Exploring the acceptance of telehealth within palliative care
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**Keywords:** TELEHEALTH; PALLIATIVE CARE; SELF-DETERMINATION THEORY; IMPLEMENTATION

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Abstract:

Objectives
The aim of this paper was to explore potential divergence and convergence in relation to health care professionals’ (HCPs) and patients’ acceptability of the use of telehealth within palliative care provision through the lens of Self-Determination Theory (SDT; Deci & Ryan, 1985).

Design
The research utilized a deductive qualitative approach utilizing semi-structured interviews to explore divergence and convergence between health care professionals’ preconceptions of the use of telehealth in palliative care and the lived experiences of patients accessing support in this manner.

Methods
Semi-structured interviews were conducted with both HCPs and patients to explore whether the barriers and benefits of telehealth perceived by HCPs corresponded to the patient’s lived experience of utilizing the technology in their palliative care. Interviews were analyzed using a deductive thematic analysis following the process of Braun and Clarke (2006) guided by the basic psychological needs identified in SDT as a framework.

Results
HCPs and patients identified that the use of telehealth could satisfy the need for autonomy, however this manifested in different ways whilst divergence emerged between patient and HCPs’ perceptions about how telehealth could satisfy the need for relatedness and competence needs.

Conclusions
The findings of this paper highlight how HCP’s preconceived concerns about the use of telehealth in relation to providing supportive palliative care may not be realized when exploring the experiences of patients accessing services through this medium. This paper highlights the important role of psychological need satisfaction when considering acceptability of telehealth, and motivation to engage in the implementation of technologically driven health services.

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EXPLORING THE ACCEPTANCE OF

TELEHALTH WITHIN PALLIATIVE CARE SERVICE PROVISION: A SELF-

DETERMINATION THEORY PERSPECTIVE

Short title: Acceptance of telehealth within palliative care service provision

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Statement of contributions

What is already known on this subject?

A large body of research has explored the potential benefits of the use of telehealth to support palliative care service provision. Such research has utilised the perceptions and experiences of both health care professionals and patients. Telehealth has been identified as a way of improving access to specialist services, increase efficiency of health care services.

What does this study add?

- The application of Self-Determination Theory provides a contribution of psychological needs theory to understand the intrinsic motivation of health care practitioners and patients to engage with telehealth use within a palliative care context.

- The divergence between health care professionals and patients’ perspectives on the role of telehealth establishing an environment that satisfies psychological needs provides underlying psychological explanations for why despite evidence suggesting positive results that the use of telehealth has not been used more routinely within health care provision.

- Despite providing potential benefits and psychological need satisfaction for patients, telehealth inadvertently thwarts psychological needs for health care professionals working with technology, who maintain a preference for a face-to-face, traditional model of service provision with regular human contact.
Abstract:

Objectives

This paper aimed to consider barriers to telehealth adoption in palliative care through understanding the divergence and convergence of health care professionals’ (HCPs) and patients’ acceptability of use through the lens of Self-Determination Theory (SDT; Deci & Ryan, 1985).

Design

The research utilized a deductive qualitative approach using semi-structured interviews to explore divergence and convergence between health care professionals’ preconceptions of the use of telehealth in palliative care and the lived experiences of patients accessing support in this manner.

Methods

Semi-structured interviews were conducted with both HCPs and patients to explore whether HCPs perceived barriers to, and benefits of, telehealth corresponded to the patient’s lived experience of using telehealth in their palliative care. Interviews were analyzed using a deductive thematic analysis following the process of Braun and Clarke (2006) guided by the basic psychological needs identified in SDT.

Results

HCPs and patients identified that the use of telehealth could satisfy the need for patient autonomy, however, this manifested in different ways. Divergence emerged between patient and HCPs’ perceptions about how telehealth could satisfy the need for relatedness and competence needs.

