

NATIONAL CLINICAL PROGRAMME
FOR TRAUMA & ORTHOPAEDIC SURGERY



Theme 3A –
Testing of a National
Osteoarthritis (OA)
Hip and Knee Pathway



Interim Report
Sláintecare
Integration
Innovation
Fund (SIIF)
January 2023 –
April 2024



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RCSI National Clinical Programmes - Trauma and Orthopaedics
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Email: ncptos@rcsi.ie

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Theme 3A – Testing of a National Osteoarthritis (OA) Hip and Knee Pathway

Interim Report

Sláintecare Integration Innovation Fund (SIIF)
January 2023 – April 2024

COMPILED BY:

Ms Ruth Kiely Programme Manager

Ms Niamh Keane Project Manager

Mr Alan Walsh Consultant Orthopaedic Surgeon, Our Lady's Hospital, Navan and
Project Clinical Advisor

Mr Finbarr Condon and **Mr Tom McCarthy** Joint National Clinical leads
National Clinical Programme for Trauma and Orthopaedic Surgery

*This project has received funding from the Government of Ireland's Sláintecare
Integration Innovation Fund under Theme 3A - Test priority scheduled care
pathways from the HSE's new pathway suite.*

Introduction

The National Clinical Programme for Trauma and Orthopaedic Surgery (NCPTOS) successfully secured funding through the Sláintecare Integration Innovation Fund (SIIF) in December 2022 to test the national OA hip and knee pathway on two sites for a two-year period. This pathway closely aligns with Sláintecare's Reform Programme 1 - To Improve Safe, Timely Access to Care and Promoting Health and Wellbeing.

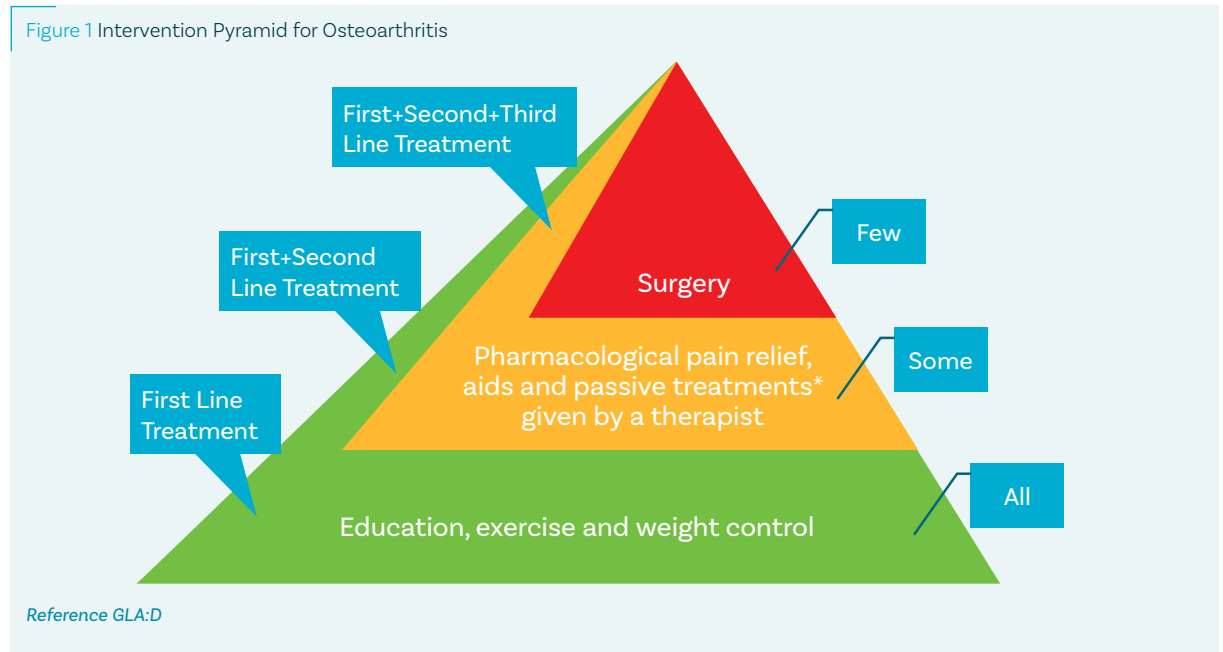
It is estimated that > 400,000 people in Ireland are affected by Osteoarthritis (OA). French et al (2016), using Wave 1 data from TILDA (The Irish Longitudinal Study on Ageing), reported within their sample of 8,175 people aged 50 years and older, that 12.9% self-reported symptoms of OA. OA is a chronic disease which causes changes within the affected joint(s). Symptoms include pain, joint stiffness, muscle weakness, leading to reduced mobility and function. Factors that contribute to these symptoms include excess weight/obesity, age, gender and occupation.

Recent research reports a significant increase in the number of patients being referred for surgery without first trying conservative management. This has a significant impact on the Irish healthcare system in terms of OPD waiting list management and resource utilisation.

The National Institute for Health and Care Excellence (NICE) in their 2022 evidence based guidelines place a strong emphasis on managing mild to moderate OA symptoms with therapeutic exercise and a weight management programme where indicated..



The OA hip and knee pathway outlined below (*Figure 1*) focuses on the first line treatment which uses an exercise based approach and includes weight management advice in conjunction with a prescribed exercise programme



This pathway has been developed to help patients presenting to their GP's with mild to moderate osteoarthritis of either the hip or knee. It is designed to allow them to manage their symptoms and maintain function by participating in an interdisciplinary exercise group or if more appropriate, individual sessions.

