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Palliative Care Telementoring Education in Nursing Homes: A Qualitative Evaluation

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Key messages:

What is already known?

- There is a need to educate and support nursing and residential homes in palliative care to reduce suffering and unnecessary hospital admissions.
- Project ECHO is proven to be effective in delivering education to isolated healthcare workers.

What are the new findings?

- Project ECHO is generally well received by nursing homes and can lead to enhanced palliative care education.
- Project ECHO can create an engaged community of practice for nursing homes during sessions, however further thought should be given to how knowledge is shared outside of sessions.
- Nursing homes desire short sessions to ensure reduced demand on their caseload
- Technology can be used successfully to bring together communities of practice for education and peer support, although barriers such as accessing equipment and confidence being on camera should be addressed prior to starting.

ABSTRACT

There is an increasing need to support nursing homes in palliative care to reduce suffering and avoid unnecessary hospital admissions at the end of life. Providing education to nursing homes faces many barriers including structural systems and cultural issues. In order to overcome some of these barriers, education using Project ECHO (Extension for Community Health Outcomes) methodology has been delivered to nursing homes throughout a large city in England. This paper aims to explore participant experience in Project ECHO for nursing homes.

Methodology

Qualitative semi-structured interviews with a purposive sample of nursing home staff. Interviews were conducted by one researcher and transcribed verbatim. Line by line coding and categorisation were used to form themes.

Results

Eleven interviews were completed with data saturation reached by interview eight. The following themes were revealed: Barriers and facilitators to accessing Project ECHO, Community of Practice and Communication with nursing homes and data extraction.

Conclusion

Project ECHO is an accessible, acceptable, and engaging way of delivering palliative care education to nursing homes combatting some of the traditional barriers that nursing homes face in accessing training.

INTRODUCTION

If current trends continue, by 2040 nursing homes (NHs) will be the most common place of death in the UK(1). As well as an immediate requirement for nursing home beds to support this(2), there is a need to educate and support nursing and residential homes in palliative care, reducing suffering and unnecessary hospital admissions at the end of life(3). The COVID-19 pandemic has highlighted the importance of palliative care in nursing homes with many homes experiencing a large number of resident deaths(4). However, evidence suggests that palliative care in NHs internationally is sometimes lacking. A study of 322 NHs across six European countries found that staff knowledge of managing physical palliative care symptoms was suboptimal, which had an impact on patient care at the end of life(5). Education provision and evaluation around palliative care is varied, with limited data detailing whether these influence resident care(3). It is therefore important to evaluate educational interventions to understand and learn from their successes and failures. In a rapid review of the literature, Manson, Gardiner and McTague,(6) found barriers to palliative care education included structural systems, cultural and interpersonal issues, and problems with knowledge translation and indicated that by addressing flexible barriers, educational interventions can be more successful.

Project ECHO is a virtual educational intervention which utilises videoconferencing software to deliver tele-mentoring to hard-to-reach populations. The methodology is proven to be effective at delivering education to isolated healthcare providers in order to improve participant self-rated knowledge and confidence, and patient care(7, 8). It uses a Hub and Spoke approach to deliver remote education in the form of a brief lecture lasting 20-30 minutes followed by 1-2 case presentations from the Spokes. An overarching principle of "all teach, all learn" signifies that education is not only from the Hub to the Spokes but also from the Spokes to each other and back to the hub. Project ECHO uses Zoom technology which runs on a low bandwidth, meaning that participants only need access to a computer, tablet or smartphone with access to a basic internet connection. A camera is encouraged to improve engagement, but not essential.

Substantial evidence supports Project ECHO's effectiveness in other healthcare settings including community health centres and primary care (9–11) but limited knowledge of its efficacy in a NH environment. This is consistent with the general care home education literature(3), where there is a lack of evidence on the effectiveness of interventions due to difficulties with data linkage(12), participant motivation, skills of the educator, and participant influence making it difficult to attribute an educational intervention to quantitative

outcomes(13). Qualitative evaluation has been instrumental in understanding the implementation of interventions and can provide essential information on evaluation that quantitative data cannot describe, such as reporting experience, acceptance, and helping to interpret findings(14). However there has been little qualitative investigation into NH palliative care educational interventions(6), including Project ECHO.

