

Original Article

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Service evaluation of Advanced Clinical Prioritisation (ACP) tele triage pathway in pain medicine

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Article Info

Article Notes

Received: October 30, 2025

Accepted: January 06, 2026

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Keywords

Advanced Clinical Prioritisation (ACP)

Pain Management

Waiting List

Scheduled Care Transformation Programme (SCTP)

Telemedicine

Sustainability

Abstract

Background: Improving timely access to healthcare is one of the top priorities of the government of Ireland's, Sláintecare healthcare reform programme. Telemedicine has been increasingly utilised in care delivery by pain management services in Ireland. Advanced clinical prioritisation (ACP) was one of the initiatives proposed by scheduled care transformation programme of the health service executive to validate and hence manage waiting lists. A pilot study on ACP pathway in pain management by our group showed potential for improving access.

Aim: The aim of this service evaluation was to describe referral outcomes and care pathway allocation following implementation of an ACP telemedicine clinic.

Methodology: The referral letters were pre-screened for review at the ACP clinic, and the appropriate care pathway was determined after a consultant delivered telephone consultation.

Results: Out of 307 ACP tele-consultations included in this study, only 21.4% patients needed to be scheduled for face-to-face appointment with the service and 45.4% patients were referred directly for diagnostic or therapeutic interventional pain management procedures.

Conclusions: The results document referral outcomes and care pathway allocations. This highlights the need for further studies to explore the potential of this ACP telemedicine model of care to improve service access. This would need a double arm design with measured access metrics.

Introduction

Long waiting time to get access to specialised care is an ongoing problem. This was exacerbated by Covid-19 related delays in access to elective/scheduled healthcare. In the field of chronic pain management in the Irish context, the increasing number of patient referrals to the service is compounded by inadequate resources including manpower. Telemedicine may have the potential to provide some solution to the problem. In Ireland, the use of telemedicine in pain management services had seen an increased from 13% pre Covid-19 to 46% during the Covid-19 pandemic¹. Limited activity in outpatient and scheduled care during the pandemic resulted in long waiting lists for access to planned services which is still an ongoing issue and an important area of concern for the government of Ireland. HSE established a Scheduled care transformation programme (SCTP) to ensure sustained transformation of scheduled care. Advanced clinical prioritisation (ACP) was one of the initiatives proposed by the SCTP². A pilot study conducted by our group on ACP pathway for new patient referrals had demonstrated the potential for this

model of care to streamline patient referral outcomes³. Waiting list management, improving access to healthcare, and providing timely healthcare to the people has been the guiding principles leading the Government of Ireland's multi-annual Waiting list action plans⁴.

The aim of this study was to build on and evaluate the advantage gained from the ACP pathways for Pain Management in our organisation. Historically, all patients referred to the pain management clinic in our organisations were assessed at a face-to-face appointment following which they were directed to the most appropriate treatment pathway for the subsequent appointment. We started an ACP pain management teleclinic with the primary aim to effectively identify and redirect suitable patients to the interventional pain management pathway, to provide patients with the right care at the first service visit. We expect this to have a secondary benefit in reducing the number of patients needing face-to-face pain medicine clinic appointment, thereby improving appointment waiting time and access to those with more complex pain necessitating in-person evaluation and assessment by a full multidisciplinary team along with pain physicians.

Methods

Following the success of our pilot project on ACP of referrals to pain management department, additional funding was secured by the hospital for a consultant delivered virtual ACP clinic for pain management delivered by means of a telephone consultation. Referral letters were reviewed and triaged by a consultant pain physician starting with the longest waiting patients. Patients who were deemed likely to be candidates for interventional pain therapy based on the information provided in the referral letter were booked on the ACP clinic booking list. The patients with incomplete or vague information from referrer in relation to pain, complex pain symptoms, predicted need for multidisciplinary input, or non-identification of a target for interventional pain therapy based on the referral letter alone remained on the face-to-face Pain Management clinic booking list. This contrasted with our pilot project which had included 100 sequential referrals who were waiting longest for their first outpatient pain medicine specialist consultation. The clinic was run in a virtual format by means of a telephone consultation by a consultant pain physician, after which treatment plans were put in place where possible and outcomes documented. Where directing the treatment via telephone was not possible, consultation patients were brought to our outpatient department later for face-to-face consultation. Documented outcomes included discharged to referrer (GP or specialist), referred to referrer for further information and reappointment, referral to other specialist, referred for interventional pain management, pharmacological management, referral for physiotherapy or psychological

therapy, assessment for pain management programme (PMP), outpatient pain clinic face-to-face appointment, repeat tele appointment and uncontactable (DNA). Patients could have more than one documented outcome but for the purpose of the study, the next step in the patient's referral journey was considered as the main outcome.

