Project ECHO: Enhancing palliative care for primary care occupational therapists and physiotherapists in Ireland

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Abstract
Project ECHO (Extension for Community Healthcare Outcomes) uses videoconferencing technology to support and train healthcare professionals (HCPs) remotely. A 4-month fortnightly ECHO programme was developed and implemented to enhance palliative care provision by primary care therapists. Teaching and case-based discussions were facilitated by palliative care specialists. A mixed-methods cohort study was used to evaluate the project. ECHO participants completed pre- and post-programme questionnaires regarding their knowledge and skills across key palliative care domains. Focus groups were held before programme commencement to explore participants' attitudes and experiences of palliative care and after programme conclusion to explore their experiences of ECHO. Twenty-six primary care HCPs commenced the ECHO programme. Mean scores in self-rated confidence in knowledge and skill improved significantly ($p < .002$) following the programme. Twenty-one primary care HCPs completed the post-ECHO surveys and scores of self-rated confidence in knowledge and skills were significantly higher than pre-ECHO scores. Ninety-five percent of participants ($n = 19$) reported ECHO met their learning needs and was an effective format to enhance clinical knowledge. Eighty-five percent of participants ($n = 17$) would recommend ECHO to their colleagues. Project ECHO improved palliative care knowledge and skills of primary care HCPs in Ireland, with potential to address the growing need for integrated palliative care services.

Keywords
occupational therapy, online learning, palliative care, physiotherapy, primary care, Project ECHO

1 | INTRODUCTION

1.1 | Palliative care provision

The World Health Organisation (WHO) describes palliative care as: "...an approach that improves quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention of suffering by of early identification and impeccable assessment and treatment of pain and other problems, physical, psychological and spiritual" (WHO, 2020). Internationally, due to ageing populations and rising prevalence of terminal non-communicable diseases, there is a growing need for palliative care,
yet access to palliative care services is often limited (Arora et al., 2017). Increasingly, integrated palliative care services are promoted within primary care to allow for more holistic responses to adults living with life-limiting conditions in the community (den Herder-van der Erden et al., 2017; WHO, 2016).

In Ireland, projections of need for palliative care services are estimated to increase up to 84% between 2016 and 2046 (May et al., 2020). Previous studies indicate that specialist and generalist palliative care capacity and funding in Ireland do not meet current need (May et al., 2014; Weafer & Toft, 2018). Workforce development and service provision in palliative care is required to meet anticipated growth in demand for palliative care services (May et al., 2020).

An interdisciplinary team approach to palliative care is recommended (Jünger et al., 2007; Radbruch & Payne, 2009); however, the composition of healthcare professionals (HCPs) on the team tends to vary, and Høgdal et al., (2020) note the roles of occupational therapists and physiotherapists may be underestimated and may result in patients experiencing unmet needs concerning daily activities, fatigue, pain, concentration and anxiety.

The need for palliative care education that is delivered in an integrated, collaborative and cost-effective way is well documented (WHO, 2018). HCPs have identified education addressing knowledge and application of palliative interventions and practice coaching as key elements which would support integration of a palliative approach within primary care (Nowels et al., 2016). In Ireland, the Health Service Executive Palliative Care Competence Framework sets out the training, education and skills required across palliative care at generalist, intermediate and specialist levels and informs academic curricula and professional development programmes (Palliative Care Competence Framework Steering Group, 2014). It sets out six core domains of competence, common to all HCPs and representing the primary understanding required to provide palliative care, as listed in Figure 1.

Online learning models offer much potential to overcome barriers to accessing education for HCPs, by allowing engagement in learning at a convenient time and location, enabling balance between work commitments and professional development (Sinclair et al., 2015). Project ECHO is a distance health education model, which uses audio-visual technology to connect a team of experts (the ‘Hub’) with HCPs working in community settings (the ‘Spokes’).

