Clinical Interventions in Aging

ORIGINAL RESEARCH

A Multi-Stakeholder Qualitative Evaluation of ED PLUS: A Physiotherapy-Led Transition to Home Intervention for Older Adults Following Emergency Department Discharge

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Introduction: Older adults frequently attend Emergency Departments (EDs) and experience high rates of adverse outcomes, including functional decline, re-presentation, and unplanned hospital admissions. Developing effective interventions to prevent these outcomes is a priority. Healthcare providers (HCPs) are well positioned to create integrated care pathways for older adults discharged from the ED. ED PLUS is a physiotherapy-led, multidisciplinary model that bridges the care transition between the ED and the community. It initiates a Comprehensive Geriatric Assessment (CGA) in the ED and provides multidisciplinary follow-up to the patient for six weeks post-discharge.

Purpose: This study aimed to explore the views and experiences of older adults and HCPs involved in the ED PLUS intervention to inform the design of a future definitive trial.

Methods: A descriptive qualitative design was used. Older adults (n = 9) and HCPs (n = 10) who participated in the intervention arm of the ED PLUS trial were invited to participate in semi-structured interviews exploring their experience and perspective of the ED PLUS intervention. These interviews were audio-recorded, transcribed, and analysed using reflexive thematic analysis.

Results: Nine older adults and six HCPs consented to participate. The evaluation highlighted stakeholders' experiences and suggested modifications for optimising ED PLUS. Four themes emerged:

- ED PLUS bridged the transition between care settings for older adults.
- Stakeholder collaboration and investment were key enablers of implementation.
- Organisational, logistical, and personnel issues impeded the intervention's delivery.
- There is potential for service optimisation and expansion.

Conclusion: This evaluation emphasises the important role of physiotherapists and other HCPs in transitional care delivery for older adults. The findings will inform future trials of the ED PLUS model, aiming to improve outcomes for this population.

Keywords: older adult, emergency care, admission avoidance, care transition(s), integrated care

Introduction

As life expectancy increases, the proportion of older adults (aged ≥ 60 years) is rising globally.[1] Ireland is no exception, where there are currently 742,300 older adults in the population and that number is expected to increase to 1.56 million by 2051.[2] However, these projected increases in life expectancy do not equate to increases in "healthy life expectancy". According to the recent Eurostat[3] data, in Europe, men and women aged 65 years will have life expectancies of approximately 18 years and 21 years, respectively. However, only 9 of these will be years lived in good health. The

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remaining years are characterised by age-related multi-morbidity due to one or more chronic diseases, resulting in an important reduction in quality of life and increased cost of healthcare utilisation.[3] This increased incidence of multi-morbidity, along with older adult populations demonstrating lower thresholds for accessing acute care, has resulted in an increasing number of older adults accessing both acute and emergency care.[4,5]

Internationally, older adults have been reported to account for up to 25% of all emergency department (ED) attendances,[6] with this figure being reported as closer to 30% in Ireland.[7] Once in the ED, older adults are more likely to experience longer lengths of stay, have more complex presentations and experience higher rates of adverse outcomes following discharge from the ED than those under 65 years of age.[8] Adverse outcomes include functional decline, poorer quality of life, unscheduled return visits to the ED, hospitalisation and mortality.[9,10] Furthermore, recent Irish data suggests that up to 60% of older adults presenting to the ED are admitted for inpatient care,[11] with a recent systematic review concluding that increased presentations by older patients with complex chronic conditions and multimorbidity is a significant contributing factor to ED overcrowding.[12]

As the first point of contact for emergency and acute care, the ED plays an important role in the healthcare provision and hospital admission regulations for older adults. An ED visit by an older adult presents an opportunity to deliver interventions and enact a care pathway. Hence, there has been an increase in ED-based intervention research in this cohort. However, to date, there is low-quality evidence available for the effectiveness of ED interventions for older adults.[13] Given the high rates of adverse outcomes experienced by older adults attending the ED, as well as the international focus on moving to longitudinal, coordinated care models, further research is needed to examine the role of and determine the effectiveness of interventions initiated in the ED supporting transitions of care for older adults being discharged from the ED.[13]