The group interventions are delivered in community-based settings and run over a continuous four to six-week period on both sites. This enables patients to join in a timely manner following referral from the GP and the completion of an initial assessment by either the physiotherapist and if indicated by the dietitian.

More innovative features of the pathway include the development of a patient-facing app to support and promote self-management and help individuals maintain the benefits gained during the interdisciplinary exercise programme. The project also pilots the HSE's Patient-Initiated Review (PIR) process, both during the programme and, ultimately, through integration within the app.

Pilot Site Identification

Our Lady’s Hospital, Navan (OLHN)/CHO8 and University Hospital Waterford (UHW)/CHO5 were nominated to test the pathway. Both sites had been part of earlier successful service re-design projects relating to the management of OA (SIF 56 & 324) and the learnings from these projects have been incorporated into the design of this pathway. This pathway was co-designed with extensive stakeholder engagement as outlined in *Appendix 1*.

Both sites (*Figure 2*) have the full support from hospital senior management and their respective orthopaedic consultants thus enabling timely implementation of the pathway as required by the terms of the grant agreement.

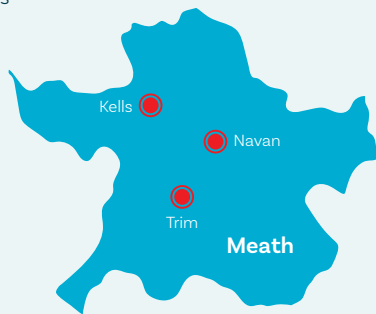
Mr Alan Walsh, consultant trauma and orthopaedic surgeon based at Our Lady’s Hospital, Navan is the programme’s clinical advisor for this project.

The sites are very different in their geographic spread, demographics and socioeconomic profiles and the programme felt that there would be significant learnings to be gained from testing this pathway in these two sites, prior to this pathway being implemented nationally.

Figure 2 Implementation Sites

Navan/CH08

Population Census (2022): **220,826**



Carlow/Kilkenny (CH05)

Population Census (2022): **166,128**



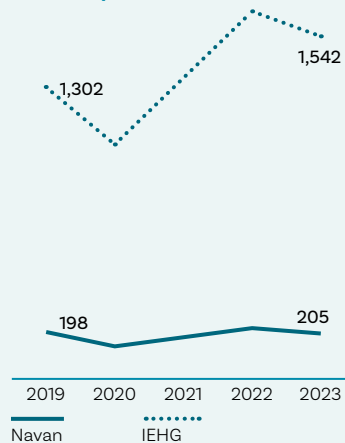
The orthopaedic referral demand for both sites is outlined below (HSE BIU OPD Reports Feb 2023)

Referral Demand* - Average Referrals for each year from 2019-2023

Monthly Avg Referrals in Navan vs IEHG Orthopaedics

13%-15% of the referral demand in Orthopaedics for **IEHG** is from **Navan** (approx 2% of National Demand for Orthopaedics)

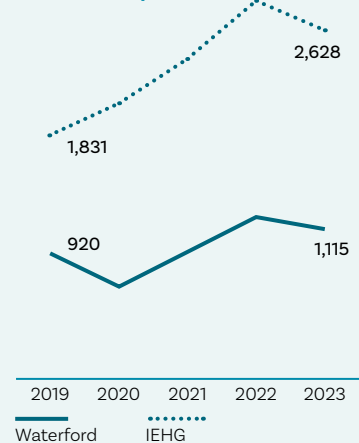
Average Referral demand declined during the pandemic and then rose again in 2021-22



Monthly Avg Referrals in Waterford vs SSW Orthopaedics

40%-50% of the referral demand in **SSW** Orthopaedics is from **Waterford** (approx 10% of National Demand for Orthopaedics)

Average Referral demand declined during the pandemic and then rose again in 2021-22



An issue with available OPD waiting list data is the quality of same and the lack of information regarding casemix i.e. what conditions are being referred to orthopaedic OPD clinics.

Data collated by the Physiotherapy-led MSK Triage Initiative, has shown that the three most common MSK conditions referred to OPD clinics by GP's are:

- Hip/Knee
- Spine
- Shoulder

For the project application in October 2022, it was estimated (based on results from SIIF 324), that if no intervention was implemented, there would be 185 referrals for OA hip and knee, per month, on both sites. Given the pent-up demand following the pandemic, both sites were eager to test this new care pathway to improve timely access for patients presenting with OA hip and knee conditions to the most appropriate care in the right location.

The criteria for referral to this pathway is outlined below:

Inclusion criteria	Exclusion criteria
Patients aged > 50 years	Patients aged < 50 years
Diagnosis of OA	History of Trauma

To date, the pathway implementation team in Navan are delivering community-based interventions in four locations in the county. The implementation team in Carlow have focused their activity on one site due to recruitment issues, but are planning to commence implementation in Kilkenny in July 2024.

All team members working on the pathway have been trained to deliver an evidence-based exercise programme for this patient population e.g. ESCAPE (Enabling Self-management and Coping with Arthritis Pain using Exercise), PEAK Programme (Physiotherapy Exercise and Physical Activity for Knee Arthritis) and GLA:D Ireland (Good Life with osteoArthritis Ireland).



