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## **Evaluating an online tele-mentoring palliative care education programme for domiciliary care workers**

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### **Why you should read this article:**

- To recognise the challenges faced by domiciliary care workers in obtaining support
- To understand how online tele-mentoring can support domiciliary care workers
- To enhance your knowledge on the aspects of the role domiciliary care workers identify as requiring further teaching

### **Author details**

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### **Keywords**

community, community care, clinical, dying at home, end of life care, education, educational methods, e-learning, palliative care, professional, support staff

### **Background**

In the UK, there are an estimated 92,000 people who would benefit from palliative care not receiving any at all, either from specialist palliative care professionals or generalists (Dixon et al 2015). In

England, nearly a quarter of all deaths occur at home, rising from a fifth in 2007 (Public Health England 2018), and research demonstrates that people want to die at home (Shucksmith et al 2012). However, domiciliary care workers often do not feel confident to provide end of life care (Harding et al 2012, Mousing et al 2018), which can lead to poor communication between patients, professionals and relatives (Devlin and McIlpatrick 2010, D'Astous et al 2019) and increased hospital admissions (Hoare et al 2019).

Family carers welcome the relationships domiciliary care workers develop with patients, however domiciliary care workers report that they feel isolated because of their decreased visibility to other healthcare workers (Harding et al 2012) and the limited opportunity to discuss problems with colleagues (Mousing et al 2018).

A brief literature search identifies limited palliative care educational interventions for domiciliary care staff (Pulsford et al 2013, Mousing et al 2018, D'Astous et al 2019) and with varied outcomes. Mousing et al (2018), in a qualitative study of professional care givers' perspectives of the barriers to palliative care in the home, found these included lack of time, availability, continuity of patient care and engagement in training, which are similar to those experienced by care home staff (Farrington 2014, Hockley and Kinley 2016, Mayrhofer et al 2016). A systematic review of home care workers who provide care for people with dementia up to the end of life reported that there was a need for emotional and technical support for carers (D'Astous et al 2019). Finally, Devlin and McIlpatrick (2010), which examined the role of home care workers, and Mousing et al (2018) concluded that targeted educational programmes were required to improve home care staff's knowledge and confidence in delivering palliative care.

Project Extension for Community Healthcare Outcomes (ECHO) is an educational methodology that uses Zoom, an online tele-mentoring platform. It operates via a video link from a specialist 'hub' centre to 'spoke' sites to create a virtual community of practice between participants. It has been used successfully around the world to improve knowledge and confidence and reduce the isolation felt by remote healthcare workers in a variety of fields (Zhou et al 2016). In the UK, Project ECHO has reported positive outcomes in delivering palliative care education to nursing home staff (Dowling et al 2019) and community hospice workers (White et al 2019), and in managing pain for patients with advanced dementia (De Witt Jansen et al 2018). However, Project ECHO has not been evaluated in domiciliary care, and it is hypothesised that using ECHO methodology will support domiciliary care workers by reducing some of the barriers they experience, such as limited opportunity to talk with colleagues.

## **Aim**

To test the acceptability of Project ECHO to domiciliary care workers as a means of increasing their knowledge of, and confidence in, delivering palliative care, and its effectiveness in reducing isolation by developing a community of practice.

## Methods

### Design and participants

A mixed-methods service evaluation took place over a year from May 2018 to April 2019. The evaluation used one domiciliary care agency that delivered care interventions to the community in a large UK city, including a night roaming service, and frequently delivered palliative and end of life care.

Participants were home care workers from the domiciliary care agency. All home care workers at the agency were invited to take part in the programme (approximately 80).

### ECHO methodology

Before the 12 sessions started participants were invited to an event at which gaps in their knowledge were identified and a curriculum was created based on their needs. The curriculum is outlined in Box 1. The ECHO programme consisted of 12 education sessions, one per month, that were designed to teach the curriculum created. They lasted 90 minutes were led and supported by hospice nurses trained in the ECHO methodology. The sessions consisted of a 30 minute 'brief lecture' given by a subject expert followed by one or two case presentations based on real-life scenarios brought by the participants. Due to the potentially distressing topics encountered in the educational sessions, participants were advised they could leave at any time and hospice counselling services were made available to them, although these were not used.

The service evaluation consisted of the education provider as the specialist hub site during the ECHO methodology evaluation, and the domiciliary care agency's training centre as the spoke. Education sessions were conducted at the spoke site, and participants were encouraged to attend the education sessions remotely if they could not attend in person. Attendance for the 12 education sessions was monitored and recorded on an online database called iECHO.