ED PLUS[14] is an evidence-based and stakeholder-informed intervention (ED PLUS) aiming to reduce the incidence of functional decline and other adverse outcomes among older adults living with frailty. The Medical Research Council Framework for the development and evaluation of complex interventions[15] was conceived following the conduct of an evidence synthesis,[16] secondary data analysis[17] and the stakeholder panel of older adults and family carers[18] who engaged with the research team from study conceptualisation. ED PLUS bridges the transition of care for older adults between the index visit to the ED and the community by initiating a Comprehensive Geriatric Assessment (CGA) in the ED and implementing a six-week follow-up multidisciplinary intervention in the patient's home, which included a home visit from a physiotherapist within 24 hours following discharge from the ED[14], Supplementary Information File 1, Table S1, and Figure S1 outline the components and sequencing of the ED PLUS intervention. The ED PLUS pilot feasibility randomised controlled trial found that despite recruitment challenges experienced during the COVID 19 pandemic, recruitment and retention in the study was high. Satisfaction with the ED PLUS model of care was also reported, with participants strongly endorsing it as an acceptable model of care that was effective and beneficial for older adults. Furthermore, there was a lower incidence of functional decline and improved quality of life in the ED PLUS group when compared to usual care.[14] Following completion of the ED PLUS pilot, this qualitative study was undertaken to capture the stakeholders' views and experiences of ED PLUS, prior to scale up to a definitive trial. This study aimed to establish whether ED PLUS was acceptable as a model of care both to older adults discharged from the ED and to HCPs involved in delivering the intervention. It further aimed to identify and explore any trial design aspects that required refinement prior to proceeding to a full randomised control trial (RCT).

Methods

Study Design

This study was conducted in line with the Consolidated Criteria for Reporting Qualitative Research (COREQ).[19]

A qualitative descriptive design was undertaken to allow an in-depth examination of the views and experiences on this topic from the perspective of various stakeholders. This approach aligns with our study and aims to explore the experiences and views of older adults and health care providers (HCPs) who participated in the intervention arm of the ED PLUS[14] Trial.

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Recruitment and Participants

Participants of the pilot feasibility trial were adults aged ≥65 years, with undifferentiated medical complaints presenting to an ED Monday to Thursday (8am-5pm). All participants recruited to the ED PLUS Intervention met the following inclusion criteria;

- Participants had to be medically stable as deemed by the treating physician (vital signs are within normal limits, patients do not require a surgical assessment).
- Have a score of ≥2 on the Identification of Seniors at Risk (ISAR) screening tool. The ISAR is a validated five-item screening tool for use in the ED to detect older adults at risk of adverse outcomes including functional decline, revisits to the ED, unplanned hospitalisation and mortality within 6 months of the ED presentation.
- Be community dwelling.
- Have a short-term ED attendance or AMU admission with a predicted length of stay of ≤72 hours from ED presentation.
- Have a confirmed negative COVID-19 test on presentation to the ED.

All older adults living with frailty (n=9) and HCPs (n=10) who received or delivered the ED PLUS intervention were invited to participate in the study. All consenting participants were interviewed between December 2021 and April 2022.

Ethical Considerations

The study was conducted in accordance with the Declaration of Helsinki. Ethical approval was obtained from the HSE Mid-Western Area Research Ethics Committee (088/2020). All potential participants received an information sheet upon initial recruitment to the ED PLUS trial that explained the purpose of the study, study procedures, study risks and benefits, confidentiality in handling the collected data, anonymity in interviews, and confidentiality in the reporting and dissemination of the study. All participants were made aware that their participation was voluntary and that they had the right to withdraw at any stage. All participants provided consent for their quotations to be used and published anonymously.

Data Collection and Interviews

Audio-recorded, semi-structured telephone interviews were conducted to allow an in-depth exploration of participants' perspectives and experiences of the ED PLUS intervention. Telephone interviews are an effective method for collection of qualitative data, including data related to sensitive topics.[20] Benefits of telephone interviews include more flexibility for scheduling, convenience for participants, enhanced accessibility, less time-consuming, and improved cost-effectiveness. The interview guide is provided in Supplementary Information File 2. The guide was informed by the study aim, background literature and based on guidelines for conducting semi-structured interviews.[21] Since ED PLUS was a new model of care, the qualitative descriptive design was tailored to provide a comprehensive and detailed summary of participants' experiences and perspectives, without relying on a theoretical framework.[22] Prior to adoption for use, interview questions were developed and reviewed in conjunction with a local public and patient involvement (PPI) panel of older adults in the mid-west catchment area; this PPI panel was set up to support researchers in geriatric emergency medicine research. The interview schedule used for older adult participants focused on their experiences of participation in the trial, ED PLUS intervention, service use, and interaction with HCPs. The topics covered in the interviews with HCPs included experiences of delivering ED PLUS, modifications to ED PLUS, impact on care delivery, barriers and facilitators of service provision, impact of the Covid 19 pandemic on the delivery of ED PLUS, and collaborative working practices. Field notes were recorded after all interviews to document initial impressions and areas of interest.

