croí MySláinte was one of 122 projects selected from 477 applications, which was successful in meeting the goals of the Integration Fund:⁽¹⁾

- » Demonstrating innovative ways in which citizens can engage in their own health.
- » Representing best practice in the management of chronic diseases and caring for older people.
- » Encouraging innovations in shift of care to the community or promote hospital avoidance.

However, as the Croí MySláinte programme was about to commence in March 2020, it coincided with the COVID-19 pandemic and all face-to-face programme activity ceased. Consequently, a rapid re-organisation of the project took place, with the priority being to meet the needs of cardiac patients who were no longer able to access vital hospital-based prevention and rehabilitation services. The mode of delivery pivoted from face-to-face to online and an interactive platform to support the delivery of a web-based, CVD prevention and rehabilitation programme was developed. This enabled patients to receive timely access to a structured, comprehensive risk factor management, and lifestyle modification programme from the comfort and safety of their home.

Despite the significant challenges presented by COVID-19, **Croí MySláinte was successfully delivered over a 4 month period and within the original Sláintecare project timelines.** All key performance indicators were achieved with significant improvements in cardiovascular health being attained. Importantly, patients deemed the programme acceptable, embracing the technology and actively utilising the self-management tools provided.

Croí MySláinte signals a **new opportunity to deliver preventive care** in a different way that meets with patient preferences, enhances service delivery and achieves best practice guidelines in CVD prevention. This report provides a summary of the key outcomes and achievements of the project and offers practical insights and learnings which will help inform the Sláintecare 2021-2023 reform programme of improving safe, timely access to care, and promoting health & wellbeing.⁽¹⁾



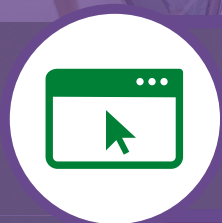
Key programme highlights

105 patients were referred to the programme



74% programme uptake and **84%** retention rate

423 virtual consultations were conducted using zoom, video conferencing



2,540 engagements with the virtual platform

Physical activity levels increased **six-fold** from **14%** to **82%**



Anxiety levels were more than **halved** from **40%** to **17%**

Depression levels more than **halved** from **22%** to **10%**



Blood pressure control improved from **24%** to **68%**

LDL cholesterol improved from **14%** to **41%**



BACKGROUND

CVD is one of the leading causes of death and disability in Ireland, with approximately half of all deaths occurring in patients with already established CVD.^(2, 3) Following a cardiac event, comprehensive Cardiac Rehabilitation (CR) programmes have been shown to reduce cardiovascular mortality and morbidity, improve quality of life and reduce hospital readmission rates.⁽⁴⁾ However, despite this compelling evidence there are challenges regarding uptake and accessibility, which extend beyond issues of programme availability.⁽⁵⁾ During the COVID-19 pandemic, these challenges were further exacerbated with reported attendance rates at CR dropping by as much as 70% due to staff redeployment and closure of units.⁽⁶⁾

It is widely accepted that existing hospital-based CR programmes are not suitable for everyone and in line with the Sláintecare recommendations there is a need to look at alternative models of care, including **digital health** that enable people to live well with their condition from home. Croí MySláinte is one such alternative that has demonstrated success in providing patients with efficient and timely access to comprehensive preventive care which otherwise may not have been available to them due to the pandemic.

WHAT IS CROÍ MYSLÁINTE?

Croí MySláinte is a 12-week, **digital CVD prevention and rehabilitation programme**, which is delivered by a specialist, interdisciplinary team (Cardiovascular Nurse Prescriber, Physiotherapist, Dietitian) with sessional Psychology and Cardiologist support. The programme addresses the medical and lifestyle drivers of CVD, whilst providing important psychosocial support at a time of increased anxiety and social isolation for patients. Croí MySláinte was designed and developed with input from key stakeholders including patients, health care professionals and an E-learning technologist. It is modelled on the evidence-based MyAction programme^(7, 8) and aligns to best practice international guidelines for **remote delivery of healthcare to CVD patients**.^(9, 10) The key steps to programme development and implementation are outlined in figure 1.

The core components of Croí MySláinte include: **lifestyle modification** (smoking cessation, healthy food choices, and physical activity), **medical risk factor management** (blood pressure, lipids, and glucose) and electronic prescribing of **cardio-protective medication** where appropriate. The programme is delivered using a web-based platform (see figure 2) which hosts a wide range of interactive educational resources, including bespoke, pre-recorded videos and embedded links to weekly live Zoom sessions. Croí MySláinte adopts an **integrated care approach** to care with cardiac patients being referred from multiple sources including cardiac rehabilitation units, hospital cardiology departments and general practice.