#### Box 1. Project ECHO palliative care curriculum

Session	Title
1.	Communication - patient and family
2.	Pain and signs and symptoms - medication/creams
3.	Mouth, bowel and bladder care
4.	Advance care planning
5.	Difficult situations - seizures/breathing/collapse
6.	My client is confused (Mental Capacity Act/Deprivation of Liberty safeguarding)
7.	Discharge liaison nurses/district nurses
8.	Pressure area care/infection control
9.	Signs of dying - what to do before and after death

10. Spirituality
11. Cancer and long-term conditions signs and symptoms
12. Nutrition/hydration/swallowing/ percutaneous endoscopic gastrostomy

### **Data collection**

Qualitative data were gained with informed consent from a focus group of four of the participants following the final education session. The focus group was led by a researcher who had not been involved with the domiciliary care ECHO programme to reduce participant and researcher bias. The aim of the focus group was to evaluate participants' enjoyment of the programme and to understand what could be improved if the programme was run again. Focus groups were transcribed by the researcher.

In addition, a quantitative knowledge and confidence self-efficacy questionnaire designed by the ECHO team was issued to participants before starting the education sessions, after six sessions and following the last session. Evaluations of the education sessions that focused on delivery of the session, content and relevance to practice were also completed after each session.

### **Data analysis**

Quantitative data from the session evaluations and the self-efficacy questionnaires were entered into a spreadsheet and analysed using descriptive statistics, which allows extraction of a median, mean and mode (Ali and Bhaskar 2016). A statistical non-parametric test would have been preferred, however the small sample size meant this would not have been adequately powered (Ellis 2010).

As the researcher led the focus group and transcribed the recordings there was a familiarity with the text, therefore inductive, line-by-line coding followed by categorisation was performed. Themes were then identified using content analysis (Erlingsson and Brysiewicz 2017), and discussed with the team to clarify context and triangulated with the quantitative data to improve credibility.

### **Ethics**

Formal ethics approval was not required as this was a service evaluation rather than research, however the project was registered with the audit and service evaluation team at St Luke's Hospice, Sheffield, to ensure that ethical procedures were followed.

The participants signed consent and General Data Protection Regulation forms before attending the education sessions for the first time and written consent was also gained for participation in and recording of the focus group.

### **Results**

There were 64 individual attendances over the 12 education sessions from 25 members of care staff (average 2.24). The minimum number of sessions attended by a participant was one, and the



Not at all	0	0	0	0	0	0	0	0	0	ND	ND	0
Partially	2	3	0	2	0	0	1	0	1	ND	ND	1
Fully	3	4	5	4	3	4	4	3	2	ND	ND	6

**Table 2. Was the education presentation relevant to your job?**

	1*	2	3*	4*	5*	6*	7	8*	9	10	11	12
Not at all	0	0	0	0	0	0	0	0	0	No data (ND)	ND	0
Average	0	2	0	3	1	0	1	0	0	ND	ND	0
Very	5	5	4	2	2	4	4	3	3	ND	ND	7
*Missing data												

Comparison of self-efficacy questionnaires filled out before and after participating in the education sessions revealed an increase in self-reported knowledge across all 12 topics of the curriculum and an increase in confidence in seven of the 12 topics. Due to the small sample size statistical tests would not be adequately powered to detect an effect (Ellis 2010).

### Qualitative

Four participants consented to take part in the focus group, two of whom had attended one education session, one had attended five sessions and one had attended nine sessions. The focus group lasted 25 minutes and was audio-recorded. The main themes that arose were attendance, reducing isolation and participant engagement.

### Attendance

Participants reported that they worked seven days/nights on and had seven off, and so because the sessions were held monthly it meant that the same staff could attend but also meant that some staff could not attend any. When asked if they would consider attending sessions in their 'off' time the consensus was no, as they believed their attention would not be fully on the training.

### Reducing isolation

The participants valued having a variety of professionals with whom to discuss their complex cases. One participant discussed the difficulty of contacting professionals about complex cases and said that taking part in the ECHO programme had helped to break down some of those barriers:

'Because you're a carer you get pushed to the side and people don't listen to what you're saying but when we come to (the hospice) nobody does that and people can ask the things that they've been afraid to ask. And having the professionals the other side has helped to answer some of the questions that we've not always been able to get the answer for.' – Participant 001

It was also felt that sharing case studies or examples from practice improved communication and reduced isolation between carers. 'Quite often when someone is talking you go "Oh, yeah I've been in there, that worries me too, oh so it's not just me".' – Participant 003

### **Participant engagement**

Participants spent time discussing sessions they thought went particularly well and the ones they did not enjoy as much. One important factor was having an enthusiastic and interactive facilitator. When participants were asked questions and encouraged to join in discussions they took more from the sessions and felt more engaged. However, if a professional read from a slide presentation and the facilitator did not engage participants in discussion, they reported decreased enjoyment and learning.