All interviews were conducted by AH, a physiotherapist, and a PhD student who had no established relationship with the participants. The interview was pilot-tested with one older adult participant and one HCP to assess the clarity and appropriateness of the questions, resulting in minor changes and these two interviews were subsequently included in the analysis.

Data Analysis

All audio-recorded interviews were fully transcribed verbatim by AH. Data were collectively analysed using reflexive thematic analysis.[23,24] This inductive approach is data-driven without trying to fit it into an existing coding frame or the researcher's analytic presumptions. To address our research aims, thematic analysis was conducted within a critical realist paradigm which acknowledges that participants' experiences are lived realities that are produced and exist within broader social contexts.[23,24] Methodological rigor was enhanced using strategies such as ongoing documentation of the personal reflections of the researcher relating to her values, beliefs, and previous experience as a physiotherapist working in Frailty Intervention and Older Adult Care across acute, transitional, and community-based settings.

To ensure reflexivity through transparency, continuous detailed discussions were conducted between (AH) a novice qualitative researcher and (CF) an experienced qualitative researcher, throughout the research process to enhance understanding and clarity in the interpretation of the data (CF) was actively involved in the analysis process. The lead researcher (AH) maintained a reflexive diary and, through discussion with supervisors and co-researchers (RG and MC), considered the impact of her status as a physiotherapist with a special interest in Older Adult care and Frailty Intervention.

The QSR International Pty Ltd. NVivo (Version 12; 2018) computer software was employed to organise, store, and retrieve data for analysis by (AH). Six phases of thematic analysis were conducted by (AH) with critical review and feedback from (CF) as follows: Phase one involved full and prolonged engagement with data achieved by conducting and transcribing the interviews and re-reading the interview transcripts. In phase two, the lead author (AH) coded all transcripts through an open coding approach, and sections of transcripts were coded by (CF) to refine and agree on the codes. The second stage included a list of codes that represented both the patterning and the diversity of relevant meanings in the data. In phase three, both researchers reviewed and collated all potentially relevant codes to generate candidate themes guided by the research question, aided by thematic maps. Phase four was accomplished through the process of reviewing these candidate themes against the codes, the original dataset, and one another, ensuring that the themes were sufficiently distinct yet related to one another. Phase five involved refining the themes through writing theme definitions to clarify the scope of the themes and editing the theme titles to ensure that they were descriptive of the central organising concept of the theme. Phase six included writing the narrative report and deciding how the quoted data extracts would be presented. Culturally and gender appropriate pseudonyms were used to ensure the anonymity of the healthcare staff while older adults were assigned codes (P1-P9) while reporting the data.

Results

Nine older adults and six health care professionals consented to participate and completed interviews. The average length of the interviews with older adult participants was 26 minutes (range, 18–42 minutes), and the average length of the HCP interviews was 38 minutes (range, 30–52 minutes). The demographic characteristics of the ED PLUS older adult participants are outlined in Table 1, and those of the ED PLUS HCP participants are outlined in Table 2.

Following thematic analysis of the collected data, the following were identified as the main themes:

Table 1 ED PLUS Participant Characteristics. ED PLUS Older Adult Participant Characteristics

Characteristic	ED PLUS Participants (n = 9)
Age (years); mean (SD)	80.5 (8.3)
Gender Female (n)	7
Gender Male (n)	2
Rockwood Clinical Frailty Scale Average (SD)	5 (1)
Pseudonym	P1-P9

Abbreviations: SD, standard deviation; n, number.

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Table 2 ED PLUS Healthcare Provider Participant Characteristics

Professional Role	Gender	Pseudonym
Specialist Registrar (Gerontology)	Male	Arif
Dietician	Female	Lauren
Occupational Therapist	Female	Aoife
Physiotherapist	Female	Máire
Research Nurse	Female	Lorraine
Research Nurse	Female	Julie

1) The ED PLUS model of care bridged the transition across care settings for older adults
2) The investment and collaboration of multiple stakeholders in the ED were key enablers of implementation
3) Organisational, logistical and personnel factors impeded the delivery of ED PLUS
4) Potential for service optimisation and expansion

The ED PLUS Model of Care Bridged the Transition Across Care Settings for Older Adults

Many components of ED PLUS were identified as positive, feasible, and acceptable in providing effective transitional care for older adults across healthcare service settings.