This phenomenological study aimed to explore the experience of participants in Project ECHO for NHs and generate an understanding of whether knowledge gained was translated into practice. Underlying research questions included:

- What are the barriers and facilitators to accessing Project ECHO?
- What is the value of participants on the community of practice?
- How can the appropriate data be obtained for evaluation from nursing home staff?

METHODOLOGY

Between 2017 and 2020 Project ECHO for nursing homes (NHs) (care homes with onsite nurses) has delivered three programmes of palliative care education to NHs in a large city in England. Each programme consists of twenty, 1.5 hour sessions with content chosen by the participants. It is run from a 'hub' at the local hospice and supported by knowledge experts from primary and secondary care. Local evaluation of the programme has consistently been associated with increased confidence and competence of NH staff members, although research has not yet been conducted into the impact on the wider healthcare system. We therefore aimed to undertake a qualitative study of staff experiences to understand the apparent benefits and explore whether knowledge gained was translated into practice.

Programme three of Project ECHO for NHs was evaluated for this study. The programme delivered sessions fortnightly to a total of 121 participants (table 1) between October 2018 and July 2019 (see table 2 for curriculum and attendance at each session). The curriculum was decided following an initial knowledge event where NHs were given the opportunity to voice areas where they lacked knowledge and confidence. As seen in previous programmes, attendance in the sessions is strong for the first 6-7 sessions then this drops to a lower, consistent attendance.

Table 1: ECHO session participant demographics

Participant role	Number registered
Home manager	17
Deputy manager	5
Clinical lead nurse	14
RGN	18
Senior carer	8
Carer	49

Other (chef, administrator, kitchen assistant, nursing assistant, physiotherapist	10

Table 2: NH Curriculum for programme three of project ECHO for nursing homes

Session Number	Content	Attendance
1	Myth busters: Palliative and End of Life Care and DNACPR	43
2	Red, Amber or Green? "Traffic lighting" your residents / How do I refer to the Hospice?	31
3	Do I need to call 999? Planning for Out of Hours	25
4	End of life care plans made simple	26
5	Your resident's pressure areas and end of life care	32
6	Eating and drinking at the end of life: how do I know what's best?	31
7	Protecting your resident vs depriving liberty/ Does my resident have capacity?	14
8	My resident: talking about Motor Neurone Disease and other neurological conditions	16
9	My resident and dementia	24
10	My resident and cancer	22
11	My resident and heart failure/COPD	19
12	My resident and diabetes – end of life care explained	15
13	Help! My resident feels sick	23
14	Help! My resident has pain	21
15	Help! My resident is breathless	25

16	Help! My resident is agitated	12
17	My resident and the last days of life	20
18	Death, dying and spirituality: what do you need to know?	20
19	Using your communication skills in your care home setting	14
20	The Inner Chimp: Looking after yourself and your team	18

A qualitative phenomenological evaluation of programme three of Project ECHO for NHs took place between July 2019 and September 2019 following the conclusion of the education programme. Ethical approval was gained from the local university (026757); the project was also registered with the hospice evaluation team and SRQR reporting guidelines(15) were used to guide the methodology and write-up.

A purposive sample(16) of NH staff who had attended one or more Project ECHO education sessions was chosen by the researcher to ensure a representative sample of the population while ensuring information-rich cases(17) . Participants were recruited using two methods: 1. Project ECHO participants attending a Project ECHO celebration event at the end of the programme were invited to participate in a group interview and 2. other Project ECHO participants were invited to participate in an individual interview via a gatekeeper working clinically in their NHs. Consenting participants were contacted by the researcher (JM) to arrange a time and place to conduct the evaluation.

A semi-structured interview schedule was developed in collaboration with the Hub team (supplementary material) to give structure to the interview but also to allow enough flexibility for individuals to discuss their experiences(17). Brief demographic data were also collected.

Interviews and the group interview were conducted by JM, a leadership fellow seconded to the project, who had not met the participants prior to data collection. Written consent was gained from all participants.