Once a patient agrees to participate in the programme, they are invited to attend an individual virtual consultation with the health team (nurse, dietitian and physiotherapist). Following this initial assessment they receive access to the online platform and attend a group-based, 2 hour live session once a week. This includes an exercise component, goal setting and an interactive workshop. The programme places a strong emphasis on self-management by utilising specific behavioural change techniques and self-monitoring tools. For example, all participants are provided with a blood pressure monitor for home measurement, a Fitbit to track their steps, heart rate and exercise progression, food and exercise diaries and a workbook to support goal setting and overall tracking of progress.

The objective is to equip individuals with the knowledge, skills and confidence to make changes to their lifestyle in a realistic way that can be sustained long-term. Weekly virtual interdisciplinary team meetings are held to review lifestyle, risk factor and therapeutic goals and where necessary, the nurse prescriber optimises medication, working in collaboration with the Cardiologist, GP and Pharmacist. The patient care pathway is illustrated in figure 3.

Patient outcomes measures were based on the primary endpoints for lifestyle, risk factor and therapeutic goals as recommended by the European Society of Cardiology (ESC) best practice guidelines for Hypertension,⁽¹¹⁾ Dyslipidaemia⁽¹²⁾ and CVD Prevention.⁽¹³⁾

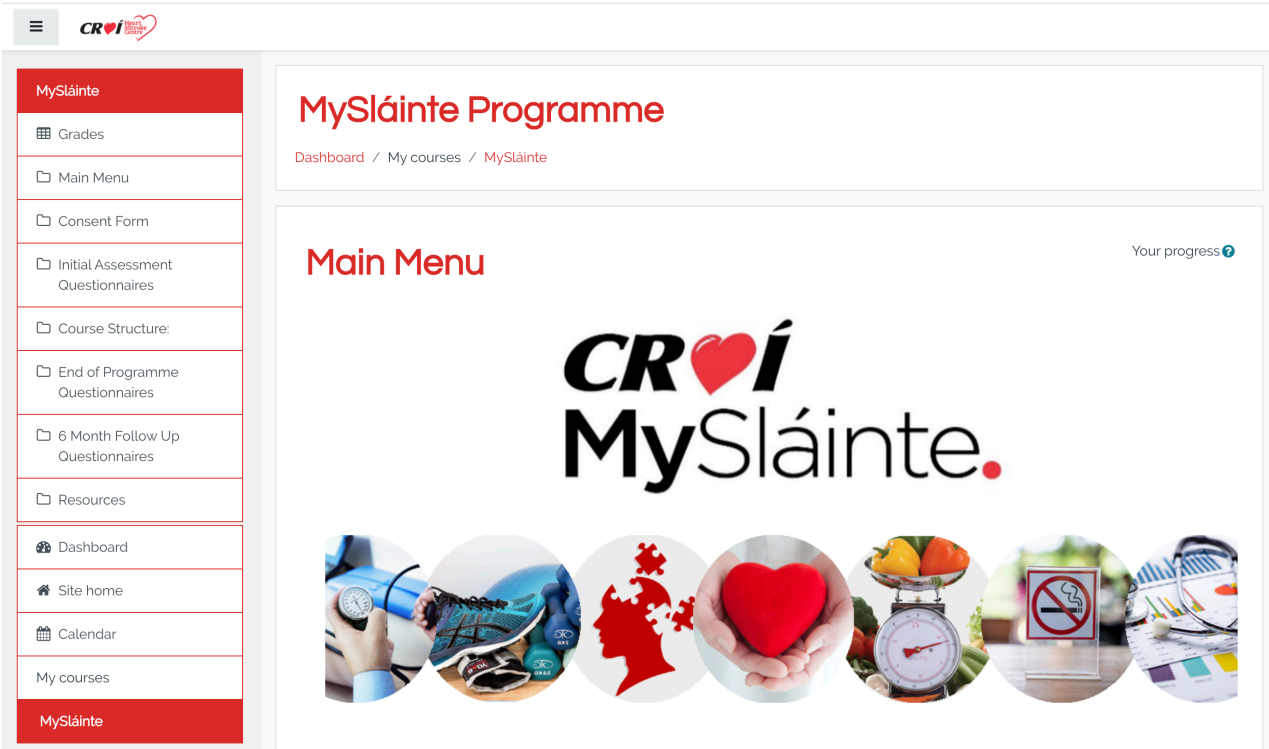
Figure 1. Key steps to programme implementation