Resources and Recruitment

The programme has completed and has had three budget change requests approved:

- December 2022 (Navan – staff resourcing),
- February 2023 (RCSI – project support)
- October 2023 (University Hospital Waterford – staff resourcing).

Funding was secured to recruit 6.8 WTE between both sites for this project (Table 1). The staffing resources are predominantly for physiotherapy and dietetics. Each site was also funded for a 0.5 WTE Administrative Clerical Grade IV.

Recruitment in Navan for the physiotherapy posts was led by the physiotherapy manager with recruitment being completed by April 2023.

Recruitment on the Waterford/Carlow sites was led by the orthopaedic business manager until July 2023. Recruitment has been hampered significantly by two factors, contract type (part-time; specified purpose contract) and the introduction of the HSE Recruitment Moratorium.

The recruitment for a Senior Dietitian on both sites has been difficult given the national shortage of dietitians. In Navan, recruitment commenced in mid-2023 and the post was filled in September 2023. Waterford/Carlow have been unable to recruit a senior dietitian.

For the first nine months of the project, the programme had liaised with the Obesity National Clinical Programme in relation to sharing educational resources around weight management/healthy eating that clinicians could use to signpost patients in the absence of a dietitian. The Senior Dietitian in Navan has recorded an educational piece which is used at the interdisciplinary education sessions and is a point of contact for all dietetic queries for the Carlow team.





L- R: Kathleen Bradley (Senior Dietitian, OLHN), Keelan O'Connor (Senior Physiotherapist, OLHN), Pauline Robinson (Clinical Specialist Physiotherapist, OLHN), Mr Alan Walsh (Consultant Orthopaedic Surgeon, OLHN), Helen Fitzgerald (Clinical Specialist Physiotherapist, UHW/Carlow)

Table 1 Resources and Recruitment Status

Role	Site	WTE Funded	WTE Recruited	Start Date
Grade IV	UHW	0.5	0.5	17.07.23
Physiotherapist, Clinical Specialist	UHW	0.5	0.6	08.01.24 (uplift from 0.5 WTE to 0.6 WTE)
Physiotherapist, Senior	UHW	1	Maternity leave	19.06.23 Maternity Leave Aug - Sept 2024
Private Practitioner contracted to work at Senior Physiotherapist Grade	UHW		0.4	27.03.24
Dietitian, Senior	UHW	1	Unable to Recruit to Post	
Physiotherapist, Senior	UHW	0.5	Unable to Recruit to Post	
Total UHW		3.5	1.5	
Physiotherapist, Clinical Specialist	OLH Navan	0.8	0.8	17.04.23
Physiotherapist, Senior	OLH Navan	1	1	17.04.23
Dietitian, Senior	OLH Navan	1	1	04.09.23
Grade IV	OLH Navan	3.5	1.5	06.06.23
Total OLHN		3.3	3.3	
WTE Total		6.8	4.8	

Project Implementation

This project has had a number of components that have required extensive stakeholder engagement both at a national and local level. Below are the high-level overviews of how the project has progressed through implementation since January 2023.