The ECHO model has been applied to many chronic diseases and patient groups such as hepatitis C, chronic pain, multiple sclerosis, mental health and geriatrics (Alschuler et al., 2019; Arora et al., 2011; Bennett et al., 2018; Carlin et al., 2018; Johnson et al., 2017; Mariciono et al., 2017; Sockalingam et al., 2018). It has also been implemented for palliative care internationally, demonstrating improvements in participants’ self-efficacy by enabling HCPs acquire new knowledge, skills and best practice resources in palliative care (Arora et al., 2017; Burpee et al., 2019; Marr & Neale, 2012; White et al., 2019; Yennurajalingam et al., 2019). ECHO has potential to bridge the gap between the growing need and limited palliative care resources in Ireland by facilitating palliative care specialists to disseminate core principles and best practices to primary care HCPs, thus developing communities of practice.

1.2 | Project ECHO: Palliative care for occupational therapists and physiotherapists in primary care

This ECHO programme was developed to improve access to palliative care by offering easily accessible and up-to-date training on palliative care principles and best practices to primary care occupational therapists and physiotherapists throughout Ireland. This study aimed to evaluate the impact of delivering education using the ECHO model on occupational therapists and physiotherapists self-reported confidence in their clinical knowledge and skills in addressing the palliative care needs of patients they work with in primary care settings. The ECHO ‘Spokes’ were primary care occupational therapists and physiotherapists who attended remotely from their workplaces. The ECHO ‘Hub’ consisted of senior HCPs with palliative care experience from specialist palliative care settings, including occupational therapists, physiotherapists, a dietitian and a nurse manager.

1.3 | Curriculum for ECHO programme

The ECHO team identified 14 topics deemed relevant to occupational therapy and physiotherapy in palliative care based on expert opinion, the Competence Framework and previous training needs analysis. Participants then prioritised the topics they wanted ECHO to address, prior to the commencement of the programme (as presented in Figure 2).

ECHO was delivered utilising the already established ‘Palliative Hub’ e-learning platform, designed and hosted by the All Ireland Institute of Hospice and Palliative Care (AIHPC). Each session included a didactic presentation followed by anonymised case-study
Specialist clinicians and academics with relevant knowledge provided brief, focused training on a clinical topic, after which Spoke members presented anonymised case studies, using a standardised proforma. Each clinic lasted 90 min and was digitally recorded using Zoom®.

2 | METHODS

2.1 | Design

A mixed-methods evaluation of ECHO in improving primary care occupational therapists and physiotherapists' confidence in their knowledge and skills to address the palliative care needs of clients they work with in primary care was undertaken, using a combination of quantitative questionnaires and qualitative focus group discussions.

2.2 | Baseline assessment

Prior to programme commencement, participants completed a pre-ECHO online questionnaire using Survey Monkey™. This survey collected demographic characteristics of the sample, their reasons for joining ECHO and self-rated confidence in their knowledge and skills regarding key domains of competence in palliative care practice, using a Likert scale where 1 = Not at all confident; 2 = Not very confident; 3 = Neutral; 4 = Somewhat confident; and 5 = Very confident.

2.3 | Post-ECHO assessment

Participants completed another survey following completion of the ECHO programme in which they rated their overall confidence in their knowledge and skills regarding key domains of competence in palliative care practice and also rated statements in relation to their experience of participation in the ECHO programme.

2.4 | Focus groups

Two focus groups were held prior to the programme commencement to explore participants' prior experiences of palliative care. Three focus groups were held upon completion of the final ECHO clinic to explore participants' experience of the overall ECHO programme. A topic guide was used to guide discussion and explored participants' experiences of the ECHO format, how the curriculum addressed their learning needs, how they applied learning gained through ECHO, and how it impacted on their contact with specialist services and ideas for future ECHO clinics. An additional focus group was held with Hub members to explore their experiences of participation.

2.5 | Recruitment

The ECHO programme was advertised through primary care networks, palliative care and oncology advisory groups, manager advisory groups, the AllIHP newsletter and the Palliative Rehabilitation Facebook group. A census approach to sampling was undertaken whereby all ECHO participants were invited to complete the evaluation forms and focus group discussion.

2.6 | Ethics

The study was given approval by the Research Ethics Committee (approval date 19/3/2019, reference number 20190206). Informed consent was sought from participants.

2.7 | Data analysis

Due to small sample size, descriptive statistics were used to describe and summarise participant characteristics and nonparametric Mann–Whitney U tests were used to explore differences in pre- and post-ECHO evaluations. Statistical significance was set a priori at \( p = .05 \) and \( p \) values reported to provide an indication of the impact of the model on HCP's self-reported confidence in their knowledge and skills.