Interviews were transcribed verbatim and inductive, line-by-line coding took place followed by categorization(18). Themes were then formed from these categories and based on the initial research questions using an inductive, iterative approach with the raw data.(19) Participants were unavailable to provide checking so transcripts were sent to an independent researcher (LS) and themes examined to reduce researcher bias(20). Data saturation was reached with no new themes occurring after interview number eight.

RESULTS

Eleven participants were approached for individual interview and nine consented. Two participants also attended a group interview out of twenty invited. Lack of time was the reason given for inability to participate in interview. Interviews lasted between 20-30 minutes and the group interview 65 minutes. Demographic data is presented in table 3.

Table 3: Participant Demographics

Study number	Age	Job role	Length in current nursing home	full or part-time	Length of time in a nursing home setting	Number of ECHO sessions attended
001	26-35	Clinical manager	Less than 1 year	full time	1-2 years	Less than 5
002	46-55	Home manager	6-10 years	full time	More than 10 years	Less than 5
003	56-65	Clinical manager	6-10 years	full time	More than 10 years	5-10
004	46-55	Home manager	Less than 1 year	full time	More than 10 years	5-10
005	46-55	Carer	3-5 years	full time	6-10 years	Less than 5
006	56-65	Deputy Manager	More than 10 years	part time	More than 10 years	16-20
007	36-45	Head Chef	6-10 years	full time	More than 10 years	11-15
008	56-65	Carer	1-2 years	part time	1-2 years	Less than 5
009	36-45	Nurse	6-10 years	full time	More than 10 years	16-20
010	56-65	Home manager	3-5 years	full time	3-5 years	5-10
011	36-45	Nurse	Less than 1 year	full time	3-5 years	Less than 5

Themes revealed by content analysis of the transcribed data are depicted in table 4:

Table 4: Themes and Sub-Themes

Theme	Sub-Theme
Barriers to accessing Project ECHO	Timing Staffing Information Technology
Facilitators to accessing Project ECHO	Relevance Peer Support
Community of practice	
Communication with nursing homes and data extraction	Communication Dissemination of learning

Themes were led by the research questions and interview schedule, however content was taken purely from the raw data and identified as important to participants due to repetition throughout the same interview, and in multiple transcripts, across multiple professions.

Barriers to accessing Project ECHO

Timing

Participants raised several barriers to engagement in the sessions, the main barrier being time. The afternoon timing of the sessions appeared to suit most NHs, however a majority of participants reported that they would prefer sessions to be 60 rather than 90 minutes due to clinical pressures.

> "It was a good time after dinner. Up until 1 is very busy, even in the kitchen. After 1 it usually dies down. For carers, they have to do lunches 12.30-1.00 so they still have time to make sure the residents are ok." ~Participant 007

Staffing

Staffing pressures compounded time pressures, meaning that on occasions participants either couldn't attend sessions, or felt they were leaving their clinical areas short when they did attend.

> "We are always short staffed but are always expected to attend the training so the fact you have left one carer per house does sit in the back of your mind." ~Participant 005

Information Technology (IT)

Another significant barrier raised was the use of IT equipment to deliver training. This provided a barrier to accessing sessions as not all staff were able to access a computer. Some staff were uncomfortable being on camera or faced competing priorities which meant participation in a session was difficult.

> "The barriers for us was about having the equipment, IT equipment, and it was because most of the PCs had been in the admin offices, my office, or administrator's office. So it meant that, on the day, even though you'd earmarked that session for no disturbing, if I'd got a meeting prior and it ran over, it ran over." ~ Participant 002

> "As soon as I say it's on camera they're not interested." ~ Participant 009

Facilitators to accessing Project ECHO

Relevance

Individuals felt that the subjects covered were relevant to them as NH staff, importantly topics were perceived as relevant not just to clinical staff but to all staff in the NH setting. This helped them to engage in the learning process.

> "It doesn't matter whether it was a nurse, or administrator, or a carer, everything was relevant, everybody could identify with it."~Participant 002

Participants found the case-study aspect of ECHO sessions particularly helpful and enjoyable and felt that there was always something they could take from these to apply to their own residents.