Figure 4

2023 Project Implementation

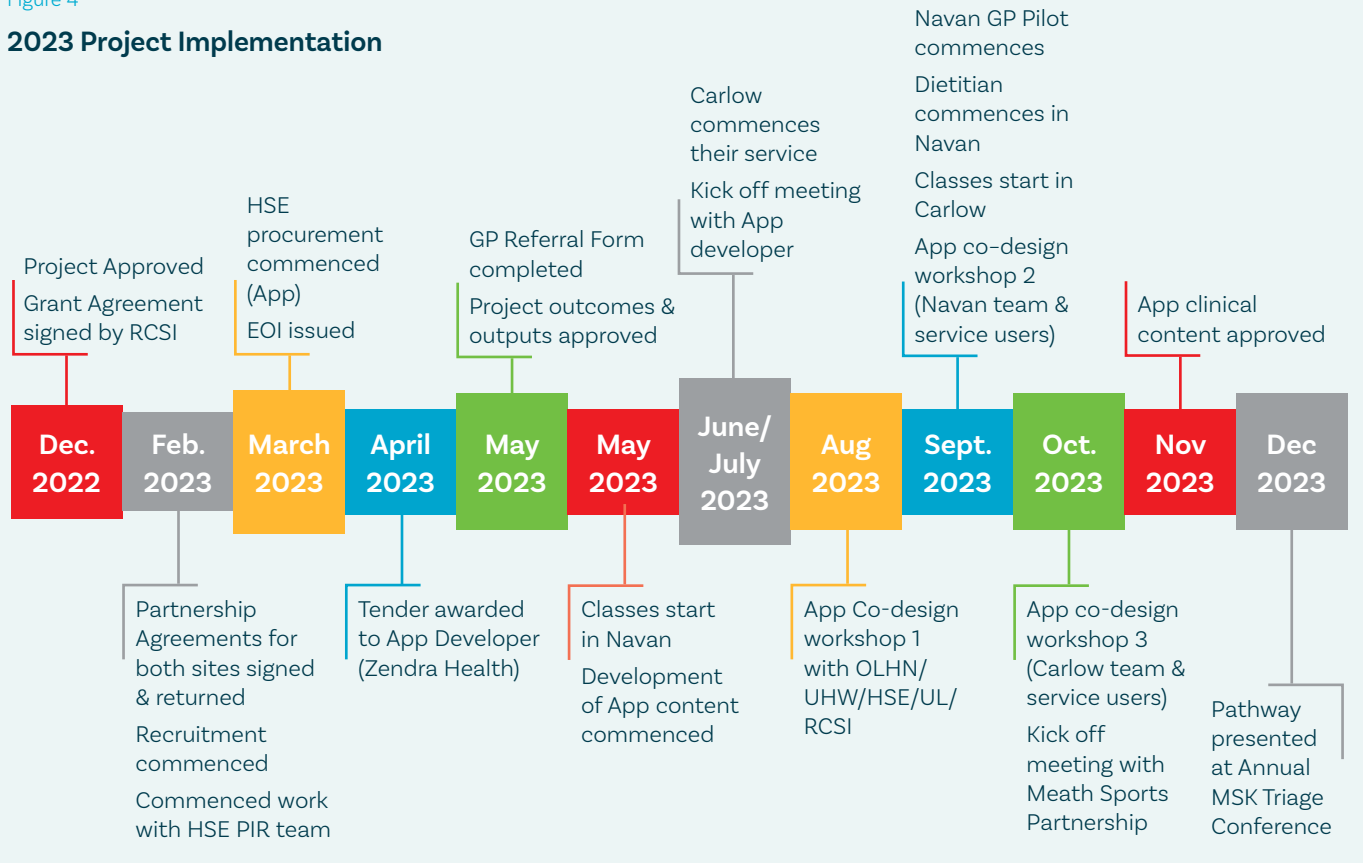
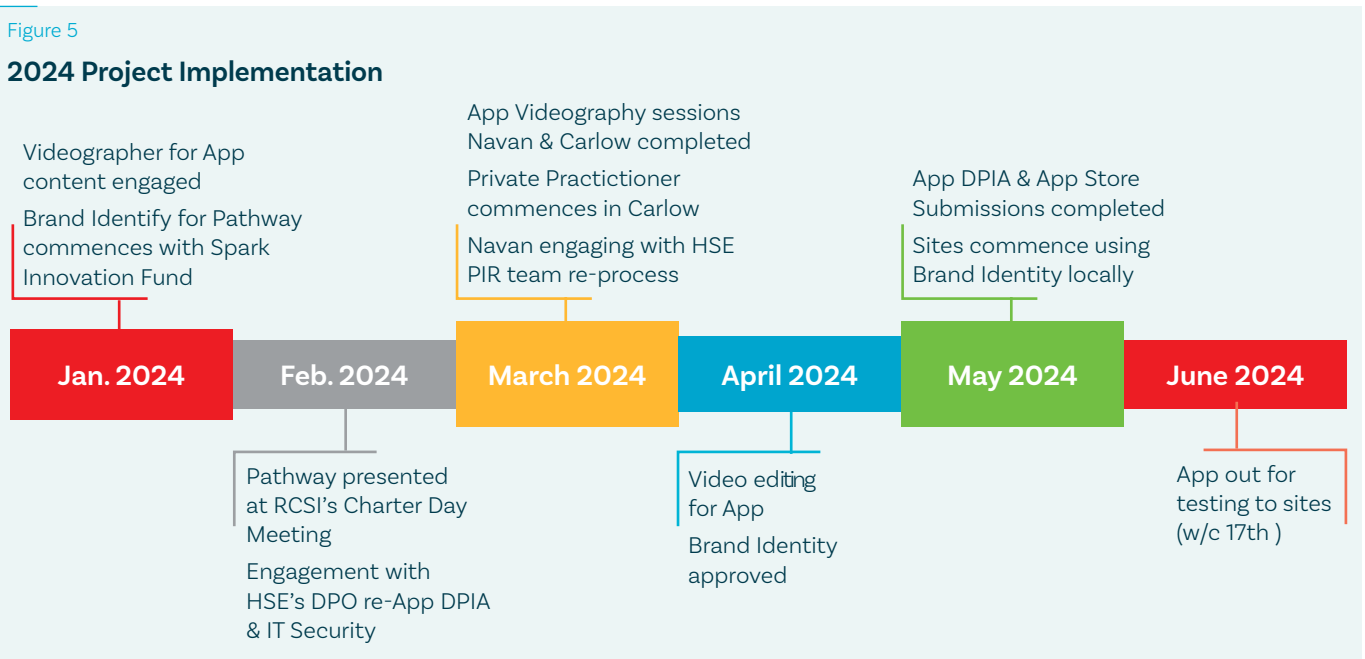


Figure 5

2024 Project Implementation



App Development

As part of the terms and conditions of the grant agreement, the programme is required to be compliant with all HSE procurement and data protection regulations for this project.

As this pathway is part of a suite of HSE’s modernised care pathways, Lorraine Smyth, HSE’s e-enabler for digital solutions, worked closely with the programme in all facets of the procurement and app development process. The procurement process was a collaboration between three different service areas – these were lymphoedema, orthopaedics and the delivery of community based mental health services.

The timeline for completion of the procurement process is outlined below:

Date	Activity
1 March 2023	Expression of Interest Issued by HSE re- app procurement
23 March 2023	Evaluation team met to review all submissions
21 April 2023	Three vendors invited to showcase their app platforms
5 May 2023	Successful vendor awarded tender (Zendra Health)

Once the vendor – Zendra Health had been appointed there were three co-design workshops

“Community is key”
23 August 2023: Dr Steevens Hospital – all clinical teams; programme; academic partners, HSE team lead for Active Clinical Prioritisation (ACP) and Patient Initiated Review (PIR).