Conclusions
The findings of this paper highlight how HCP’s preconceived concerns about the use of telehealth concerning providing supportive palliative care may not be realized by patients accessing services through this medium. This raises interesting questions about the extent to which patients are engaged in decisions about the availability of telehealth services and how accurately gatekeepers make distinctions between thwarting of their psychological needs and those of their patients.
Background

Many countries are experiencing challenges in health care delivery, including the increased pressures of an aging population with complex health needs, staff shortages and the need to deliver services closer to patient homes (Koch, 2006). Palliative care delivered in rural areas represents one such challenge (Robinson, Pesut, & Bottorff, 2010). Numerous policy documents (e.g., End of life care strategy for England, 2008; Longley et al., 2014) identify telehealth as a possible way of overcoming some of these challenges. Stroetmann, Kubitschke, Robinson, Stroetmann, Cullen, and McDaid (2010) define telehealth as; the delivery of services by health care professionals using information and communication technologies in the interest of advancing the health of individuals and their communities. Telehealth potentially offers opportunities for community-based care, improved access to services, and decreased travel time for patients. These benefits are offered without a corresponding increase in travel time for Health Care Professionals (HCPs), thus resulting in economically efficient services.

Pilot implementation studies have consistently reported positive patient perceptions and acceptability of technology in palliative care (Whitten, Doolittle, & Mackert, 2004; Becevic, Boren, Mutrux, Shah, & Banerjee, 2015; Bush, Donaldson, Moinpour, Haberman, Milliken, Markle, et al., 2005) and occasionally report patient frustrations that HCPs fail to make more use of the technology available to them (Whitten et al., 2004). Research has highlighted how HCP acceptance of approaches such as telehealth are central to its successful implementation (Nicholson, Coates, Mountain, & Hawley, 2013). HCPs remain an important gatekeeper to the services that are available to their patients and as such, understanding their views may be key to understanding the likely implementation of technology into routine care.
HCPs may remain more sceptical of telehealth in comparison to their patient counterparts. Guided by Normalization Process Theory (NPT; May, 2006); Mair, Hiscock, and Beaton (2008) present a theoretical explanation of some of these scepticisms concerning: the usability of the technology from HCP and patient perspectives; skills that need to be developed; availability of technical support, and, the appropriateness of using technology to support palliative care patients. Taylor, et al. (2015) also outlined how early failures during adoption can lead to HCPs losing faith in technology’s role within the palliative care context, highlighting the need for improved staff training.

HCPs’ perceived barriers to telehealth appear to be in contrast to what patients and policymakers perceive to be the solution to their unmet needs. However, whilst research has previously considered the practical barriers and benefits of adoption there is limited research that has explored the deeper psychological reasons why individuals may hold differing perspectives on the use of telehealth during palliative care. Theoretically driven exploration of why and how there may be agreement and disagreements in the underlying psychological values and views of stakeholders might allow us to identify solutions to unlocking the potential of telehealth where it is appropriate.

Self-Determination Theory (SDT; Deci & Ryan, 1985) is a theory of motivation that considers how the fulfilment of psychological needs determines our motivations to engage in certain behaviours. The theory proposes three inherent psychological needs, namely, autonomy, competence, and relatedness. Autonomy relates to a need to feel self-determined and volitional in one’s decisions and behaviours. Competence relates to the need to feel able to affect outcomes of one’s behaviours and relatedness represents the need to feel supported and accepted within one’s
environment. According to SDT, the satisfaction of psychological needs is associated with improved well-being and an increased likelihood of engaging and persisting in a behaviour. In contrast, a lack of satisfaction or active thwarting of psychological needs can result in a lack of motivation to engage and poorer psychological well-being (Deci & Ryan, 2000). Applying SDT to the implementation of telehealth provides a novel opportunity to consider how the benefits and barriers as perceived by HCP and patients represent potential satisfaction or dissatisfaction of underlying psychological needs and the implications that this has for their motivation to accept the use of technology in palliative care. Identifying these motivations may provide insight into the latent psychological barriers to, and facilitators of, telehealth implementation, thus better informing appropriate strategies to address these.