Focus group discussions were recorded using Zoom®, and audio data were transcribed verbatim. Data were analysed using thematic analysis (Braun et al., 2018). Transcripts were initially coded separately and grouped into categories as appropriate. Categories for both Spoke and Hub focus groups were then combined to form overarching themes. Emergent themes were considered in the context of the existing literature. Constant referral back to transcripts and codes was undertaken to ensure that the analysis remained true to and reflected the developing themes.

3 | FINDINGS

The ECHO programme took place from April to October 2019. Ten fortnightly videoconferences were held. Between 16 and 26 spoke
participants attended each session. While 13 Hub members were available, typically five Hub members participated in sessions. Over the duration of the programme, 17 spoke participants presented case studies for discussion.

3.1 | Participant profile

Twenty-six participants commenced the ECHO programme, and one occupational therapist withdrew mid-programme, citing work pressures. The ‘Spoke sites’ represented geographical spread across the Republic of Ireland. Sociodemographic and professional profiles of participants are provided in Table 1.

The majority of therapists had more than 10 years of professional experience (80.77%, \( n = 21 \)). Many therapists had been working in primary care for years, 53.85% (\( n = 14 \)) had over 10 years primary care experience. Most therapists reported that clients with palliative care needs are frequently on their caseloads (76.92%, \( n = 20 \)). An overwhelming majority of therapists (96.15%, \( n = 25 \)) reported that occupational therapists and physiotherapists would benefit from additional training in the area of palliative care. Only 19.23% (\( n = 5 \)) had opportunity to engage in formal education sessions such as attending conferences or seminars. None had participated in formal postgraduate education regarding palliative care. All participants (\( n = 26 \)) reported that they often felt the need to discuss their clients with palliative care needs with other multidisciplinary team members and 65.38% (\( n = 17 \)) reported feeling the need to refer clients with palliative care needs to specialist palliative care services.

3.2 | Pre-ECHO focus group

Participants reported that between 5% and 20% of their caseload included people with palliative care needs and usually this was for people in the final phase of their illness. Participants reported working with people with terminal cancer, progressive neurological conditions such as motor neurone disease, multiple sclerosis and Parkinson’s disease and many participants reported working with clients with end-stage dementia. While some occupational therapists reported delivering symptom management interventions, such as anxiety management and energy conservation, most input related to equipment provision, pressure care and positioning, and carer education. Physiotherapists reported involvement for mobility, strengthening and manual handling. Participants reported that they did not have much contact with their palliative care colleagues. Participants reported wanting to feel more confident in their skills and in how to communicate with their clients.

3.3 | Pre- and post-ECHO survey evaluations

Twenty-six HCPs (16 occupational therapists and 10 physiotherapists) completed the pre-ECHO knowledge and skills questionnaires, and 21 participants completed the post-ECHO evaluations. The majority of participants (\( n = 21 \)) reported their reason for joining ECHO programme was to improve their clinical knowledge and skills in addressing palliative care needs of their clients in primary care. Four participants identified wanting a better understanding of the referral process and liaison channels with specialist palliative care teams.

Despite the majority of participants in this study having many years of practice experience, pre-ECHO questionnaires suggested participants lacked confidence in their knowledge and skills across many domains, indicated by responses of ‘Not at all confident’ and ‘Not very confident’. In particular, participants lacked confidence in their knowledge or skills relating to Principles of Palliative Care; Care Planning and Collaborative Practice; Loss, Grief and Bereavement and Professional and Ethical Practice in the Context of Palliative Care. However, confidence improved significantly in post-ECHO evaluations, with nobody selecting ‘Not at all confident’ and ‘Not very confident’ for confidence in...
their knowledge and skills of *Principles of Palliative Care* and of *Care Planning and Collaborative Practice*. There was also a marked reduction in those who chose such options for all the other domains, with the majority now selecting 'Somewhat confident' and 'Very confident' for all statements (see Figure 3a,b).

Statistical analysis of scores in knowledge and skills using a Mann–Whitey U test demonstrated that overall scores were significantly higher post-ECHO across the six competencies for both knowledge and skill (*p* < .000 and *p* = .001, respectively). See Table 2 for details.