> "The case presentations are good because it makes it real life doesn't it? And it also means that you'll hear the presentation and you'll think 'Oh yeah, that's what we're going through as well'. So you do learn a lot from that." ~Participant 010

Peer support

NH staff enjoyed the peer-support that participating in ECHO sessions delivered. This made them feel less isolated and provided reassurance that they were not alone in dealing with the complex cases faced in a NH setting.

> "It was about sharing best practice and knowing we were not in it alone. It was good to be able to see other homes who have gone through similar, sharing their experiences (…). There are support networks there." ~Participant 004

Value of community of practice

All participants described ECHO for NHs creating a 'community of practice' which they defined as bringing together other NHs and professionals. This occurred between individual homes, within homes, and with other professionals such as hospice staff.

> "It's nice to share stories and learn from others so it was rewarding, every session you pick up something as there is always something new to learn. It was good that there was a variety of experts on the panel." ~Participant 004

Although participants enjoyed engaging with the community of practice in the sessions, they reported that they had not continued this engagement outside of the ECHO programme, although they felt they could if needed.

> "I haven't needed to contact other care homes yet. It certainly could happen, it has been nice when we have logged in to the sessions and other care homes have sent a chat message through saying 'hello'." ~Participant 002

Despite not actively contacting other NHs outside of the ECHO sessions, interacting with professionals at different homes has helped to break down communication barriers on other occasions by providing familiarity and mutual discussion topics.

> "I had another home come to assess one of my residents a few weeks ago potentially to move there because it's closer to family and she came in and said 'I know you. You're from ECHO'. And we would just then instantly click on and we knew who the other one was." ~Participant 009

Communication with NHs and data extraction

Communication with NHs

Evaluating the ECHO Programme is an important feature of ongoing programme development and improvement. However NHs differed in how they wanted to receive information from the central hub, and in how ECHO should be evaluated. When effective communication with NHs was explored with participants, there was a lack of consensus regarding how they wanted to receive information and complete evaluations of ECHO. Most homes agreed that the best way to collect information about any change in practice as a result of the ECHO programme was to ask participants for examples.

> "Yes, people don't tend to complete these if they are sent online. I have completed paper copies before but I have also known that people have completed them but not sent them back to you." ~ Participant 006

> "I think electronically be easier than being given a paper form, because they'll probably lose it." ~ Participant 001

Dissemination of Learning

Participants identified difficulties with accessing data to demonstrate dissemination of learning or change in practice. Although some NHs printed out the session slides for staff to access, most participants reported more informal dissemination of learning. Information learned may have not been relevant at the time, however participants reported storing

knowledge to provide positive role modelling alongside supervision and teaching when an appropriate situation arose.

> "It's an ongoing thing, because if somebody comes in and you get a situation, then you tend to find that you talk to them about it. So it's not a case of doing a formal teaching." ~Participant 003

DISCUSSION

This qualitative study aimed to explore the experience of participants in Project ECHO for NHs and to gain an understanding of whether knowledge gained was translated into practice. Our findings found that ECHO is generally well received by NHs and can lead to enhanced education, a supportive community of practice, and meaningful peer support. However barriers to participation and continued engagement remain.

Our findings indicate positive outcomes from Project ECHO for NHs. A community of practice that encourages peer support has been created during sessions allowing a safe space for participants to share learning and experiences. Further thought should be given to how this community of practice can be empowered to share knowledge outside of sessions. Scheduling further sessions to encourage continued engagement has been suggested in the literature(21), however this has not been actively evaluated. An issue also arises about who would facilitate these sessions. Previous palliative care education programmes in care homes have benefitted from dedicated facilitators to encourage regular meetings and dissemination of learning(22–26). A facilitator could encourage ongoing communication with other nursing homes, and could assist with more formal knowledge translation, to ensure dissemination of learning. Participants in our study also reported the benefit of informal dissemination of knowledge as and when the time arises, which indicates that more formal facilitation may not be necessary in all cases. Informal knowledge translation such as this also makes short-term evaluation of the efficacy of the programme difficult, as it may be many months before participants consolidate or deliver on the education received during the programme. It would be beneficial to investigate participant knowledge and confidence in 6-12 months to understand whether the learning has had a positive impact on resident care.