This research takes a novel perspective to the debate about why telehealth has not been adopted on a larger scale despite evidence suggesting that its incorporation in health care delivery can result in positive psychological and clinical outcomes for patients and other service users (Whitten, Doolittle, & Mackert, 2004). The current paper considers the perspectives of HCPs and patients to explore where there may be convergent and divergent views about how telehealth satisfies or thwarts psychological needs. Given that service adoption is often considered before patient engagement, the methodology employed has considered how HCPs’ views of telehealth ahead of service implementation corresponded or diverged from the lived experience of patients subsequently utilizing a newly offered telehealth service. This approach provides an interesting opportunity to identify where preconceived barriers and benefits held by HCPs are shared, or challenged, by the patient experience. Considering this within a theoretical needs-based framework (SDT; Deci & Ryan, 1985) also helps to inform how these shared or contradictory barriers may feed back
into the motivations of relevant stakeholders for engaging in telehealth thus contributing to a deeper psychological understanding of stakeholder concerns and views.

The research question was framed following cross-examination and reanalysis of data from two exploratory studies. The initial studies looked at the two stakeholder groups independently. By combining and reanalysing the data sets the following research considers the question: What are the convergent and divergent views held by HCPs and patients towards the implementation of telehealth in palliative care explored through a SDT lens?

**Method**

**Design**

This paper utilizes a qualitative design to gain in-depth insight into HCPs' preconceived barriers and benefits of telehealth use in palliative care in relation to the patients' lived experiences of using telehealth to access psychosocial support while receiving palliative care.

To explore HCPs’ perceptions single semi-structured interviews were conducted at one time point ahead of the telehealth service being implemented. Due to the focus of the interviews with HCPs on their preconceptions of telehealth, interviews were not conducted at subsequent time points. Patient data was collected longitudinally over three semi-structured interviews, conducted at monthly intervals with a cohort of patients using telehealth as a component of their palliative care.

**Participants**
A sample of eight HCPs and three palliative care patients (each interviewed 3 times) were included in this study and provided a total of 12 hours of data.

**Health care professionals**

HCPs were identified through their employment with a rurally based voluntary palliative care hospice at home service and from HCPs working within the specialist palliative care team based at the local general hospital. To be included HCPs were required to be responsible for providing either clinical or social care to palliative care patients.

A demographic overview of the HCPs can be found in Table 1.

[INSERT TABLE 1 HERE]

**Patients**

Patients were identified via the specialist palliative care multidisciplinary team. Inclusion criteria for the study consisted of patients who were recipients of specialist palliative care and who lived in a rural location. Exclusion criteria consisted of patients who were under the age of eighteen and those who did not possess the capacity to provide informed consent to take part in the study. Participants who did not possess a working internet connection were excluded as this was required to facilitate video communication (the mode of telehealth used in this context) between the patients and HCPs. A demographic overview of the participating patients can be found in Table 2.

[INSERT TABLE 2 HERE]

**Procedure**

**Health care professionals**
HCPs were provided with a detailed information sheet providing an overview of the research process. It was emphasised that involvement in the study was voluntary and that any views expressed would be anonymized. After providing informed consent, HCPs responded to questions concerning their perceptions of telehealth use in palliative care in a semi-structured interview. The interview itself consisted of inter-related sections based on Spradley’s (1979) model of building interviewer-interviewee rapport. Driven by an extensive literature review, the interviewer asked questions pertaining to the multifunctional role of HCPs in palliative care provision, their understanding of the concept of telehealth, and, their perceived practical and psychological barriers and benefits of implementation in relation to existing service provision.

**Patients**

Patients were initially approached by palliative care team members who provided them with study information. Those who expressed an interest were asked to complete the reply slip and return to the research team who were then able to contact them directly to address any questions and arrange a convenient time for an interview. This was to ensure that no patient details were shared with the research team prior to their agreement to be contacted.

The initial visit to the participant’s home involved taking informed consent and a face-to-face demonstration of the equipment. Polycom RealPresence® software was installed on laptop computers, which were provided to each participant for the duration of the study. The Polycom RealPresence software accessed a remote VPN that enabled the remote laptops to access the secure NHS network. Following demonstration and trial run connections, the participant received written systematic
instructions of how to connect to reinforce the visual demonstration for future reference throughout the project.