The importance of having both an in-reach and out-reach service approach delivered by the same MDT was consistently referenced by both older adults and HCPs in terms of delivering continuity of care, providing an effective service delivery model and was viewed as optimising the discharge process for the older adult,

> This cohort are frail older people who have come through the ED in trauma for the most part and they have had a load of information thrown at them and then suddenly they're going home and they have all these unanswered questions, knowing there would be a follow up provided reassurance. (Aoife)

Although older adults were initially anxious at the suggestion of having health care providers visit their home, most acknowledged that these fears were largely allayed with the knowledge that the health care provider known to them from the ED would be the person completing the domiciliary visit and felt reassured that all necessary precautions were put in place,

> (The physiotherapist) was wonderful, she had all the right stuff and made me feel safe and at ease. (P1)

While another stated

> I felt she treated me like she would someone in her own family, I was getting the best of care. (P2)

The importance of the role of the case manager in providing a single point of contact for the older adult and the MDT across the care transition in regard to identification of needs, generation of appropriate referrals and provision of follow-up services was also consistently referred to,

> Knowing I had someone to contact, and that it was someone I had met face to face, was very reassuring. There is nothing worse than not being able to speak to someone in person when you're worried. (P3)

Similarly another older adult expressed how having the follow-up contact was very important to facilitating discharge

> The nurses and doctors tell you so much, and they're busy and in a rush, you don't really get time to take it all in. Knowing I'd have a chance to talk to someone from the hospital after I went home put me at ease leaving the hospital. (P4)

The case manager's role was widely acknowledged by all participants as particularly necessary for providing continuity of care and promoting confidence in the service being provided. Promoting effective communication between HCPs and older adults and their families and caregivers was identified as the main contributing factor to this sense of confidence in service provision by the majority of older adults evaluated.

> I think what was a massive plus was that (the case manager) came in and met the patients in the ED. If this was led out (implemented as a model of care), I think that that in-reach (initiation of follow-on community based or domiciliary service at point of care within acute healthcare services while patient remains an in-patient; aims to promote timely access to services, continuity of care and accessibility) element would be an important factor to maintain if feasible. I think that was a very important and invaluable aspect of the service. The patient having a chance to meet the person who would be coming to their home the next day, and the health professional getting to meet them and gauge their needs ahead of the visit was invaluable. (Julie)

The value of domiciliary visits by case managers has also been repeatedly acknowledged. Although many members of the MDT stated a preference for completing these visits, they acknowledged that having an appropriately experienced member of the team completed these visits was an acceptable and feasible model that promoted the efficiency of service delivery and acted as a safety net for older adults. The importance of continuity of care and prompt domiciliary visits is also widely highlighted by HCPs in preventing re-presentation to the ED for multiple reasons.

> In the ED information isn't always heard or fully imparted so knowing that if you had concerns with regards to risk with the patient or if they were acutely deconditioned or off their baseline, but you knew that there was a likelihood that they would get back to that baseline with the appropriate supports in place, and the appropriate intervention, knowing that there was next-day follow up was absolutely invaluable because (a)they have a safety net; (b)a lot of the time when patients re-present early to the ED after their initial index visit it is because they have questions that they weren't sure about or they have anxieties or they don't get that timely input. (Aoife)

There was consensus among the MDT that delivery of services entirely virtually and remotely would not have been effective for this population and that domiciliary visits were an essential component of the service delivery model. A blended service delivery model with the adoption of a personalised approach to care ethos ensured a successful approach, with one HCP expressing their view on the domiciliary visit as

> Having that next-day follow up in the patients' home is absolutely invaluable – the value of it can't be understated. (Lorraine)

While another suggested that if the ED PLUS pilot

> Was mainstreamed in practice that it would certainly have laid the foundation for what the ideal service would look like! (Aoife)

The Investment and Collaboration of Multiple Stakeholders in the ED Were Key Enablers of Implementation

Having acceptance and support from the ED staff was vital to the successful outcomes of ED PLUS, with HCPs acknowledging that

> Overall the staff in ED were no problem to work with, they were delighted to see us coming they were delighted that we were offering another pathway and another option to these patients. (Máire)