Statistical Analysis

Standard, descriptive statistics including frequency, mean (averages), median, and range were calculated using Microsoft Excel for Mac. Given the descriptive, single arm design, no inferential statistical analyses were performed or implied.

Results

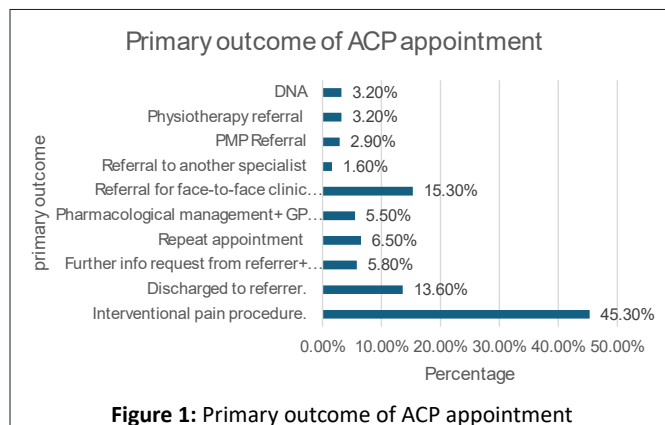
We collected data pertaining to ACP clinic appointments over the period September 2022 to November 2024. Total of 310 patients were included in the data collection. 3 patients were prioritised follow up patients who had requested appointment due to concern related to interventional procedure performed in the past. 307 new patients were evaluated in our ACP service over this period.

Of the 307 patients included in our patient cohort, 59.7% (n=183) were female and 40.3% (n=124) were male. The average age of this patient cohort was 58.8years (range= 23-90years, SD=14.5years, median= 59years). The average length of time for a patient to have been waiting on our outpatient waiting list for initial consultation/assessment was 19.3months (range=0-25months, SD=4.48months, median=19months). 12 patients received their appointment within 12months of initial referral while the average waiting time for 295 patients on our outpatient waiting list for their initial appointment was 19.9 months (range=15-25months, SD=2.96).

There were multiple sources of referral of patients for specialised care to pain medicine service. The different sources of referral in our study cohort are depicted in Table 1. The primary outcome of the ACP clinic appointment varied and is depicted in Figure 1.

Table 1: Pain medicine referrals from different sources

Referral source	Number (n)	Percentage (%)
GP	197	64.2%
Spinal	45	14.6%
Back pain screening clinic (BPSC: clinic operated by spinal surgery department)	10	3.2%
Orthopaedics	14	4.5%
Rheumatology	10	3.2%
Neurology and neurosurgery	8	2.6%
Surgery (upper GI+ vascular)	7	2.3%
Urology	4	1.3%
Respiratory	3	1%
Gynaecology	1	0.3%
Other Pain specialist	4	1.3%
Inpatient	4	1.3%



Discussion

According to the Lancet's Global burden of Disease, low back pain ranks ahead of other chronic diseases like diabetes, anxiety, and depression as the cause of disability globally⁵. Prevalence of chronic pain in Ireland is 35.5% according to the PRIME study⁶. PRIME study also showed that 57% of chronic pain sufferers were females and 43% were male, which was somewhat similar to a European wide study by Breivik et al⁷. Demographic data from our study suggests a similar pattern of pain prevalence with 59.7% of the patients being females and 40.3% being male. The average age of patients in our study cohort was 58.8 years, which is like our pilot study subgroup³. We would hence presume that the sample data is somewhat like the distribution of pain patients in previously reported studies.