ECHO methodology dictates that participants choose their curriculum within a designated subject in order to encourage engagement and participation(27). Our data suggests that even though there was a varied cohort, participants found the education relevant and could frequently relate didactic teaching and case studies to residents in their own homes. This helps to address the perceptions of irrelevance that have been reported previously in care home end of life training(28,29).

Reported barriers are consistent with the literature on palliative care education in NHs(3,6). Participants prefer shorter sessions to limit the demand on their caseload, however there is a delicate balance between time and curriculum content. ECHO sessions worldwide vary from

60-120 minutes(30–32); further research could seek to explore the impact of session length on attendance, particularly if a shorter session improves attendance due to reduced time/staffing pressures. Although ECHO sessions place demands on time, the methodology means that there is no need to travel for training generating a potential overall time saving. Another method to improve engagement would be providing shorter programmes to reduce the pressure on NH staff. Attendance figures dropped following session 6/7 therefore shorter programmes of this length may be more acceptable. It is not known why the numbers fall after this number of sessions therefore future evaluation should investigate this further.

One notable finding was that IT barriers were related to accessing equipment and issues with being on camera, rather than difficulty using the technology. Most participants could be considered "digital immigrants"(33); they did not grow up with technology, however they were still able to engage with sessions. This could be due Project ECHO's focus on accessibility, however as this was programme three of a series, it could also be due to familiarity with the process of accessing the sessions. It is also recognised that participants who felt less comfortable with the technology might have stopped accessing the sessions during programme one or two. Increased uptake of video technology during the COVID-19 pandemic may reduce this problem in future. In fact, Project ECHO has shown that technology can be used successfully to bring together communities of practice for education and peer-support without the need for face-to-face interactions which is proving to be instrumental as social distancing measures prevail.

Limitations

Interviews were conducted by a researcher working within the ECHO team, but unfamiliar to the participants. This allowed for enough understanding about ECHO methodology, but may have inadvertently led to bias(20). The use of purposive sampling may also have caused bias as, although the researcher attempted to gain a representative sample, this was not random and only included participants who attended two or more sessions therefore some important barriers to attendance may have been lost. To reduce any potential researcher bias, analysis and outcomes were discussed with an independent researcher (LS). It is recognised that this qualitative work is based on one NH education programme and therefore findings may not be generalisable, however it is expected that when contextualised with other literature, the results will assist others with designing palliative care education for NHs.

This programme of Project ECHO was delivered exclusively for NHs as it was identified that NHs had the highest 1-year mortality (30.8%)(34). Future programmes will be rolled out to include care homes without onsite nurses and while it is anticipated that this will have similar outcomes, caution should be taken not to generalise findings to this population.

Conclusion

Project ECHO is an accessible and acceptable way of delivering palliative care education to NHs. Project ECHO methodology ensures that participants are engaged and learn within a supportive community of practice but dissemination of this knowledge to peers requires further investigation. The results highlight barriers faced by participants include time, staffing

pressures, and familiarity with the technology and that engagement with NHs should occur both electronically and paper-based. Further research should assess the impact of Project ECHO on clinical outcomes and transferability to other locations and settings.

COMPETING INTEREST

This project was completed by a Health Education Leadership Fellow working within the Project ECHO team.

There are no other conflicts of interest.

CONTRIBUTORSHIP STATEMENT

Jane Manson was the lead researcher, conducted and analysed the interviews and was the primary author.

Clare Gardiner was the main supervisor on the project. She also assisted with analysis and categorisation of the data and editing the manuscript.

Lynne Ghasemi & Emma Westerdale were part of the steering group and were involved in editing the manuscript.

Helen Cawley was part of the steering group.

Paul Taylor was involved with editing the manuscript.

Lucy Sutton provided theme checking in line with the raw data

Dr Laura McTague & Dr Sam Kyeremateng are not included as authors but were supportive of the project and gave guidance in relation to Project ECHO and the evaluation.

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