The post-ECHO survey evaluations also revealed that participants valued the ECHO learning format. Many stated the technology used in ECHO allowed them engage in education that would have been otherwise difficult to access, due to geography and time pressures. Overall, post-programme evaluation suggests high satisfaction rates whereby 95% (*n* = 19) of participants felt ECHO met their learning needs and 85% of participants (*n* = 17) would recommend ECHO to colleagues.

### Table 1: Demographic profile of Spoke participants

| Demographic profile                        | %   | (n) |
|--------------------------------------------|-----|-----|
| Total number of respondents                | 100 | 26  |
| Female                                     | 96.15 | 25   |
| Profession                                 |     |     |
| Occupational therapist                     | 61.54 | 16   |
| Physiotherapist                            | 38.46 | 10   |
| Years of experience                        |     |     |
| 3–6 years                                  | 11.54 | 3    |
| 7–10 years                                 | 7.69  | 2    |
| 11–15 years                                | 19.23 | 5    |
| 16–20 years                                | 23.08 | 6    |
| More than 20 years                         | 38.46 | 10   |
| Years of experience working in primary care|     |     |
| Less than 3 years                          | 11.54 | 3    |
| 3–6 years                                  | 15.38 | 4    |
| 7–10 years                                 | 19.23 | 5    |
| 11–15 years                                | 30.77 | 8    |
| 16–20 years                                | 3.85  | 1    |
| More than 20 years                         | 19.23 | 5    |
| Highest level of education                 |     |     |
| Diploma                                    | 7.69  | 2    |
| BSc.                                       | 38.46 | 10   |
| PG Certificate                             | 3.85  | 1    |
| PG Diploma                                 | 19.23 | 5    |
| MSc.                                       | 30.77 | 8    |
| Prior experience of working with clients with palliative care needs | 65.38 | 17   |
| Further education/training related to palliative care |     |     |
| Attendance at seminars and conferences     | 19.23 | 5    |
| Read research articles/journals/books       | 26.92 | 7    |
| Discussion with colleagues                 | 80.77 | 21   |
| Peer education                             | 46.15 | 12   |
| Formal post-graduate experience             | 0     | 0    |

3.4 | **Focus group interviews**

In total, 16 individuals from Spoke sites participated in three focus groups on completion of the programme, to explore their experiences of participation and to determine any perceived benefits to participation in Project ECHO. Nine Hub members participated in a separate focus group. The sessions were topic guided. Transcripts were thematically analysed (Braun et al., 2018), and three key themes were identified and are presented below (Figure 4).

### 3.5 | **Theme 1: Expanded scope of practice**

Participants described having a better understanding of the scope of practice, having more confidence in assessment and treatment approaches and better awareness of community resources. Therefore, they saw greater potential for their practice beyond what they would have typically engaged in, such as equipment provision. Participants reported that prior to joining the ECHO programme, they had tended towards a more hands-off approach to patients with palliative care needs. Since completing the programme, participants reported being more confident to engage in a more comprehensive assessment and treatment approach and to being more comfortable with their roles. They also had better awareness of how to navigate and liaise with various community services and agencies. This improved ability to manage palliative care needs was pertinent for care of primary care patients:

> We are meeting these palliative care clients quite a lot now on our caseloads and it’s one area I don’t have a lot of experience in but now in primary care a lot of people are choosing to be at home for end of life care so I feel it is very relevant and I feel a lot of the lectures were very beneficial.

(OT, Spoke Focus Group 2)

Participants described enhanced knowledge about various palliative care approaches. In some cases, it affirmed their role and boosted their confidence to continue their practice. Having learned more about certain topics, such as pain, fatigue and lymphoedema, participants recognised opportunity beyond typically offered interventions and scope to broaden their input with their palliative care patients to address their needs:

> I can go a little bit further and ask more questions and give more advice, deliver more, I wouldn’t say specialist intervention, but further intervention.

(PT, Spoke Focus Group 2)
From an OT perspective, our input for palliative care was mostly equipment provision... That is something we would like to expand our role... there is so much you can offer... fatigue management, pain management.

(OT, Spoke Focus Group 3)

Hub members recognised not only their own level of expertise but also how that could be shared with their community colleagues via ECHO and the importance of that to enhance patient outcomes. Hub members reported that they had over-estimated the level of palliative care knowledge their community colleagues had, so it was valuable to become aware of this in order to support them better and to utilise their position in the community to maximise benefits for the client.