By the end of December 2022, there were 690,223 people on active hospital waiting lists for acute scheduled care in Ireland⁴. Publicly available data from the National Treatment Purchase Fund (NTPF) suggests that as of January 2024, 13531 patients were on the outpatient waiting list for pain relief. Around 2000 of these patients had been waiting between 12-18 months since referral and around 1500 were waiting more than 18 months. 1532 patients were on the outpatient waiting list for pain medicine in our institute at that time, with 86.3% waiting for a period above national target⁸. When we compare this to our previously published data³, where there were 12000 patients on the pain relief waiting list nationally and around 5000 of them were waiting more than 12 months, the positive impact of the interventions made by the HSE can be appreciated. A point to be noted from our study data is that only 12 patients had received their outpatient consultation within 12 months, while the average waiting time of 295 patients that were included in this study was 19.9 months with a range between 15-25 months. This indicated a significant delay when compared to the Irish national outpatient waiting list target time of 10 weeks. An external review of our Pain management service was undertaken recently to evaluate pain medicine outpatient

demand and capacity to support an integrated spinal pathway with the aim to reduce the number of redirected referrals and the wait time between referral and care plan decision. It showed that from 2019 to Aug 2023, the pain medicine wait list was steady at around 1100 to 1200 patients, but in the next 12 months, it steadily increased by 40% contributed both by increased demand and reduction of service capacity due to loss of 1 WTE (whole time equivalent) consultant post.

The Irish Medical Councils guide to professional conduct (2024) and telemedicine guide highlight the accepted integration of telemedicine into the future of healthcare delivery⁹. Telemedicine provides an innovative technological solution facilitating continuity and convenience of care to help vulnerable patients and those in isolated locations. It allows for efficient use of limited health resources and is more useful when integrated as part of an existing system of patient care⁹. Utilization of telemedicine in the field of chronic pain medicine saw an increase during Covid-19 pandemic (2020-2021) with a decrease in face-to-face contacts¹⁰. Concerns are understandably raised regarding patient satisfaction with teleconsultation when compared to in-person consultation. Although limited research has been conducted in this area, a randomized controlled trial suggested that despite physical separation, physician-patient communication was not inferior during telemedicine consultation¹¹. Cost analysis studies comparing telemedicine to conventional face-to-face consultation system have indicated favourable value with the former. Median direct patient cost was 133 dollars in telemedicine group compared to 443 dollars in the in-person group in the crossover trial conducted by Pronovost et al¹². HSE established the Scheduled Care Transformation Programme in 2021 to ensure sustained system wide transformation of scheduled care. One of the initiatives suggested was ACP for patients waiting for a first outpatient appointment. The key components of the suggested ACP process were clinical assessment via virtual consultation and actioning the most appropriate next step in patients care journey². While telemedicine is not new to medicine, it has not been applied widely in the field of pain medicine. A pilot study was conducted and published by our group on the role of the ACP model for patient care in chronic pain medicine outpatient clinic³. This model of care was initially developed to reduce the need for face-to-face attendances in the context of a global pandemic. It was aimed at improving the efficiency of clinics and providing timely assessment/ treatment to the service users. It is worth noting that historically all patients referred to pain medicine department were evaluated at a face-to-face clinic, where the most appropriate treatment plan was determined.

One of the key deliverables of the Waiting list action

plan 2023 of the government of Ireland are 'Modernised care pathways' designed to broaden access points of healthcare for specific conditions to reduce scheduled care waiting lists and need for hospital attendance and alleviate pressure on the system while maintaining patient satisfaction with their care¹³. This ACP platform that we designed for our chronic pain management service does tick most of these boxes. By pre-screening patients for the ACP clinic, only 21.4% of the patients included in this study needed to be scheduled for a face-to-face appointment with the multidisciplinary pain service for physician consult, Pain management programme (PMP) assessment or physiotherapy assessment. Reasons for needing face to face assessment could vary from complex nature of pain, need for psychosocial assessment as identified on telephone consultation, patient request, hearing impairment, language barrier and need for translator services or need for formal clinical examination identified during telephone assessment. 5.8% patients were sent back to referrer for further information and 1.6% were referred to another specialist. We suspect this cohort would have had similar outcome with further referral had they had a face-to-face clinic appointment with pain management instead of telemedicine consult, hence saving valuable time for the patient and the service providers. 45.4% of the patients were referred directly for diagnostic or therapeutic interventional pain procedure. This was important as it meant a reduction of waiting times between face-to-face OPD clinic and interventional pain procedures. Higher proportion of patients could be redirected to the interventional pain procedure pathway in this study compared to our pilot project on ACP clinics for pain medicine³ because of the introduction of preselection of our referrals for ACP clinic. The external review of our pain medicine service over 12 months (August 2023- August 2024) showed that 300 patients were added to day case waiting list after their first appointment and 503 patients after their return appointment. Our project data suggests that with streamlined information triage, there is an opportunity to increase care plan decision on the 1st hospital visit.