But also highlighting the need for staff buy-in at management level and demonstrating positive service outcomes and efficiencies to enable this,

> You'd really need to get the managers on board. Once you are providing a service and a better pathway for patients most people will not have a problem – the problem is when the pathway doesn't. (Julie)

Collaborative work processes between ED staff and the ED PLUS team, as well as between members of the ED PLUS team itself, provided opportunity for experiential learning and educational opportunities for staff within the ED as well as

increasing awareness of the role of the disciplines involved within the ED PLUS MDT, one participating HCP summarised it as

> I found an excellent MDT, from physiotherapy to occupational therapy, the fact that everyone was present meant that I had direct communication with each member of the team. That was superb. Everyone knew what my role was, that my role was to complete the comprehensive geriatric assessment. They were helping me even within my role. For example in relation to pharmacy reconciliation, members of the MDT were helping on this by collecting information for me. It was a collaborative effort. (Arif)

Effective communication both between HCPs and between HCPs and older adults was essential. Having a dedicated team within the ED again contributed to this. As one HCP described

> Another huge issue when the family can't come in is that when they are not with the person they can't advocate for them. So a lot of the time the patients, particularly the elderly and the frail, they're just lost down there in the ED. Having a specialist team with the skills to communicate in this scenario was a bonus. (Julie)

Communication between the ED PLUS MDT and the ED staff was also vital to the success of the service delivery and outcomes as indicated by HCPs and was facilitated to the best of everyone's ability when in the interest of the older adult and ED patient flow,

> Everyone was very communicative and wanted to facilitate the discharge for the patient. Obviously EDs are overcrowded, and sometimes things happen outside of our control or in a delayed manner sometimes, but everyone was definitely trying their best to facilitate the discharge. (Arif)

The need for a dedicated MDT within the ED to provide appropriate services for older adults has been widely acknowledged throughout the evaluation process by healthcare service providers. Many felt that the presence of such a team within the ED not only impacted directly on the care provided to older adults but also more broadly to the care provided by the ED staff, as their awareness of the needs of older adults and the impact of the MDT approach to care improved through direct contact with the service.

Others acknowledged the impact of an established MDT for older adults pre-existing within the ED,

> Having a team pre-existing and dedicated to the ED was certainly an enabler whereas if you had a new team coming in it mightn't have been as cohesive. The pre-existing team was certainly a massive strength to the success of the feasibility trial because the HSCP team, or a member of it, was often the first person to interact with the patient and gather the background details. (Aoife)

Despite positive feedback and affirmation regarding the importance of the MDT, the absence of a pharmacist in the MDT was repeatedly referred to. Many HCPs felt that inclusion of a pharmacist would be necessary in future service developments,

> If I was to make one other change to the team, it would be to incorporate a pharmacist. The medical reconciliation aspect of the CGA is quite specialist and very time consuming and a pharmacist would have been a great asset in this regard. (Arif)

In addition, older adults acknowledged the reassurance provided by receiving care from a team of dedicated professionals with expertise in assessing and treating older adults

> It's easy to feel lost and scared in a place so busy, you'd feel like the nurses and doctors always have something better or more important to be doing and don't have time for you. The people I met weren't like this, they neglected nothing and couldn't do enough for me. (P5)

With older adults appreciating an approach to care that treated them

> As a person with needs and not just a medical condition. (P6)

HCPs also highlighted the value of a more holistic approach to care provided by ED PLUS,

> The input that they required from a functional psycho-social perspective is often why patients represent back to ED, whereas you knew that the likelihood of that was reduced and that they would progress in their function as you would predict as opposed to regress because they were getting that timely input. (Aoife)

Overall, participants referred to the value of having that initial contact with a dedicated team within the ED and the CGA process being made accessible to the older adult,

> I felt I was getting a lot more attention than normal, and from people who were interested in helping me as an older person. (P6)

while HCPs explained

> I think it definitely led to admission avoidance, especially patients who may have been admitted under different specialties and may have stayed in hospital for a few days, it definitely impacted their outcomes in terms of picking up hospital acquired infections and their rehabilitation potential. (Máire)

And similarly HCPs felt that having early access to comprehensive geriatric assessment

> Was also very valuable in highlighting care needs and the need for onward referrals to other services that then prevented possible readmissions and representations to ED. (Arif)

Organisational, Logistical and Personnel Factors Impeded the Delivery of ED PLUS

Limitations of the service model were identified during the evaluation process. Concerns were expressed regarding the feasibility of the case manager's workload, particularly if the service was to be provided across a larger geographical area, which would involve communicating with multiple health care professionals across different geographical areas.