There’s a huge amount of parallel working, and this of course offers us an opportunity to be able to upskill a whole host of clinicians out there who are working on their own who are really very scared of working with dying patients.

(OT, Hub Focus Group)

Participants reported that patients benefited from this enhanced scope of practice. Overall, participants reported that ECHO had reinforced the need for client-centred approaches. Participants reported that they had changed their practice to ensure they adopted a more thorough assessment of the needs of the palliative care patient.

I am asking more questions and getting more information. I feel more confident to deliver more advice,
Participants reported increased confidence, particularly in relation to facilitating difficult conversations, having adopted a more comprehensive assessment that specifically considered palliative care needs, which led to better patient outcomes:

> It did lead to me setting goals that might have been missed otherwise... before it might have been something I might have avoided because of feeling uncomfortable.  
> (OT, Spoke Focus Group 2)

Participants described the benefit of enhancing their knowledge of interventions and practical techniques, such as use of fans in breathlessness management. Participants reported better awareness of current best practice and evidence which subsequently influenced the treatment approaches they were taking.

> Everyone wanted to provide the best possible service to this client group... there were great ideas generated through the format.  
> (OT, Spoke Focus Group 1)

Through their participation in ECHO, participants forged links with local community palliative care teams which led to improved continuity of care for patients. They felt there was a better understanding of their role by their colleagues and a better understanding of how and when to access specialist services. Because of these enhanced relationships with specialist palliative care services, participants reported having more confidence in liaising and negotiating a plan of action when they received a palliative care referral:

> If I got a palliative care referral I would be more inclined to liaise with them to say, what is the plan here, what are we doing, how are we liaising with palliative care.  
> (OT, Spoke Focus Group 1)

Participants described some barriers to implementing practice changes due to constant community resource pressures regarding time, funding, staffing and caseloads. Participants reported their primary care colleagues do not have much capacity to support practice changes, which was frustrating for participants who felt that despite what they had learned through ECHO, they could not offer.

> a different service or an additional service, we just do not have the resources, time wise and staffing wise for that.  
> (PT, Spoke Focus Group 3)

The structure of how services are currently set-up hampers multidisciplinary liaison and collaboration which was perceived to be a barrier to effective or efficient service provision. Participants described the need for better understanding of how services are structured and cross-service strategic planning to ensure clarity on roles and scope of practice:

> All the different members of the team not under the same roof... so that is barrier because we are all working off different pages.  
> (PT, Spoke Focus Group 1)

### 3.6 Theme 2: Community of practice

Participation in ECHO allowed establishment of a network of HCPs working in palliative care which was valued by participants. Participants reported it was useful to hear about practice across the country, and they were reassured that HCPs in different counties were experiencing similar challenges and were adopting similar approaches in their efforts to provide quality services and also that this allowed sharing of ideas:

> signpost more services. I feel I can offer more now following that course.  
> (PT, Spoke Focus Group 2)

> Everyone wanted to provide the best possible service to this client group... there were great ideas generated through the format.  
> (OT, Spoke Focus Group 1)

> If I got a palliative care referral I would be more inclined to liaise with them to say, what is the plan here, what are we doing, how are we liaising with palliative care.  
> (OT, Spoke Focus Group 1)
Participants reported intentions to further exploit the relationships they had fostered through participation in ECHO and to further enhance patient pathways and address areas for improvement:

We are going to do a meet and greet with them... as a result of Project ECHO... to have a better understanding of each other’s services. While it has always been good, it is only going to get better because of Project ECHO.

(OT, Spoke Focus Group 3)

3.7 | Theme 3: Utility of ECHO format

Overall, participants reported a positive experience of the ECHO format. Having the programme run over a number of months was preferable to “a one or two day intensive course and it’s so much information at the time that you cannot really process” for the majority of participants. Participants reported that the more protracted format allowed deeper engagement with the course content and allowed time for reflection on practice.

You had the presentations and the online information... I dipped back in and out of it and read about it, thought about clients I had worked with...it prompted reflection in practice and also to get the really up to date information was hugely beneficial.