Participants accessed psychosocial support from a qualified therapist via the telehealth system on average once every ten days (Range: 8-12) and sessions lasted up to one hour. The support received focused mainly on the provision of psychosocial support on a one-to-one basis, which on occasions utilised techniques such as art therapy. Sessions were arranged through discussion between the HCP and patient and the use of an appointment system in the same manner as face-to-face appointments.

For patient convenience, interviews were conducted in patients’ homes. Interviews were conducted with patients on three occasions at monthly intervals following the introduction of the technology. Additional prompts were added to the second and third interview schedule to investigate whether or not the patient had made sense of their experience of using telehealth to access psychosocial support differently in comparison to their prior interviews. Interviews were audio recorded for the purpose of transcription. Interviews ranged in length (from 21 minutes to 79 minutes).

**Data analysis**

A deductive thematic analysis using the basic psychological needs of SDT (Deci & Ryan, 1985) as a guiding theoretical framework was conducted. A deductive approach is useful if the general aim of thematic analysis is to test a previous theory in a different situation, or to compare categories at different periods (Hsieh & Shannon, 2005; Elo & Kyngäs, 2008). In the case of this paper, the deductive approach was utilized to explore the role of psychological need satisfaction in the context of HCPs’ preconceptions of telehealth and the lived experience of palliative
care patients using telehealth. The analytical technique followed the guidelines of Braun and Clarke (2006).

Figure 1 provides an overview of the analytical process for both stakeholder groups. With reference to interviews conducted with HCPs, all of the interviews were treated as a whole data set and were coded as such with consideration of the three psychological needs. In order to explore the multiple time-point interviews conducted with patients, a slightly modified analytical approach was taken. Coding was initially conducted at time-point level for each individual patient and then on a cross-case basis. The generated codes were collated into the theoretical headings of the psychological needs with consideration about how needs were discussed. The codes identified for each stakeholder group were then pooled together to explore the convergence and divergence of perspectives relating to the satisfaction or thwarting of psychological needs.

[INSERT FIGURE 1 HERE]

**Ethical Considerations**

Ethical approval was gained from the local NHS Research Ethics Committee and NHS Research and Development.

A requirement of the review stated that the researcher should be accompanied to interviews with patients by a HCP. The HCP was situated in a different room to the one used for the interview but could be called on should any patients become distressed during the interview.

A clear explanation that telehealth equipment and facility would be removed after 3 months was provided (as a requirement of the wider research study); however, where the HCP felt patients were particularly benefitting and in need of the service,
agreements were made to enable the service to keep the laptops for continuation of the service.

**Findings**

Using principles of SDT (Deci & Ryan, 1985), themes (Autonomy, Competence, and Relatedness) were explored that related to the basic psychological needs considering whether the perspectives of HCPs and patients demonstrated converging or diverging attitudes regarding satisfaction or thwarting of these needs in relation to telehealth use in palliative care.

**Autonomy**

Both HCPs and patients suggested that telehealth could play a role in empowering patients and increasing their sense of autonomy; however, there was an evident divergence in how this sense of autonomy satisfaction was manifest.

HCPs’ perceptions of telehealth often centred on discussion of telemonitoring systems as opposed to other forms of telehealth such as videoconferencing or text message reminder services. This in itself is interesting in the context of telehealth adoption where HCPs may not consider, or be aware, of the broad range of applications that could be utilised. In this context HCPs saw telemonitoring as an opportunity for patients to self-manage their illness and symptoms via automated feedback. This in turn was perceived to facilitate patient autonomy through an improved ability to understand their conditions and the need for self-management techniques.

“I think there is also an element of importance in the terms of the individual feeling they have a sense of self-management because if they can see what’s
happening in terms of how they behave and how it affects their symptoms it will help them as well” GW (Social worker), Line - 255

Patients identified how the telehealth videoconferencing that they had been using created an autonomy supportive environment and improved opportunities to understand and learn more about their condition through increased confidence to engage in questions and discussion with the HCP. In the following extract, PC discussed how she experienced videoconferencing from home in contrast to hospital consultations.