Programme implementation involved:

- » Identifying a suitable **virtual platform** to support online programme delivery. Given the short timelines of the project, an existing learning platform (Moodle) was utilised.
- » Development and adaptation of **programme materials** for online delivery, including clinical documentation, referral forms, educational resources, pre-recorded presentations, workshop lesson plans, and evaluation forms.
- » Establishing efficient **referral pathways**, to ensure seamless patient care with successful integration between key stakeholders. These included the referral centres (Saolta University Hospitals in Galway, Mayo & Sligo, Galway Clinic and Bon Secours Hospital Galway) and GPs.
- » Development of **virtual care protocols, policies and procedures**, to ensure safe, high-quality programme delivery.
- » **Training Croí healthcare professionals in the use of virtual technology** and delivery of remote health care.
- » Provision of **technical guidance for patients**, supporting access to online platform, and use of zoom.
- » Identification of strategies to **monitor and measure programme outcomes virtually**. This was a collaborative effort, whereby GPs supported by obtaining clinical measures such as bloods, the referral centres provided functional capacity testing and patients completed self-administrated questionnaires online and measured their own blood pressure using the provided monitors.



Figure 2. Croí MySláinte Online Platform

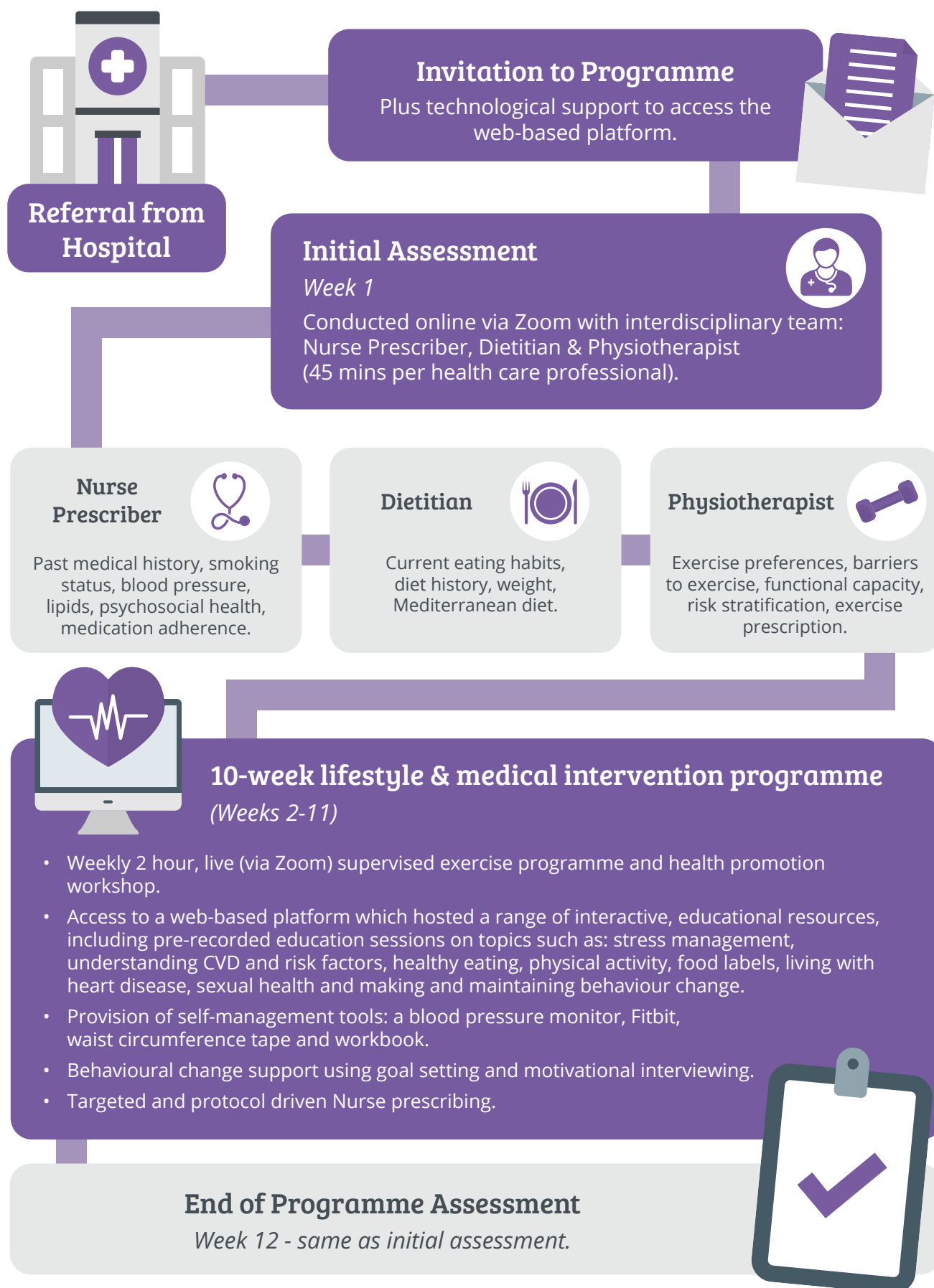


Course Structure:



Screenshots from the Croí online platform, Moodle, showing the digital interface for the weekly sessions on the top panel and a more detailed example of one of those sessions on the bottom panel.

Figure 3. The Patient Care Pathway



DELIVERING TO THE SLÁINTECARE PROJECT TARGETS

Croí MySláinte successfully achieved and exceeded the agreed project targets with significant improvements in medical and lifestyle risk factor management and psychosocial health being attained (see Appendix 1). Whilst acknowledging the short duration of the project and small sample size, these outcomes are comparable and exceed results achieved in similar programmes delivered in the traditional face to face format.^(7, 8)

“This programme has given me the information, skills and motivation to maintain the lifestyle changes that I have implemented during the course.”

- Leslie, Co. Mayo

Target 1: Deliver a virtual model of care to patients affected by cardiovascular disease

Croí MySláinte successfully recruited patients at high cardiovascular risk (figure 4) who presented with multiple, poorly controlled cardiovascular risk factors (table 1). In addition, many of these patients are also living with multiple other chronic conditions such as diabetes, arthritis, chronic kidney disease and cancer. The age range of participants was between 35 and 84 years with the average age being 63 years. 81% (n=52) of patients were male, 36% had a medical card and 60% had private medical insurance.

Figure 4. Recruiting Diagnosis

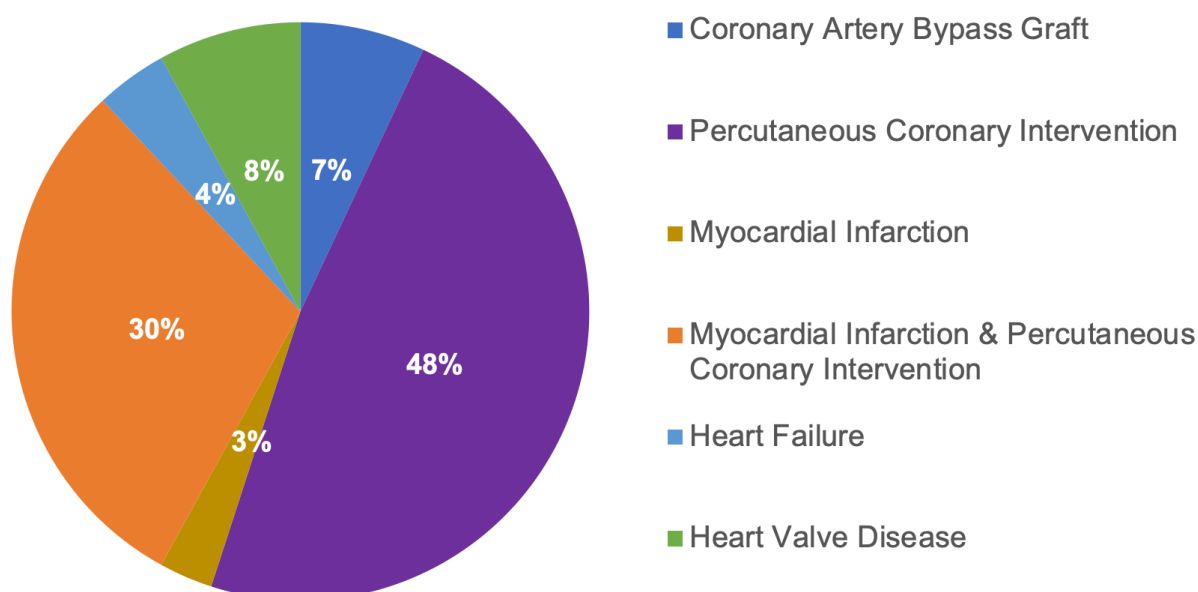


Table 1. Baseline risk factor profile of patients

Risk Factors		Patients (n=77)
Physical Activity	% NOT achieving targets (150 minutes/week)	86
Diet	% NOT achieving recommended Mediterranean Diet Score (optimal score ≥ 9)	97
Anthropometrics	% Overweight (BMI $\geq 25\text{kg/m}^2$)	48
	% Obese (BMI $\geq 30\text{kg/m}^2$)	27
Smoking	% Smokers	3
Psychosocial	% with raised Anxiety levels ≥ 8	38
	% with raised Depression levels ≥ 8	21
Erectile Dysfunction	% males with mild to severe Erectile Dysfunction	55
Cholesterol	% NOT achieving recommended LDL targets ($\leq 1.4\text{ mmol/l}$)	87
Blood Pressure	% NOT achieving recommended targets ($\leq 130/80\text{mmHg}$)	76

Target 2: Achieve a 50% programme uptake and retention rate

A total of 105 patients were referred to the programme between July 2020 and August 2020. Uptake and retention rates to the programme were high with 97% of patients (n=75) who attended the initial assessment (n=77) enrolling in the programme. Of this group, 64 (85%) completed the programme with a median attendance of 9/10 programme sessions. The main barriers to participation include poor digital literacy skills, inadequate IT support (equipment and broadband), other health issues and family commitments.

Target 3: Increase programme accessibility to those living in remote locations

One of the key advantages of virtual delivery is that it can increase access to those living in remote areas. 56% of all patients (n=43) who participated in Croí MySláinte were from outside of Galway demonstrating the programme's wide reach into counties such as Mayo (n=30), Sligo (n=11), Limerick (n=1) and Donegal (n=1).

Target 4: Achieve a 20-30% improvement in physical activity levels