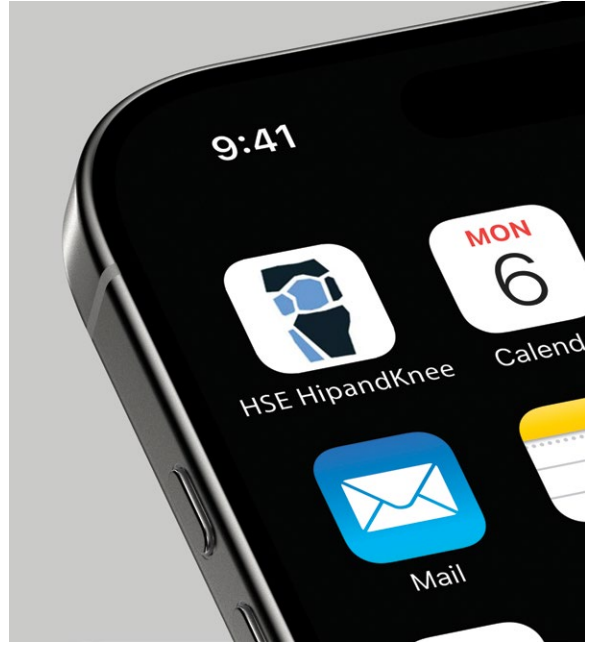
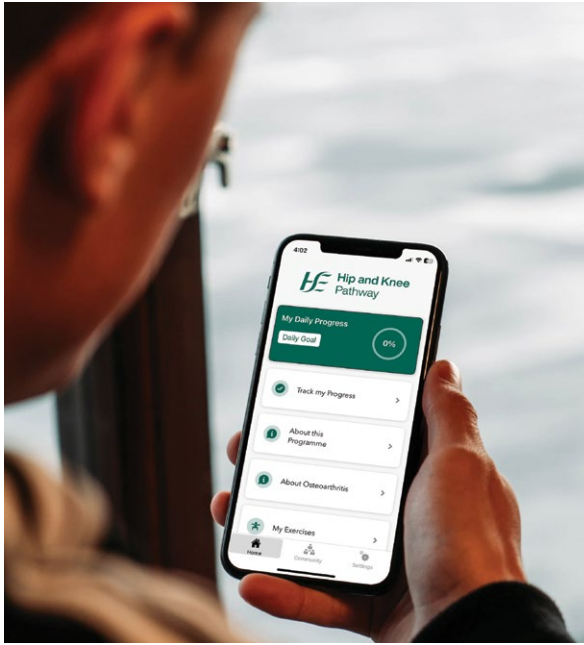
“Video's of the exercises - simple and easy to follow”

“Keep exercises fresh, accessible and empathic”

L- R: 20 September 2023: Navan service users
17 October 2023: Carlow service users

“Handing of baton - once the 6-week programme is over where to from here?”

“Importance of facilitating follow-up”



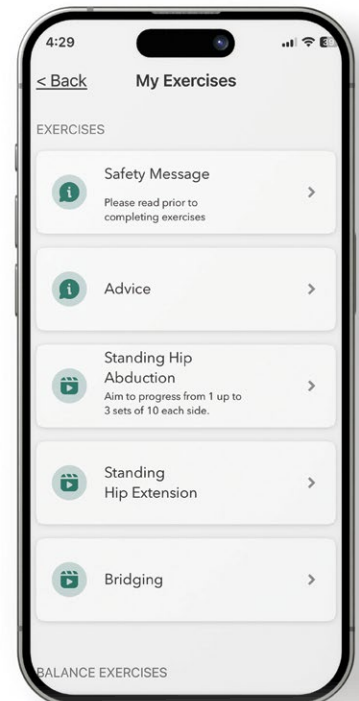
These workshops laid the foundation for the video content that has been recorded on both sites in March 2024 and will be available in the app. The Programme has reached out to Meath Sports Partnership to explore having an egress out of the pathway for patients who are keen to continue to exercise within a group setting, following their interventions.



The programme also had the opportunity to collaborate with the HSE's Spark Innovation Programme. This led to the development of a new brand identity for teams working on the pathway and this will appear on the app (left)

As outlined above NCPTOS has been working with the HSE's Data Protection Office (DPO) in relation to the Data Protection Impact Assessment (DPIA) since February 2024 - this was signed off by all relevant stakeholders at the start of May 2024.

Together with Zendra Health the programme has been working with the HSE's App Store (Digital Operations), and the app is now available on the App store and will go to the teams for testing the week commencing **17 June 2024**. It is envisaged that patients will be able to start using the app very soon after that.



Patient Initiated Review (PIR)

Patient Initiated Review (PIR) is a strategic priority for the HSE and Department of Health as outlined in the 2024 Waiting List Action Plan. The programme has been working with the HSE's PIR team who have been developing the PIR process since early 2023.