Lack of timely and efficient access to essential follow-on services was also identified as a potential barrier to the effectiveness of this model of care going forward, an element that would further impact on the workload of the case manager, a concern expressed by many HCPs,

> One of the main things limiting the broadening of a service is access to follow up. For example who is going to be following up these patients, the primary physician or is it going to be a geriatric consultant or is it going to be a GP follow up based on a specific recommendation. (Arif)

While others viewed it as manageable on a smaller scale but problematic in the event of a larger scale implementation,

> Some of these patients who need access to investigations for example echoes, holters, dexas, telemetry; how can all of these things be organized if we implement a wider service population and timing of delivery with extended service. There are a lot of challenges to keep in mind when talking or thinking of expanding service. (Arif)

Similarly, the lack of accessibility of community-based services to meet the needs of service users in a timely manner upon discharge was also strongly identified. One participant referred to the often apparent disconnect between both the intra- and inter-disciplinary acute and community service providers and its impact on care delivery,

> The acuity of patients being discharged home is changing and this is something not being addressed in primary care in line with how it is happening in the acute services. (Máire)

Another HCP expressed concerns and frustrations regarding the lack of continuity between acute and community services as a barrier to implementation

> Sometimes when you are referring on to primary care services they may not always have the understanding that we have in the hospital. They may not see the urgency, they triage their own referrals and they may not see the urgency for that patient to be seen that I would consider as very urgent and a priority. (Aoife)

In relation to ED PLUS, the Covid 19 pandemic has impacted both older adults and healthcare professionals. Many older adults stated that their presentation to the ED was delayed as a result of wanting to avoid the hospital setting for fear of contracting Covid 19,

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> I was reluctant to go in in case I'd come out worse, it was a scary time with so much unknown and you'd hear ads on the radio telling you to stay at home, you'd be afraid of being in there alone. (P7)

Participants highlighted the impact of Covid 19 in causing delays in access to care upon attending the ED, and the worry and stress induced by the same. Healthcare service providers provided insight into the challenges and difficulties that the Covid 19 pandemic posed in relation to the recruitment of older adults, provision of timely assessment, and access to diagnostics and staffing provision. These challenges significantly impacted both recruitment for this RCT and the efficiency of the services delivered within the ED.

Delayed access to assessment was further compounded by the inconsistent availability of specialist geriatric expertise to complete the Common Geriatric Assessment. This was secondary to multiple uncontrollable factors such as demands of existing caseload, Covid 19 related sick leave and annual leave as one HCP described,

> One other barrier or difficulty. was the doctors, as a team the medical team, we were supposed to have access to a registrar but with covid, teams were under pressure and it was quite difficult to get doctors down to assess patients in a timely manner. (Julie)

while another participant acknowledged the challenge of accessing this specialist geriatric expertise in an efficient and timely manner at the ED index visit

> Not as criticism but more the realities in practice. (Aoife)

The follow-on impact of delayed access to assessment and diagnostics often resulted in delayed discharge and frustration for both older adults and the healthcare service providers, with one HCP referencing the importance of timely access

> In the ED I can't over-emphasise enough the importance of timeliness and targets and timelines. They're all really important factors in the ED, as is decision making, be it admission or discharge. (Aoife)

while an older adult expressed frustration at the impact of waiting times on them personally,

> I just wanted to go home, I could almost feel myself becoming more anxious and unwell the longer I was waiting there (the ED) and I just wanted to be at home. (P4)

Both older adults and health care service providers acknowledged the challenges presented in relation to collecting collateral history, completion of examinations, and effective communication at times in the absence of caregivers and family members in the ED. Furthermore, the use of Personal Protective Equipment (PPE) also presented as a further barrier to effective communication and rapport building in an already challenging ED environment.

The poor suitability of the ED environment to meet the needs of the older adults and their assessment,

> It's not always the most conducive environment for completion of a full CGA. (Aoife)

was deemed a limitation by all.