“I think sometimes when you go face-to-face, especially with some of the big consultants, it's kind of a bit daunting or a bit off putting or they're kind of a bit, like, okay I've got so much time there’s a whole waiting room of people out there. Whereas if you're on telehealth maybe it would give you a bit more confidence to say, oh wait a minute I need to just ask you this or hang on I need to ask you this. And just give you that bit more confidence because you’re not actually there with them,… you’re in their space aren’t you, whereas at home you’re on your own grounds, so you’re more in control.” PC – Time Point 2 (TP2) Line – 202

Reeve, Jang, Hardre, and Omura (2002) describe autonomy supportive environments as ones inclusive of opportunities for participation and choice, acknowledgement of negative feelings associated with engagement in difficult tasks, and minimization of external controls. It appears therefore that telehealth encouraged patients to feel empowered to interact more fully with healthcare professionals in an autonomy supportive way. The view that the remoteness offered by technology and the home environment was also interesting and raises questions
about how patients experience medical interactions in usual health care facilities with implications for health care delivery more broadly.

Patients also described their experience of autonomy satisfaction in a more life-centred manner, focusing on the liberation that telehealth consultation provided through the reduction in travel burden to attend appointments. An example of this liberation was discussed through PC’s reflection of how using telehealth to access support provided her with the freedom to plan the rest of her day.

“So to do a session yesterday was good because I think we went on at half-nine. So I sort of got up, had breakfast, did a few things and then did that. Then the rest of the day -- as soon as you sign off the rest of the day is your own. But if I'd gone to [location of hospital] it's pretty much the whole day really because, it doesn't take you the whole day to get there obviously, but because I get tired when I do that sort of thing then that would be me finished for the rest [of the] day. That would be what I'd do for that day. Whereas sitting here in your own lounge on a computer is not as tiring by any stretch of the imagination, so it kind of leaves you more time to do other things.” PC – TP1 – 72

This liberation enabled patients to divert their energy into more enjoyable or fulfilling activities and demonstrated that engagement with technology was not just about managing their condition but about enabling the opportunity to feel volitional about meaningful areas of their broader lives.

The distinction between autonomy support in relation to condition management versus the broader life may challenge how successfully HCPs are able to fully
embrace holistic patient-centred care as opposed to traditional biomedical models. In biomedical models the clinical management and treatment of the condition is considered more prominently than the broader environment influencing individuals’ experiences of their illness. While professionals maintain that face-to-face care is superior to that of telehealth consultations, it may be that HCPs fail to appreciate the tension between a face-to-face consultation and the corresponding pressures facing rural patients to attend when in ill health. The additional burden of travel, fatigue and organization of their daily activities around appointments detracts from the benefits of a face-to-face meeting and can leave patients in a position where they fail to engage fully in consultations.

**Competence**

The competence of HCPs and patients to manage technology as part of routine care was discussed by both groups. Interestingly, both HCPs and patients used age as a moderating discussion point in reference to the ability to use telehealth equipment. Both groups felt that the use of telehealth would be more acceptable to a younger patient because of the required competency for use. However, when discussing their actual experience of using the technology, patients within the sample suggested a sense of mastery and few issues relating to the usability of the equipment, divergent to both their own preconceptions and the perceptions of HCPs.

In all of the interviews conducted, HCPs perceived age as a potential barrier to the successful adoption of telehealth within palliative care delivery.

“I do think that the young would be far more accepting of it and would probably find it cool. They may also be able to express themselves better because they already express themselves to a screen with Facebook or
Twitter. I think they would have no issues whatsoever. My concerns are that…

*a large proportion of my patients are elderly and they would find it quite odd*”

EG (Specialist nurse), 75

HCPs made judgments about how telehealth would potentially thwart the satisfaction of patient needs for competence and made decisions about how older adults in their care would cope with technology adoption. A wealth of literature supports the interpretation that age plays a moderating role in the acceptance of technology. Venkatesh, Morris, Davis, and Davis (2003) determined in their Unified Theory of the Acceptance and use of Technology (UTAUT) that a person’s experience of using technology is a facilitating factor in the decision to accept technology. This perception reflects findings from research conducted by Radhakrishnan, Jacelon, and Roche (2012) who investigated telehealth use with patients suffering from heart failure. They reported a prevalence of elderly patients terminating the use of telehealth in their care due to increasing levels of anxiety stemming from use of the equipment. With a high proportion of palliative care patients coming from an older generation, the age of patients and lack of technology familiarity is clearly a prominent barrier to the implementation of technology in service delivery.