### **Integration of qualitative and quantitative results**

Attendance figures show that 11 of the 25 participants were able to attend more than one session, which indicates that holding sessions monthly at the same time might support consistent attendance. However, there is a need for further investigation of the reasons why some people only attended once.

One of the focus group participants reported that they particularly enjoyed the session on signs and symptoms of dying, however analysis of the evaluations of this session shows it was not rated as highly as some of the others. Participants in the focus group said they would prefer content that was more relevant to their role as home carers, however in all of the completed evaluation forms participants reported that they believed the presentation was relevant to their job.

### **Discussion**

The findings suggest that the ECHO programme is well-received by domiciliary care workers who often feel isolated in community settings (Harding et al 2012). The consistent uptake of the training for most of the programme indicates its accessibility and acceptability, however organisational challenges such as staff shortages did effect attendance towards the end. This is consistent with other palliative care education programmes who have reported low attendance and engagement (Pulsford et al 2013). Some of the participants said they would not be prepared to attend training outside their working hours, therefore there must be careful planning of future education interventions to ensure that the desired outcomes are met.

The session evaluations indicate that the training was relevant and met the majority of individuals' needs, which is important for improving engagement. Evaluation of future programmes would



benefit from using a validated tool for data collection as there are some inconsistencies between the quantitative and qualitative feedback.

ECHO methodology normally refers one hub site working in conjunction with several spoke sites. However, this service evaluation was different because the domiciliary care agency's education room was the only spoke site. It is possible that the group format of the training encouraged the same members of staff to attend the sessions, give feedback about their case presentations and create a community of practice with other domiciliary care workers and community healthcare professionals. However, this could also create inconsistency in staff knowledge, with some domiciliary care workers having more knowledge than their colleagues, which could then be transferred to care delivery, with some staff members able to deliver more effective care than others.

The increase in knowledge and confidence reported by participants is consistent with the ECHO literature (Zhou et al 2016, De Witt Jansen et al 2018, Dowling et al 2019, White et al 2019) and supports the need for a larger sample size. Positive and negative changes in confidence reported in the session evaluations were analysed, but there did not appear to be a correlation between reduction in confidence and a negatively evaluated session. In future evaluations it would be useful to explore the conscious competence model (Broadwell 1969) to identify if reductions in self-reported confidence and competence are due to learners realising that they do not know as much about a topic as they first thought.

Organisational challenges resulted in reduced attendance towards the end of the programme. Domiciliary care agencies, like nursing and residential care homes, frequently have transient staff (Rubery et al 2011), which makes delivering consistent education a challenge. The qualitative findings suggest that participants valued the opportunity to discuss issues with colleagues and enjoyed the community of practice that the sessions developed. Future research could determine if taking part in educational sessions and being part of this community improves staff engagement and well-being, and in turn reduces staff turnover.

## **Limitations**

Although the qualitative data were analysed iteratively, and member checked with other members of the ECHO team, such a small focus group affects data credibility. In addition, the focus group findings are not transferrable to other settings. However, the Project ECHO team believed that the focus group outcomes should be reported as they could, if taken with caution, support other education providers wanting to deliver education to domiciliary care.

Other limitations include the small sample size and a single study setting, while the self-efficacy and knowledge assessments were not validated. Including more than one domiciliary care agency would increase the sample size, diversify the community of practice and develop potential for greater knowledge sharing.

## **Conclusion**

Palliative care education for domiciliary care staff using ECHO methodology is well received, relevant and accessible. It has the potential to improve self-assessed knowledge and confidence and reduce isolation by developing a community of practice with hospice staff and other professionals.

Caution should be taken with interpretation of the findings due to the small sample size and limited qualitative evaluation, however further evaluation of ECHO is planned with an increased sample size from multiple domiciliary care agencies.

### **Implications for practice**

- Project ECHO could be useful methodology for educating domiciliary care workers in palliative care
- Project ECHO can help to create a community of practice for participants, reducing isolation
- More research needs to be done to identify whether Project ECHO provides statistically significant increases in knowledge and confidence for participants.

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