Potential for Future Optimisation and Expansion of ED PLUS Model of Care

Perspectives on the eligibility criteria for ED PLUS intervention and service expansion were also explored. One participant commented on eligibility, and the use of screening tools

> I think as a starting point the ISAR[25] (Identification of Seniors at Risk Tool) of 2, being positive for a risk of adverse outcomes is a good place to start. Age limits aren't always appropriate and is arbitrary enough, you could have a frail 65 year old and a robust 80 year old, but at the same time you have to apply some limit on it. I think clinical criteria to begin with is important. (Lorraine)

Another HCP concurred voicing their opinion that should the pilot progress

> It's time to refine criteria and medical groups to begin with, look at clinical criteria rather than an arbitrary age cut off, and looking at clinical judgement within that. (Julie)

Others considered the potential role of an expanded service in benefitting the pre-frail,

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> There may be a more preventative role within the younger cohort, they may need less input but perhaps you get more value for your intervention. In my opinion everyone over the age of 65 should have a comprehensive geriatric assessment completed as this should be part of the usual care of any older patient. (Arif)

In addition to eligibility criteria, expanding the service to out-of-hours availability was also referenced,

> It's after five o'clock that a lot of admissions of > 75s occurs so extending this service to overnight would be beneficial. However, again it is the logistics and staffing to allow for appropriate recruitment and so on may not be feasible but is worth looking at. (Arif)

The establishment and potential role of the integrated care programme for older person (ICPOP) community-based multidisciplinary teams (MDT) in further facilitating care provision models such as ED PLUS was also referenced,

> You would have hub (ICPOP MDT clinic) follow-up which we didn't have because the hub (ICPOP MDT clinic) wasn't in place when we were doing it. It has only come into place since January. With the hub (ICPOP MDT clinic) follow-up you would have more patients that could go onto that pathway quite safely. (Julie)

Accessibility to follow-on investigations in a timely manner and the availability of team members to ensure these are undertaken and acted upon appropriately and provide clinical governance for the same was recognised as a significant barrier limiting the implementation of the ED PLUS service model.

> One of the main things limiting the broadening of a service is access to follow up. who is going to be following up these patients, the primary physician or is it going to be a geriatric consultant or is it going to be a GP follow up based on a specific recommendation? (Arif)

In terms of the suitability of the ED environment, some HSCPs suggested that once initial triage and medical assessment was completed a

> A more in-depth assessment in a more appropriate controlled environment. (Marie)

would then be more suitable and that

> Having a designated area to complete this process would make a huge difference as when they (older adults) were in the private rooms there was no issues around recruiting or assessment and maintaining dignity and respect. (Julie)

Discussion

This study explored the experiences of older adult participants and healthcare providers involved in ED PLUS, an HCP-led intervention designed to reduce the risk of adverse outcomes among older adults transitioning from the ED to the community. Our findings revealed that, overall, this model of service delivery was experienced as positive in providing effective transitional care for older adults presenting to and being discharged from the ED to the community, with particular value placed on the role of a key caseworker in effective implementation. The findings also identified the investment and collaboration of multiple stakeholders in the ED as a key enabler of implementation of ED PLUS and clearly outlined not only the strengths but also the limitations of ED PLUS as a model of care, all of which require consideration and further evaluation to inform future definitive trial and service delivery.

Healthcare systems are multifaceted and complex. Experiencing and navigating a healthcare system can be challenging, especially for older adults with complex health problems, their families, and their caregivers. The ED environment can be hectic and lacks the appropriate space and facilities to complete assessments and address the communication needs of many older adults. Although the majority of older adults acknowledge that healthcare providers act in their best interest, this perception is challenged when patients feel frustrated as a result of being unable to access healthcare in a timely and effective manner, continuity of care or effective communication and information about their healthcare.[26] Similarly, a qualitative evidence synthesis by Condon et al exploring older adults' experiences of transition to the community from the ED identified un-resolved symptoms on discharge, lack of planned discharge, fragmented care at the point of transition home and inadequate healthcare provider communication as

factors which negatively affected transition home and return to daily life and impacted on re-presentation to the ED.[27] Inversely, this exploration found the ED PLUS model of care to effectively bridge the transition of care by addressing these factors and effectively providing continuity of care and communication throughout the older adult's healthcare interaction and journey. Health care providers and older adults alike associated positive outcomes with early access to a specialist team within the ED, which facilitated the provision of continuity of care pre and post discharge. These findings are consistent with those of Preston et al which found that successful interventions which optimised older adult outcomes from the ED integrated social and medical care, including screening and assessment, were initiated in the ED and bridged to other settings with follow-up and monitored and evidenced successful practices similar to the model of care implemented by ED PLUS.[28] The value of the specialist MDT within the ED and the investment and collaboration of multiple stakeholders in the ED were repeatedly identified as key enablers of implementation of these components.