There was a significant increase in the proportions meeting the physical activity targets from 14% at baseline to 82% at end of programme. Achieving this level of physical activity has been shown to be associated with a 20-30% reduction in cardiovascular events.⁽¹⁴⁾ Importantly, these self-reported measures were accompanied by objective evidence of improved functional capacity of 2.1 Metabolic Equivalent (MET). For every MET increase there is an 8-17% associated reduction in all-cause mortality.⁽¹⁵⁾ These significant improvements can be attributed to the individualised exercise prescription, weekly goal setting and online exercise sessions and the provision of a Fitbit which enhanced motivated and supported individuals to track their progress.

Target 5: Achieve a 2-3% reduction in weight

BMI significantly reduced between time points, with a mean reduction of 1kg/m². This was accompanied with a corresponding weight loss, on average of 2.7 kg. Over half (57%) of participants lost more than 2% of their bodyweight, with 23% losing 5% or more. The individualised support and goal setting provided by the dietitian using food diaries, coupled with group based education sessions (reading food labels, emotional eating and the cardio-protective diet) helped support participants to manage their weight and achieve a cardio-protective diet.

Target 6: Achieve a 10% improvement in the management of cholesterol and blood pressure

The number of patients achieving the recommended cholesterol LDL target of <1.4 mmol/l increased from 14% at baseline to 41% at end of programme with a mean reduction of 0.76 mmol/l being observed. These reductions are associated with a 15% reduction in CVD mortality and non-fatal myocardial infarction.⁽¹⁶⁾

For blood pressure, the proportion meeting the recommended targets (<130/80mmHg) increased by 44%, with a significant mean reduction of 19.5mmHg in systolic blood pressure observed. These improvements are associated with a 17% reduction in risk of coronary heart disease and a 27% reduction in risk of stroke.⁽¹⁷⁾

The improvements to blood pressure and cholesterol may be attributed to the increased prescribing of cardio-protective medication, coupled with the benefits associated with improved self-management and lifestyle modification.

Additional project benefits

Extending beyond the achievement of the aforementioned targets, the programme has had additional benefits on CVD health.

There were significant improvements in psychosocial health with anxiety levels reducing by 23% and depression by 12%. These reductions are significant as raised anxiety and depression levels are associated with a two-fold increase in CVD death and all cause mortality.⁽¹⁸⁾ Improvements can be attributed to the programmes strong emphasis on addressing psychosocial health through groups based activities, stress management and referral to a Psychologist. Furthermore, it is well established that a healthy diet and regular physical activity can have a positive impact on quality of life and symptoms of anxiety and depression.

Adherence to the Mediterranean Diet increased by 2.1 units. The Mediterranean Diet is recommended as the first line dietary advice in the protection against CVD with an increase of 1.5 units being associated with a 30% relative risk reduction in CVD events.⁽¹⁹⁾

Led by a nurse prescriber and with the support of a Consultant Cardiologist, the programme successfully implemented electronic prescribing. This resulted in a significant increase in the prescription of cardio-protective medications in accordance with evidence-based guidelines.^(11, 12) For example, the proportion of people on statins increased from 19% to 45%.