(OT, Spoke Focus Group 2)

In resource constrained environments, participants valued the ease of accessibility the online format offered, its interactive nature and the benefit of not having to travel to attend:

It was very cost effective with regard to time, patient time that we would have lost out on.

(OT, Spoke Focus Group 1)

While most participants were satisfied with the overall format, there were some suggestions for future developments of the programme including “advancing the level or grading up” the content now that a basic level had been achieved, specialising in one of the areas to develop deeper understanding and skills. In post-ECHO surveys, some participants suggested practical experience and opportunities to visits hospice settings to observe practice as a means to improve the programme in future. Others suggested condensing topics into blocks which may be easier for clinicians to engage with from a time-management perspective. However, other participants were contented with the existing fortnightly structure and felt if sessions occurred on a monthly basis “you might lose momentum”.

The use of case studies was a contentious issue, as while some participants described benefit from engaging in the process of presenting their case studies, others found this an ineffective learning method and were reluctant to engage in this aspect of the course.

Participants expressed preference for more reflexive discussions with more practical application where people would share practice examples about what worked such as "the ideal interventions could be XYZ and the ordinary ones that worked could be ABC". Participants suggested integrating the case study aspect into the session topic from the outset rather than a presentation at the end:

The case studies, while I thought they were interesting, I don’t know did I gain a lot from them either. I would probably like a little bit more discussion... prior to the session we could reflect on that topic and see have we questions around it in relation to specific clients.

(OT, Spoke Focus Group 2)

Hub members suggested an initial meeting of all participants may have been useful to build group cohesion and trust and to encourage active participation in this aspect of the programme:

We didn’t bring all of the participants together as a group for the first session... other versions of project ECHO do that... it would have created a group bond.

(OT, Hub Focus Group)

Hub members suggested a more consistent Hub membership may also support better engagement, where participants would be more comfortable sharing their practice:

a small expert panel where you have really three support experts and your external speaker that that creates more security for the participants.

(OT, Hub Focus Group)

4 | DISCUSSION

Improving access to palliative care for people with life limiting conditions is a high priority. Many participants reported they frequently encounter clients with palliative care needs; however, they were not confident in their roles, demonstrating need for accessible training such as ECHO. Some expressed a desire to know how to liaise with the specialist palliative care team, indicating need for a stronger network between specialist and community services. Palliative care should not only include people at end-stage of life but should be considered earlier for people with serious illness (Tavemark et al., 2019). Some participants expressed concerns that patients do not necessarily receive the optimal care and support they require from primary care occupational therapists and physiotherapists, as they are referred too late in patients’ journey. Ensuring patients receive timely and appropriate palliative care requires clear communication and education regarding the role of these HCPs. Højgaard et al., (2020) highlight how physiotherapy and occupational therapy are associated with
rehabilitation, recovery, and restoration of function which is often recognised as an integrated component of supportive care, but not necessarily an essential part of palliative care. Increased awareness of palliative rehabilitation and palliative needs assessment, along with increased confidence gained by participating in ECHO, may lead to primary care therapists seeking earlier referrals and advocating their potential role with patients at earlier stages of their disease trajectory.

ECHO encompasses core elements of integrated palliative care implementation such as multidisciplinary approaches and collaboration between community services and palliative care specialists, which facilitates dissemination of palliative care expertise (den Herder-van der Eerden et al., 2017). Similar to findings from Carlin et al., (2018), participants reported disseminating information to non-participating colleagues through informal information sharing, distribution of resources, and through formal in-service education sessions. This concept of ‘force multiplication’ (Furlan et al., 2019), whereby ECHO enables wide sharing of best practices, reduces variation in care and improves outcomes. Participants suggestions for future iterations of ECHO to build on foundations of recently acquired knowledge and skills to address more specialised areas reflects the lifelong learning ethos of Project ECHO (Harding, 2018), to develop and sustain communities of learning, following the initial course.