The HSE estimates **2.8m** review OPD appointments are offered on average each year; this is ~72% of all OPD appointments. This project hypothesises that ~ 25% of the patients commenced on PIR will/may activate this process **within three months** of completing their management programme

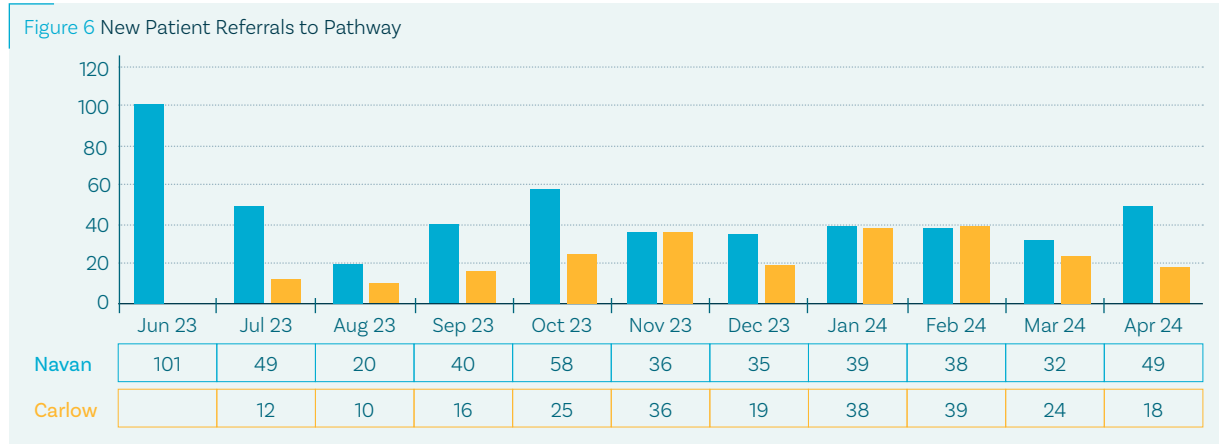
Of the **734 patients** that have been managed through this pathway in the past 11 months, just under **3% (20 patients)** have contacted the clinicians running this service for review at this point. The team in Navan have been working with the HSE lead for PIR since Q1 2024, and have developed and adapted the documents to their own specific needs and have initiated a formal PIR process with their patients that finished the interdisciplinary class in March 2024. Carlow have commenced PIR for all patients completing the programme since April onwards.



Activity to date

The monthly targets (outcomes and outputs) that were developed for this project were based on the assumption that all posts would be filled on both sites. Due to staffing challenges, Carlow are currently working at **43%** of their potential capacity.

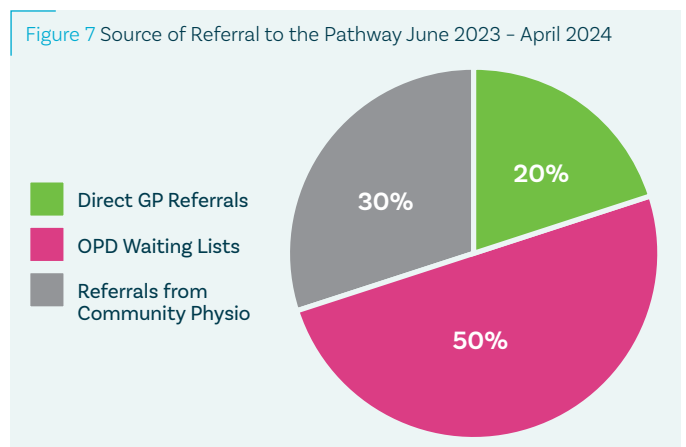
In the past 11 months, **734 referrals** have been managed via this pathway.



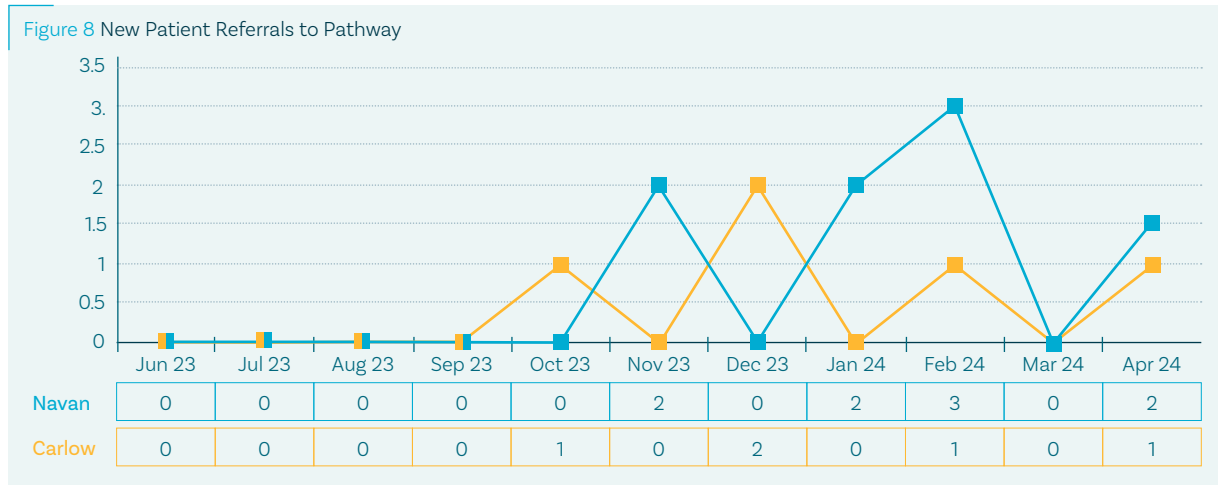
In 2023, as the pathways were being established, it quickly became evident that in order to get **“buy-in”** from both acute hospitals and community colleagues, both teams needed to review patient referrals already waiting for management on various waiting lists. This approach meant that **365 referrals** were managed and removed from current orthopaedic waiting lists including MSK Triage, and **218 referrals** from community-based physiotherapy services.