Whilst patients at baseline largely agreed with HCPs that younger individuals would find accessing support through telehealth easier, their own lived experience – demonstrated through their responses at different time-points using the equipment, suggested a sense of mastery. The extract below taken from a first time-point interview describes the initial stress encountered when using the telehealth system and reflecting on how this stress began to dissipate as the session unfolded.
“The first one when it happened when I got on, I did feel quite stressed. It was so hard and I thought this session is meant to be making me less stressed not more stressed. And I was like fit to pull my hair out and throw things through the window. But once I’d sort of talked about it with [health care professional] for a couple of minutes that kind of went out of my consciousness altogether then. I didn’t kind of give it anymore thought after that really.”

When comparing the preceding extract to the one below, taken from an interview conducted two months later, PC reflects back on her initial experiences and reflects upon the normalization of receiving psychosocial support in this way.

“I’ve got used to it [telehealth], I know more about it. You know, so it’s not so alien if you like. Initially I didn’t know what to expect at all. I didn’t know how it would work. I mean, I’m not a technophobe, but I was like will I be able to work it and, you know, how is it sort of going to work sort of thing. And will it be the same as going in, is it going to take something away from that sort of thing. But I think as I’m getting used to using it now, it’s getting more comfortable and so I’m feeling that I’m getting the same amount of the sessions as I would if I was going in to the hospital.”

The concept of normalization and familiarity being key factors relating to the acceptance of technological innovation is not novel, and thus this is a construct in numerous implementation models such as UTAUT (Venkatesh et al., 2001) and Normalization Process Theory (NPT; May, Mair, & Finch, 2009). However, findings here support theoretical suggestions this may not be directly related to age, with older adults in the study becoming increasingly competent at using the technology. It appears therefore that whilst both groups (HCPs and patients) share the concern
that older adults will not be suited to telehealth use; in practice, the older adults in this study were willing to take steps to develop their competency and managed to master and find benefit in the telehealth system.

The divergence in the preconceived perceptions of both stakeholder groups versus the lived experience of patients may provide some explanation for the barriers of adoption. If HCPs discount their older patients there is a risk that older adults are excluded from the opportunity to consider telehealth use despite this group arguably having the most to benefit from avoiding unnecessary travel to hospital locations. The patient experience suggests that whilst telehealth may not be suitable for everyone, many older adults, regardless of previous technological ability, are capable of developing mastery and satisfying the need for competence to utilize a simple videoconferencing system with suitable support in place.

**Relatedness**

The most evident divergence arose between HCPs’ pre-conceived concerns and patients’ experiences of the ability to develop a trusting and empathic relationship by telehealth. HCPs expressed concerns that the lack of proximity, absence of human touch, and remote nature of telehealth would prevent the development of trusting relationships and minimize the ability of HCPs to understand the emotional needs of their patients. In contrast, patients’ experiences of using telehealth to access psychosocial support demonstrated an environment where their needs for strong relationships and emotional understanding were satisfied.

One theme that was common across all interviews with HCPs was the importance of human touch within their relationship with patients. The lack of human touch was
identified as a barrier to telehealth as they feared that the remote care provided
would be impersonal.

“I think the main barrier is that it’s basically changing the way in which nurses
work, erm nurses are caring people and nurses want to see people and I think
that if you go and see someone who is unwell and put your hand on theirs,
you know we touch people, it’s what nurses do and that’s part of the way that
nurses care for people erm and I think to take that away and move to
something that is a little more impersonal, might be a barrier to some nurses.”

SJ (specialist nurse), 396

Some HCPs, notably the nurses within the sample, reflected on perceptions that
telehealth would ultimately change the way in which they provided care to their
patients, with concerns that a more remote form of care would create an unfamiliar
environment to build supportive relationships.