Patients not being able to attend scheduled appointments and not cancelling the appointment either (DNA= did not attend) incurs a financial expense on the healthcare system as well as wasted healthcare professional's time. In 2022 there were 481,432 DNAs and 3.4 million attendances for outpatient appointments¹⁴. This roughly equates to 14.1%. The data from our study had a DNA rate of 3.2%, which could at least partially be explained by the fact that telemedicine pathways are easier and more convenient for patients with mobility or transport concerns. This low DNA rate had been consistent when we compare with our pilot audit data, hinting towards the potential benefit of application of the ACP model of care as a method of managing referrals to pain management clinic.

Although our study demonstrates potential advantages of this ACP model of care in initial assessment and treatment initiation of patients waiting to be seen by specialist in chronic pain management, we do acknowledge it has some limitations. This data equates to being an audit of clinical activity through a clinic seeded by an innovative idea. It is not a comparative evaluation of effectiveness or patient satisfaction with telemedicine versus face -to-face consultation. Neither did we conduct a cost comparison analysis of undertaking this model of care. We suggest future studies be undertaken to evaluate this aspect. The service was delivered by a consultant pain physician from the point of triaging referrals to consultation. We acknowledge that the 'selection bias' from selecting patients suitable for ACP clinic likely influenced the high rate of successful teleconsultation outcomes (45.3% booked for interventional pain procedures). A national survey of publicly funded chronic pain management services conducted in 2021 showed that, there were 0.55 pain consultants per 100,000 of population and 0.34 WTEs per 100,000 of the population¹⁵. The negative impact of losing 1WTE consultant on capacity has been observed in our service review, which can be partly offset by the ACP model of service delivery. A shift in focus from stopping the waiting list growing to consistently reducing it will require additional WTE investment and service innovations. We did not explore the potential for an advanced nurse practitioners role in delivery of this model of care which could make it more widely applicable considering the current limitations in number of practicing pain consultants in Ireland. In our study data, after pre-screening 86.5% of the referrals accepted for ACP clinic review had been from either the GP or orthopaedic services including spinal orthopaedics and their back pain screening clinic. Stratification of current waiting list and use of specific referral codes as well as having a standardised referral template can be other strategies that could assist in optimal service utilization, and a move towards 'getting it right the first time'¹⁶. We utilized descriptive statistics in analysing the data. Lack of randomisation, single arm design of the study and lack of application of inferential statistics limits the population wide generalizability of the results. The primary focus of the evaluation was to analyse the impact of introducing a change in service delivery format on the access to service. The results should be interpreted with caution due to the limitations outlined above and although the potential benefit of this model of service delivery has been highlighted as applicable to our organisation, systemic and topical factors will be important when it comes to application of the model elsewhere. It did not seek patient reported outcomes like satisfaction with service which could be seen as another limitation of the study.

Conclusion

Telemedicine in the ACP format has potential to help with management of waiting lists. Healthcare teams should strive to find solutions to the ever increasing demands on their service. Our study results describe how we were able to utilize ACP telemedicine to redirect some of our longest waiting patients towards therapeutic pathways. Lack of comparator group and predefined access metrics, limit the ability to draw conclusions regarding effectiveness or efficiency of this model of care. Future studies should be directed at evaluating patient satisfaction and efficacy of the treatment plans initiated in telemedicine clinics with comparator groups. There is also potential to consider more cost effective and sustainable models to deliver telehealth including standardisation of referral forms and involvement of advanced nurse practitioners in delivery of such care.

Declarations

Competing Interest

There are no competing interests to declare that are relevant to the content of this article.

Funding

No funding was received to assist with the preparation of this manuscript.

Financial Interests

The authors declare that they have no financial interests.

Human Ethics and Consent to Participate

The project was registered with the hospital quality improvement department and approved as a service evaluation and had gained exemption from requirement of patient consent.

Clinical Trial Number

Not applicable.

Author Contributions

All authors contributed to the study conception and design. Material preparation, data collection and analysis were performed by Ankita Miglani, Alan Blake and Camillus Power. The first draft of the manuscript was written by Ankita Miglani. All authors read and approved the final manuscript.

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