When the pathway is implemented in Kilkenny in July 2024, as this is within the UHW catchment area, all suitable patients who have been referred to orthopaedic OPD clinics in UHW, and patients currently waiting on community-based physiotherapy waiting lists will be offered the opportunity to be managed through this pathway in Kilkenny.

From **September 2023**, Navan have been accepting direct referrals onto the pathway from participating GP practices. To date, **151 referrals** have been received via this referral source. Carlow are due to start accepting direct GP referrals in July, now that their capacity to manage these referrals has improved in terms of staffing levels since the 27th March 2024.



Of the **734 referrals** received onto the pathway to date (April 2024) **14 patients (1.9%)** have been referred to the acute hospital OPD for an appointment with the orthopaedic team within eight weeks of receipt of referral.



Of these **14 patients, 5 (> 1%) have been listed for joint replacement surgery**. This demonstrates the benefit and cost effectiveness of appropriate and timely early intervention in the management of patients with OA.

The role of the **dietitian** in the management of patients with OA hip and knee is acknowledged in the literature as being a key component in the conservative management of this patient group. To date, **206 patients (28%)** have been identified as requiring dietetic advice and intervention and **112 (54%)** of these have access to dietetic input, as there is a dietetic service for this pathway in Navan.

One of the anticipated outcomes from this project is a reduction in the number of new patient referrals for OA hip and knee to the OPD departments at both sites. Accessing this data locally has been challenging given how referrals are managed and uploaded onto the local Patient Administration Systems (PAS). Both sites are currently collecting this data manually.

As stated earlier, if this pathway was not available, it was projected that the potential number of referrals received in the period June 2023 - April 2024 for both sites would be **2,035**. For this period, the **actual number of referrals** received into the two OPD departments for OA hip and knee is **306**. This is a reduction in demand for OPD appointments of 85%.



Learnings to Date

This project has demonstrated many challenges and at the same time has offered significant opportunities to innovate and learn in terms of ensuring successful national implementation of this and other pathways moving forwards. Significant stakeholder engagement both in-person and virtual as well as the development of good working relationships between the sites has been critical throughout the project to ensure successful implementation.

As a team some of the key learnings to date are outlined below:

1. Introducing condition specific integrated care pathways is a new way of working for many in the HSE, some embraced the different way of working but others needed more reassurance and support in getting the pathway operational. This was the first time that primary and secondary care managers worked together of staff recruitment and line management as well as implementing a new care pathway.

Moving forwards, the HSE needs to consider employing a dedicated resource with expertise in change management in each of the six health regions. This individual ideally should have a sound knowledge of how the Physiotherapy-led MSK Triage Initiative works and how it is transitioning towards community-based interface clinics and ultimately to the implementation of MSK integrated care pathways. This person would be the liaison between clinical design (i.e. NCPTOS) and implementation (i.e. sites).
2. The pace of change within the HSE in 2023 was very fast and at times overwhelming – one of the roles of the programme was to support and listen to the concerns and anxieties of both managers and clinicians and help support them find workable solutions where possible. This was particularly true when the moratorium on recruitment came into place in July 2023.
3. With the implementation of an end to end integrated care pathway for this patient group, governance of the patient was an area that required clarification and agreement on both sites. The model of shared governance i.e. the patient stays under the care of the GP until such time as a specialist orthopaedic opinion is required has worked very well. If this pathway is nominated for mainstreaming then national agreement on a shared governance model would be required.
4. Access to good quality OPD waiting list data through the Patient Administration Systems (PAS) in the hospitals has been very challenging. There is a need to review how all referrals nationally are catalogued onto the OPD system which would enable condition specific reports to be generated.
5. As discussed above, there are a number of components of this pathway that are innovative and new, e.g. the development of an App and the implementation of Patient Initiated Review (PIR). The development of an app within this project timeframe on reflection was ambitious. There have been significant learnings for the programme in this regard particularly around procurement, design, content creation and data protection considerations. The programme deliberately ran their procurement campaign with community partners so that the successful vendor would have the functionality to meet the needs of integrated care across both community and acute hospital services.

6. This pathway has delivered significant value for the HSE despite recruitment issues. For the sustainability of these pathways, the roles need to be made permanent with recurring funding. If this pathway is to be mainstreamed, and a national phased implementation planned, the staffing of these posts needs to take the following factors into consideration:
 - a. Staff composition in terms of grade, number and skill-mix to deliver sustainable community-based group interventions in the long-term.
 - b. Geographical spread and travel distances to deliver services (Urban vs Rural).
 - c. Staff line management - at present on this pathway the staff are employed by the acute hospitals but work predominantly in the community alongside their community colleagues. This has caused some challenges in terms of maintaining services during periods of leave etc.
 - d. Ongoing funding to hire community-based locations such as community centres, GAA sports halls, schools etc
 - e. Funding for staff training to ensure competencies are maintained.
7. The reporting of the outcomes and outputs for this project has been too complex for the sites to track and manage. The implementation of this pathway is multifaceted and occurs over a period of 4 - 6 weeks so the current outcomes and outputs don't accurately reflect the true activity and positive impact that this pathway is delivering to patients that have been referred and have completed the programme to date. Moving forwards, the programme needs to simplify the data that is being collected and agree on two or three KPI's that could be implemented nationally.