The importance of human touch to the patient-professional relationship has been
researched in previous studies. Ludwig-Beymer (2003) emphasised the importance
stating that a “caring touch” can help connect and break down barriers, enable the
expression of concern and interest, decrease anxiety, diminish pain and create a
bond between people. In relation to the implementation of telehealth, it has also
been viewed as a potential barrier for both HCPs and patients. Whitten, Holtz,
Meyer, and Nazione (2009) discussed the notion that telehealth was viewed as
impersonal, lacking in human touch, and that in a palliative care setting where the
goal is to comfort patients and families, some clinicians viewed telehealth negatively.
Demiris, Oliver, and Courtney (2006) discussed the impact on relationship between
patients and professionals stating that when care is provided remotely, human touch
and other forms of nonverbal communication are lacking, and that, too, may affect the way in which both clinical understanding and personal relationships develop.

GW suggested that in order to understand and support the emotional needs of palliative care patients, it is necessary for HCPs to be present with the patient.

“Good emotional support, I don’t see that it can quite replace that element of this job. I mean palliative care nursing is specifically the BEING with a person it’s the BEING there with a person that is absolutely key to the job I’m afraid. It’s very well researched and documented. So you aren’t there are you if you’re video linking, so that’s quite an important thing.” GW (Social support worker), 215

Sabesan, Allen, Caldwell, Loh, Mozer, Komesaroff, et al. (2014) shared this view stating that during a telehealth consultation, as the patient and the specialist are not in the same room, the dynamics observed in a video consultation can differ from a traditional face-to-face consultation. Therefore, it is understandable that there will be on-going concerns regarding the professional–patient relationship and rapport concerning the delivery of services through telehealth.

Despite these views, Schmidt, Gentry, Monin, and Courtney (2011) found that varieties of facial expressions of emotions could be observed using telehealth. Similarly, despite HCPs’ perceptions that the remote nature of telehealth would lead to an impersonal service; in contrast, the experiences of patients suggested a relatedness-supportive environment where they felt secure and emotionally understood could be developed.

PC illuminated her experience of a one to one focus in an extract where she discussed the sense of security she felt when consulting with the healthcare professional through videoconferencing.
“Yeah, it like relaxes you, you're already relaxed. You haven't had to do all the rushing and you're not in a strange place. You're not worried about other people hearing -- well in my situation… but from my point of view, my experience of it, it's because there was nobody else in the home. Then you're totally relaxed that you can kind of say what you like, whereas if you're go to [sic] go into a building you're not quite sure, are you sometimes, whether there are other people around.” PC – TP3 – 66

PC reflected on the benefit of a relaxing and familiar environment creating a sense of privacy. This is in notable contrast to the preconceived 'unfamiliar' environment described by the HCPs. In contrast to the HCPs' perception of the importance of a physical presence for effective communication, patients discussed how the solitude of connecting from their own home enabled a secure environment in which they felt comfortable to discuss personal feelings and needs.

“Well this is for me. I don't know about other people but for myself, like I said before, I feel that I'm on my own and I'm really just talking everything out, whereas if somebody like sat beside me, obviously you can pick up different senses and I don't think I'd be so open. So, I think yes, when I do talk on the computer, I'm very free, you just gabble. You just get it off your chest and it's good because normally, I'm not a talker really” JQ – TP1 - 56

For JQ the physical proximity of another individual seemingly limited her ability to talk freely. The telehealth equipment, whilst still being able to maintain a visual connection, provided patients with the confidence to discuss their feelings without concerns about the professional’s reaction. Thus, the patient experience suggests
that contrary to HCPs’ beliefs, there were potential benefits to the remoteness of the discussion.

Patients were not suggesting that face-to-face meetings were unnecessary; however, it was apparent that for some patients high-quality communication was possible via telehealth resulting in effective relationships with good relatedness support. Thus for both groups, the environment of the other stakeholder was seen as unfamiliar and challenged the satisfaction of their needs. For HCPs, the perceived lack of ability to support their patients’ relatedness needs when they were not physically present potentially impacted their own perceptions of competence satisfaction to do their role effectively, despite patients feeling adequately supported and well understood.