MEETING THE PATIENT NEEDS

The high programme uptake and retention rates demonstrate the acceptability of the programme to patients. Patients are receiving timely access within three weeks of referral to an evidence-based, comprehensive digital Cardiac Rehabilitation (CR) and Prevention programme which otherwise may not be available to them or they would have been placed on a growing waiting list for care. The patient evaluation report (appendix 2) along with informal feedback and insights obtained from a qualitative focus group give an insight into the patient perspective of the programme.

Patients reported that the programme acted as an important opportunity and catalyst for improving their health behaviour. Knowledge acquired on the programme, together with the actions required to self-manage (monitor blood pressure, track fitness and weight) empowered participants to better manage their health. Patients believed that this improved their confidence and relationship with their GP as they felt they were “more in the driving seat”. The convenience and timing of the programme, despite some experiences of technological issues, was identified as important with many patients reporting waiting between 3 months to a year to receive CR prior to accessing Croí MySláinte. The peer support component was highly valued: *“I didn’t think it would be possible for me to do a programme like this as I am caring for my wife with Alzheimer’s, but online access is a lifesaver. I can connect with people and not feel so alone”*. The expert, personalised care received from the interdisciplinary team was seen as critical to the programme’s success.

In addition to meeting the patient needs, the programme was highly valued by the health care professionals who referred patients to the programme:

“The online MySláinte programme was very successful and went down well with our patients. We are hoping to get Rehab up and running again soon in Sligo University Hospital. However our numbers will be limited and our waiting list is now huge. Croí MySláinte might be the best way of mopping the waiting lists which I am sure exist everywhere?”

- Dr. Donal Murray, Consultant Cardiologist, Sligo University Hospital.

“The virtual programme was of immense help to our service and patients and their families at a time when our programme was paused due to redeployment of staff. It offered an option of rehab to service users that otherwise would be waiting months to gain access to our hospital programme. It meant that when our staff returned from redeployment, we were working in real time with referrals coming in rather than dealing with massive backlogs. Also it ensured access to a dietitian and physiotherapist which, sadly, are missing from our hospital based CR interdisciplinary team.”

- Ann Marie Brown, Cardiac Rehab Coordinator, Mayo University Hospital.

LEARNINGS FOR THE FUTURE

Croí MySláinte is one of the **first programmes of its kind in Ireland**, delivering comprehensive, interdisciplinary CVD prevention and rehabilitation ‘virtually’ and there are many key learnings that should be considered for future programme development:

- » **E-learning and digital expertise are essential** to developing virtual platforms and health care professionals need to be provided with support and training to adapt to online programme delivery.
- » **Virtual delivery can minimise barriers** (travel, work, childcare & carer responsibilities) associated with accessibility and can be service user friendly. For example, participants stated that they enjoyed accessing the pre-recordings in their own time and then valued coming together in a peer supported environment for the interactive discussion.
- » **Age is not a barrier** to accessing an online programme. With support, people of any age can engage once they have access to broadband and a device.
- » Through the provision of necessary tools and supports, **digital programmes can successfully engage patients** in self-management.
- » **Sufficient time needs to be allowed** for the set-up of digital programmes. Online platforms requires content to be developed and trialling and testing are essential to ensure they meet the needs of the target population.
- » **Administration support is vitally important** to participants as they become familiar with the technology, particularly at the early stages of the programme.
- » Keep the design of the online platform simple and **avoid overloading with information** as this can be overwhelming to the participant.
- » Nurse prescribing on programme helped to ensure efficient **medical management**. This has been especially important during COVID-19 where access to General Practice and hospital based cardiology support has been limited.
- » **Standard operating procedures** need to be adapted for virtual delivery. These should include policies and procedures regarding data protection and health and safety, key performance indicators and data protection.
- » **Define and monitor programme outcomes**, including patient acceptability.
- » Involving **key stakeholders, including patients**, in programme development was invaluable to ensuring successful implementation.
- » The **iterative process of learning from experience** is vital. As Croí MySláinte commenced, continual monitoring of the programme’s progress took place to review, modify and adapt accordingly, thus leading to the development of a high quality programme.