APPENDICES

Pathway Co-Design and Collaboration



APP Procurement Evaluation Team (February - June 2023)

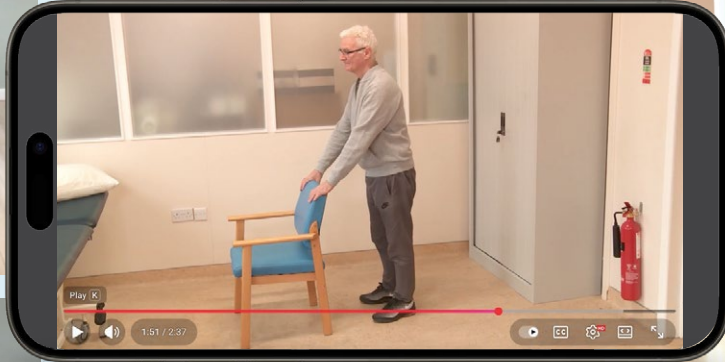
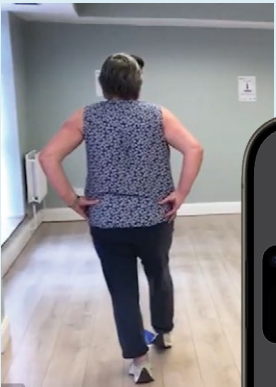
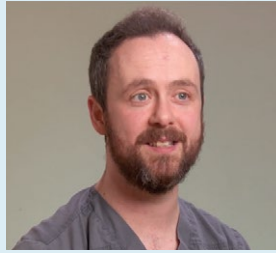
Aislinn Gannon, HSE CHO 2 Digital Health Manager
Niamh Keane, Project Manager for National OA Hip & Knee Pathway (NCPTOS)
Ruth Kiely, Programme Manager NCPTOS
Niamh Sneyd, HSE CHO 7 Digital Health Manager
Lorraine Smyth, HSE e-enabler Digital Solutions

Project Stakeholder Engagement

Organisation	Name	Title
National Clinical Programme for Trauma and Orthopaedic Surgery	Mr Paddy Kenny (2022 - 2024) Mr Finbarr Condon (2022 - Mr Tom McCarthy (2024 -	Joint National Clinical Leads
	Ruth Kiely	Programme Manager
	Niamh Keane	Project Manager
	Dr Sarah Casserley Feeney	Planning and Performance Lead Physiotherapist for the MSK Triage Initiative
	Edel Callanan	HSCP Lead
HSE - Modernised Care Pathways	Deirdre McNamara	Director of Strategic Programmes
	Ms Ita Hegarty	General Manager
	Ms Lorraine Smyth	e-enabler
HSE	John O'Hora	Primary Care Physiotherapy Manager CHO1
	Ms Marcella Kenny Ms Marianne O'Connor Susan Curtis	Patient Initiated Review Team
	Karen Gaynor	Programme Manager Obesity National Clinical Programme
	Finance Teams - Our Lady's Hospital Navan University Hospital, Waterford	
Our Lady's Hospital Navan	Mr Alan Walsh	Consultant Orthopaedic Surgeon
	Ms Ciara Rowe	Physiotherapy Manager
	Ms Jennifer O'Toole	Dietetics Manager
	Pauline Robinson	Clinical Specialist Physiotherapist
	Kathleen Bradley	Senior Dietitian
	Keelan O'Connor	Senior Physiotherapist
	Diane Doherty	Clerical Admin
	Anita Brennan	Hospital Manager
Trinity College Dublin	Dr Brenda Monaghan	Assistant Professor, Discipline of Physiotherapy
University Hospital Waterford	Mr Terence Murphy	Consultant Orthopaedic Surgeon
	Eileen Long	Physiotherapy Manager
	Siobhan Corcoran (July 2023) Amanda Challoner (July 2024 -	Orthopaedic Business Manager
	Sinead Gavin	Physiotherapy Manager - Primary Care Carlow/Kilkenny
	Grace Rothwell Ben O'Sullivan	Hospital Manager

Organisation	Name	Title
University Hospital Waterford	Helen Fitzgerald	Clinical Specialist Physiotherapist
	Ruth Loughlin	Senior Physiotherapist
	Paul Bolger	Senior Physiotherapist/Private Practitioner
	Sarah Kennedy	Clerical Admin
Royal College of Surgeons in Ireland	Mr Kieran Ryan	Managing Director Surgical Affairs
	Dr Helen French	Associate Professor School of Physiotherapy
University of Limerick	Dr Clodagh Toomey	Associate Professor , School of Allied Health, University of Limerick
	Dr Helen O'Leary	Health Research Board 'Clinician Scientist' Post-doc Fellow. School of Allied Health, University of Limerick
Patient Representative	Stacey Grealish	Patient Representative (October 2024 onwards)
Pobal	Amy Lowther	Coordinator - Programme Delivery Unit (Health and Wellbeing)
	Marie Louise Neary	Manager - Programme Delivery Unit (Health and Wellbeing)
	Neil Radema	Monitoring Co-ordinator
Zendra Health	Thomas Coleman David Coleman	Founders and Developers
HSE Spark Innovation Programme	Jared Gormley	
	Dermot Burke	National HSCP Innovation Fellow
	Mark McDonagh	Brand Designer

Move Better Feel Better



Watch our video to discover more about the National Osteoarthritis (OA) Hip and Knee Pathway.





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