This programme suggests significant potential for improving access to palliative care in rural areas or communities without local hospice services. HCPs in rural areas face numerous barriers to obtaining education including geographic isolation, distance from tertiary services, lack of financial support for travel and difficulty taking time away from clinical work due to staffing shortages, which impacts on their professional development (Curran et al., 2006; Doorenbos et al., 2011; Sinclair et al., 2015; Tilleczek et al., 2005). Prior to ECHO, only five participants in this study had opportunity to engage in formal palliative care education sessions such as attending conferences or seminars. Many participants worked in rural areas and would typically have to travel to attend training. Participants indicated difficulty taking time to attend such training, which demonstrates the need to access education in alternative ways, such as ECHO. Maloney et al., (2013) found HCP students welcomed online learning resources because of their convenience and usability. Many participants indicated a desire to continue using this type of learning model, suggesting much potential for ECHO-type programmes in continuing professional development of time and resource restricted HCPs.

A key feature of ECHO, compared to other online education, is the interaction between hub specialists and spoke participants which fosters and sustains development of communities of practice. Communities of practice are formed by people who engage in a collective process of learning about a shared concern, such as improving their practice (Wenger-Trainey & Wenger-Trainey, 2015). Technology-enhanced communication and online networking enables communities of practice that are temporally and geographically dispersed to work towards a common purpose (Sims, 2018). ECHO goes beyond a virtual classroom by developing knowledge networks that promote real-time multidirectional peer learning and sharing, where knowledge delivery is combined with mentoring and live discussion of complex cases, facilitating timely access to specialist knowledge and expertise (Struminger et al., 2017). Participation in ECHO reduces feelings of isolation as it provides a virtual community to interact with around patient care and feeling supported and encouraged by ECHO experts (Dearing et al., 2019; Zhou et al., 2016). The success of ECHO model depends on the quality of relationship between the Project ECHO team and participating clinicians (Johnson et al., 2017). Some participants suggested that an initial meeting would have developed rapport and may have allowed subsequent online sessions to be more productive. Other ECHO programmes (e.g., Bouchonville et al., 2018) have facilitated an initial training session to focus on technology use, team-building and clinical skills. Some participants suggested visiting specialist palliative care services, which may be impractical or resource prohibitive. Nonetheless, having established relationships with local specialists, further learning opportunities with these sites which may have otherwise not been possible may be explored.

Regarding content delivery, participants strongly valued the didactic part of the sessions, suggesting it may be an efficient and effective way to acquire knowledge and resources in time-pressured practice. Some participants reported the case studies did not contribute to their learning. Hub members observed reluctance to participate in case discussion and interpreted this as participants not wanting to expose gaps in knowledge and professional competence. Participants made suggestions to make case studies more effective and reflective, such as revising the case study preparation pro forma or adjusting the session format to incorporate case study questions. Case discussions are a core component of ECHO and case-based training is predictive of meaningful behaviour change by clinicians (Johnson et al., 2017); therefore, the case discussion component of ECHO requires further consideration for future programmes.

4.1 | Limitations

There were limitations in both the delivery and evaluation of ECHO which must be considered in interpreting our findings and developing future programmes. While ECHO seeks to be a ‘force multiplier’ by transferring specialist skills to primary care HCPs, Furlan et al., (2019) argue ECHO would be most effective in the context of improved primary care access. Its success will be limited in circumstances where primary care teams are under-resourced or not staffed. Future developments could include broader HCP representation and could also include service-user consultation in programme design and delivery, as per best practice guidance (Health and Social Care Regulatory Forum, 2009).

Sinclair et al., (2015) caution that e-learning is not an educational panacea, and evaluation must go beyond knowledge acquisition and user satisfaction. Future research may consider how learning is contextualised into clinical practice and whether it leads to sustained
clinical behavioural change and influences patient outcomes. Such changes take time to embed into practice and were beyond the scope of this study.

5 | CONCLUSION

Given projected demographic changes, more people with life-limiting conditions will live in the community, requiring a palliative approach to their care. As ECHO addresses disparities in access to care and slow dissemination of best practices within existing resources, it offers much potential to expand capacity in resource constrained contexts. Overall, results from this study support the use of Project ECHO for HCP palliative care education in primary care. The utility of this format was confirmed as an effective and accessible model. Findings demonstrate positive impact on confidence in self-rated knowledge and skills and on establishing a network of practice between specialist services and primary care, across disciplines and geographical areas. Future developments to nurture local relationships formed to ensure sustainable practice change were highlighted to ensure ECHO directly impacts service delivery and improves the capacity of quality palliative care provision.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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