SCALING UP CROÍ MYSLÁINTE

Outcomes from Croí MySláinte provide important ‘proof of concept’ that digital CVD prevention and rehabilitation can be successfully implemented and achieve recommended lifestyle, medical and therapeutic targets associated with reduced CVD events and improved health outcomes. Scaling up of this project is feasible as the clinical protocols, care pathways and the online platform have already been developed. There is ‘existing buy in’ from the local clinical leads and key stakeholders including patients who deem the programme to be highly acceptable. However, further roll out is dependent on mainstream funding being made available over a longer period of time and integrations with the newly established HSE Integrated Care Programme for the Prevention and Management of Chronic Disease.⁽²⁰⁾

Given the pre-COVID care gaps, such as limited capacity of hospital based cardiac rehab (39%) and the lack of standardisation in care across the country, there is an urgent need to offer patients alternative models of care that complement existing services. With the COVID-19 pandemic likely to result in an ebb and flow disruption for the foreseeable future, it would seem timely to embrace digital health and utilise the skills and infrastructure that have been developed during the pandemic.

“There is no doubt that this course has provided security and focus to me post operation. I feel I would not have coped as well without it and am still reaping the benefits of the programme.”

- Mark, Co. Mayo

CONCLUSION

Croí MySláinte is delivering a unique, evidence based model that is effectively implementing best-practice in achieving CVD prevention guidelines. It is meeting an urgent care gap by providing cardiovascular patients who are living with other chronic conditions with much needed preventive care and support which they may otherwise not receive due to COVID-19 and other barriers.

The programme has demonstrated that it is feasible to deliver comprehensive CVD prevention and rehabilitation programmes through digital, web-based platforms. Croí MySláinte strongly aligns to the principles of Sláintecare⁽²¹⁾, delivering the right care at the right time and in the right place. It represents an innovative shift in delivering preventive care by a community based organisation, beyond the traditional hospital and primary care settings. Its strong focus on self-management is enabling people to live well with their condition from home and is actively delivering to the key recommendations of the HSE Self-Management support framework.⁽²²⁾

With its established integrated care pathway, Croí MySláinte makes for an ideal model of care for future implementation as part of the HSE Integrated Care Programme for the Prevention and Management of Chronic Disease.⁽²⁰⁾

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- The National Institute for Prevention and Cardiovascular Health who provided research expertise and E-Learning technology support.
- The staff at the programme referral centres, which included the cardiac rehab departments at Mayo and Sligo University Hospitals and the Cardiology Departments at Galway University Hospital, the Galway Clinic and Bon Secours Hospital, Galway.
- The Croí MySláinte programme participants and their family members.

TESTIMONIALS

“Definitely keep it virtual. It is so much easier just to walk into your sitting room and do it in the comfort of your own home rather than fighting traffic and looking for parking. Not sure if I would have completed the 10 weeks if I had to drive in.”

- Pat, Co. Galway

“This programme, through the support of the team has given me a greater awareness of what my body can be pushed to whilst having complete confidence in my safety at all times. I am now looking forwards instead of backwards. In all, a totally life changing experience.”

- Michael, Co. Galway

“I was aware, in a general sense, of what constituted a healthy diet but wouldn't have stuck to it rigidly. I am more particular now as to what I eat.”

- Rosemary, Co. Donegal

“I couldn't walk 100 meters without having to sit down after surgery... Being referred onto the MySláinte programme changed it all again. Through this programme I am pleased to say that I am starting back to work in the New Year.”

- Fiona, Co. Galway

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APPENDIX 1

Table 1

Change in lifestyle risk factors and Psychosocial Outcomes between Initial Assessment (IA) and End of Programme Assessment (EOP)

	Patients IA	Patients EOP	Change
Physical Activity (n=52)			
% achieving targets >150min/week	14	82	68 (52,84) p<0.001
Est. Met Max	7.9	10	2.1(1.6,2.6) p<0.001
Diet and Anthropometrics (n=64)			
Mean Mediterranean Diet Score (Optimal score ≥9)	5.2	7.3	2.1 (1.6,2.6) p<0.001
Mean Weight (Kg)	86.3	83.7	-2.7 (-3.5,-1.9) p<0.001
Mean BMI (kg/m ²)	28.7	27.7	-1.0 (-1.3,-0.7) p<0.001
Psychosocial Risk Factors (n=60)			
% with raised anxiety levels ≥8 (HADS)	40	17	-23 (9,38) p<0.001
% with raised depression levels ≥8 (HADS)	22	10	-12 (2,21) p=0.02

MET, Metabolic Equivalent; HADS, Hospital Anxiety and Depression Scale

Table 2

Changes in Medical Risk Factor Management and Cardio-protective medication between Initial Assessment and End of Programme