Patient-centred care is one strategy to enhance healthcare systems by improving patient satisfaction and health outcomes while lowering healthcare costs. Having a key caseworker central to the ED PLUS model of care, a clinical specialist physiotherapist allowed for a case management approach to the care transition of older adults with integration of the MDT. The older adults in this study reported a preference for a single professional responsible for their overall care, taking into consideration their unique presentation and preferences for their management, and the value placed on continuity and quality communication mechanisms. The existing evidence supports the appointment of a clearly defined healthcare professional who coordinates care, with a focus on patient preferences, shared decision-making, and functional outcomes. HCPs such as physiotherapists offer the potential to improve patient and population health and well-being by driving service improvements, research, management, and leadership. This evaluation suggests that both older adults and HCPs recognised the value of key case workers, which is an avenue for further research. The evaluation findings also support the role of the case manager in supporting the care transition from the ED to the home, with participants indicating that ED PLUS was effective and beneficial for older adults and that viewing home visits was key to the success of ED PLUS.

Limitations of the service model were identified during the evaluation process. Recruitment was negatively affected by the Covid 19 pandemic and its impact on health care services. This has also been reported in other clinical research studies.[29] Concerns were raised in relation to the impact of staffing and service access restrictions on the feasibility of implementing ED PLUS as a model of care on a larger scale, as well as the suitability of the ED as an environment to deliver effective care for older adults. Healthcare providers expressed apprehension about the feasibility of the case manager's workload, particularly if the service was to be provided across a larger geographical area that would involve communicating with multiple healthcare professionals across different geographical areas. Despite recognising these limitations, ED PLUS was perceived as a feasible and acceptable model of care for older adults presenting to the ED, with the potential positive impact of an extended service repeatedly referenced throughout the evaluation, both in terms of process and patient outcomes. Progression to a full RCT is required to investigate the potential impact on these outcomes further.

The need for successful strategies aimed at improving both the sustainability of health and welfare systems and people's quality of life has been widely recognised in the literature.[30,31] Up to 60% of older adults presenting to the ED are at risk of admission. Hospital admissions in the older adult population are associated with functional decline, increased dependency levels, and the need for residential care. This hospital associated decline (HAD) results in significant personal and economic costs.[32] While this study focused on older adults discharged from the ED to the community following their index visit, it also aligns with evidence-based models of inpatient care. Although there is a lack of evidence for a clearly defined optimal model of care for this population, there is consistent evidence that successful models for older adult inpatient care and integrated care all include the following components: patient-centred care, frequent medical review and contact with HCPs, early rehabilitation, early discharge planning, effective and continuous communication, and a prepared environment.[33] This evaluation suggests that the ED PLUS model incorporates these components effectively to optimise service provision and improve patient outcomes in a hectic and unpredictable environment. However, further research is required to investigate the feasibility of implementing this model on a wider scale, the role of HSCPs as case managers, and the long-term impacts of such a model on patient and process outcomes.

Strengths and Weaknesses of the Study

This study explored the experiences of older adults and healthcare providers who participated in the ED PLUS intervention. We recruited participants from various health disciplines to ensure that their perspectives were represented. The limitations of this study include the lack of perspective of service managers and clinicians in the community. In addition, while participants member-checked the transcripts of their interviews, they did not have the opportunity to review or comment on the analysis or final themes generated.

Conclusion

Both HCPs and older adults reported satisfaction with and deemed the ED PLUS model of delivery of care and the role of the physiotherapist acting as a key caseworker as an acceptable means of supporting the older adult care transition from the ED to home. This model of health service delivery aligns with national and international policies on healthy and successful aging, particularly in terms of supporting older adults to live in their own homes and communities. This evaluation of ED PLUS has provided valuable multi-stakeholder insights and perspectives on its beneficial effects on the clinical outcomes and healthcare utilisation of older adults attending the ED, in addition to highlighting the potential role that physiotherapists and other Health and Social Care Professionals may play in service development and transitional care delivery for this population. Potential further developments and challenges of larger scale delivery and sustainability of this model of care were also identified and require further exploration. This preliminary evidence requires confirmation in future definite, adequately powered RCT that incorporate long-term follow-up of outcomes.

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Disclosure

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