	Patients IA	Patients EOP	Change
Blood Pressure (BP) (n=62)			
% <130/80mmHg	24	68	44 (27,60) p<0.001
Mean Systolic BP (mmHg)	137.1	117.6	19.5 (-23.2,-15.8) p<0.001
Mean Diastolic BP (mmHg)	75.9	73.7	2.2 (-5.2,0.9) p=0.17
Cholesterol (n=59)			
Mean LDL (mmol/L)	2.33	1.57	0.76 (-0.98,-0.54) p<0.001
% LDL to target (<1.4mmol/L)	14	41	27 (14,40) p<0.001

BP, Blood Pressure; LDL, Low-Density Lipoprotein

APPENDIX 2

Feedback Report

End of programme evaluations were completed online by 38 of the 64 people who completed an End of Programme assessment. Overall, the Croí MySláinte programme was very positively evaluated, with 95% of evaluation respondents rating the programme as *Very Good*.

Section 1: Technical Aspects (Zoom, Email, Online platform)

1. On a scale of 1-5, how comfortable did you feel using technology (Zoom, email, internet etc.) before starting the MySláinte Programme?

- 13% not comfortable
- 32% comfortable
- 55% very comfortable

2. Did you have any difficulties accessing the educational materials, online resources and Zoom?

- 18% yes
- 82% no

3. More information on the technology difficulties experienced during the programme:

Technology difficulties experienced by participants included issues with the quality of their home WiFi connection, being new to the online platform and using Zoom, and layout issues in the online platform. Based on this feedback, significant improvements were made to the platform. For example, the locations of questionnaires were made more visible, and once each questionnaire was completed, a 'Tick' appeared so that participants could see their progress.

4. On a scale of 1-5, how comfortable did you feel in the live group discussions?

- 5% not comfortable
- 47% comfortable
- 47% very comfortable

Section 2: The Educational Material

5. How helpful were the online education sessions?

- 95% just right
- 3% too much
- 3% did not watch

6. How useful did you find the weekly group discussion sessions?

- 3% not useful
- 37% useful
- 58% very useful
- 3% did not attend

7. How useful did you find the additional resources (e.g. workbook)?

- 5% not enough information
- 84% just right
- 11% did not use

8. What information did you find particularly useful?

Several respondents provided additional feedback in relation to the information they found particularly useful. All topics and activities addressed by the programme received positive feedback, in particular, input related to diet, medications, physical activity, and psychological well-being. The information delivered through the programme increased participants' knowledge and understanding, as well as reinforcing knowledge they already had. The live exercise sessions and group support dynamic provided participants with a valuable sense of self-confidence, motivation, and a better sense of their own capabilities.

9. What information would you have liked to receive more of, if any?

Feedback was also gathered in relation to topics participants believed could have received more attention on the program. More specific input related to cooking, stress management, and exercise. It was also suggested to offer more opportunities for the members of the group to get to know each other.

Section 3: Lifestyle Change

10. Do you feel you have a better knowledge and understanding to enable you to continue with a healthier lifestyle after you finish the Croí MySláinte programme?

- 100% yes

11. Did you make any changes to your lifestyle during the Croí MySláinte programme?

- 100% yes

12. If yes, how likely do you think you are to maintain these changes going forward?

- 24% likely
- 76% very likely

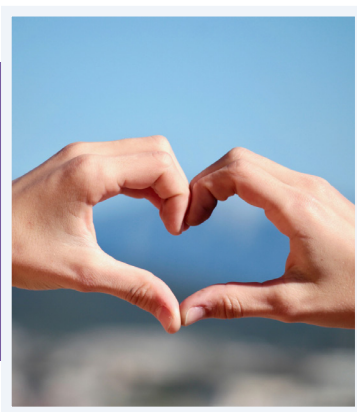
13. Overall, how would you rate the Croí MySláinte programme?

- 95% very good
- 5% good

14. Do you have any other comments or recommendations for how we can improve the Croí MySláinte programme going forward?

When asked if they had any recommendations for improvements to the Croí MySláinte programme, respondents described being very satisfied, and in particular provided positive feedback on the convenience associated with the virtual delivery of the programme, and the support provided by the Croí multi-disciplinary team. Recommendations for future programmes included follow-up sessions, more interaction between the programme participants, more mental health input, improving the usability of the online platform, and suggestions for specialized content, for example related to vascular problems and valve disease.





Fighting Heart Disease & Stroke

Croí is a registered Irish heart and stroke charity (CHY7500), committed to excellence in cardiovascular disease prevention, early detection, rehabilitation, education, research, and patient & family support

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