**General Conclusion**

Using an SDT perspective, the current study aimed to explore whether the preconceived perceptions held by HCPs regarding the use of telehealth in palliative care was convergent with the lived patient experience of using telehealth to access elements of their service. SDT (Deci & Ryan, 1985) proposes that psychological needs influence behavioural regulation and well-being, and as such, understanding the different ways that need satisfaction is discussed by stakeholders provides novel insights to the latent psychological barriers to routine telehealth use.

The findings suggest that although HCPs attempt to make decisions about the services that are offered to patients with consideration of their patients’ needs at the forefront of their decision, in reality, fully understanding each other’s perspectives may be challenging. The HCP’s main role is to improve or manage their patient’s condition, making their end of life care as comfortable as possible. As such, when
HCPs consider telehealth within their service, their consideration of patient needs are, to an extent, centred around their patients’ illness and their medical interaction with that patient.

For patients, consideration of their psychological needs extends beyond their illness to their wider lives. Thus, where HCPs’ perceptions were more focused on the need to be present with a patient to develop empathy and rapport, patients were considering the benefits that accessing support remotely might offer. Whether that be through removal of the stress caused by travel, the time and energy taken to attend appointments or the increased ability to engage in elements of their lives that were enjoyable or meaningful for them. Similarly, whilst HCPs perceived the lack of physical presence challenging their competence needs as a palliative care provider, patients saw added benefits to the remoteness which afforded them privacy and empowerment when engaging from their own home environment.

However, this research is not without limitations. The in-depth experiences of a small sample of patients will not necessarily reflect the views and experiences of patients more widely. Telehealth consultations will not necessarily be preferential for all rural patients and their families. Recruiting patients via the HCP gatekeepers for this study was challenging and it is likely that the professional biases discussed here will have influenced the nature of the patients that HCPs were willing to approach to take part in such a study. As such, the patient group may represent more technology minded individuals, those who appeared more resilient to HCPs or those open to exploring new approaches. As a result these individuals may have been more likely to experience the telehealth service positively.
Despite this, the findings raise interesting questions about the important gatekeeper role that HCPs assume when selecting services for their patients. HCPs appear to negotiate a fine line between considerations of their patients’ needs through an attempt to place themselves in their position, whilst inadvertently and often subconsciously, attempting to satisfy their own psychological needs as competent healthcare providers. In doing so, it appears that for some HCPs assuming an accurate patient perspective is difficult, and patients are often seen within the context of their condition and less in the context of their broader lives. Whilst patient-centred decision-making is advocated and adopted by most HCPs to the best of their ability, this becomes diluted when patients are not afforded the opportunity to access services such as telehealth because of preconceived ideas about their suitability.

In addition, this tension raises broader questions about whether, despite providing potential benefits and psychological need satisfaction for patients, telehealth inadvertently thwarts elements of psychological need satisfaction for the HCPs who maintain a preference for a face to face, traditional model of service provision with regular human contact. Working as a professional in this context is emotive and challenging and therefore ensuring HCP well-being and satisfaction in their role is key to a successful and sustainable service. Adopting services such as telehealth without adequate support for the professionals expected to deliver them and clarity about how telehealth can work to complement face to face care as opposed to replace it, is likely to result in an unsatisfactory service for staff and in turn their patients.

In conclusion, policy advocates wider adoption of telehealth services in rural areas (End of life care strategy for England, 2008; Longley et al., 2014), and patient experiences from this study, along with others (Becevic et al., 2015; Bush et al.,
2005; Whitten et al., 2004) appear positive. A greater appreciation of the divergent perspectives between HCPs and patients may be necessary before this adoption can become a reality. Improved education for HCPs about patients' positive experiences of telehealth and improved technical support to help implement such services may improve the satisfaction of HCPs' autonomy, competence and relatedness needs, making the adoption of such services more appealing within their role.
References


Nicholson, J., Coates, L., Mountain, G., & Hawley, M. (2013). Barriers and facilitators to mainstreaming telehealth in the community—exploring staff views and roles at the implementation and delivery phase. *International Journal of Integrated Care (7).* doi.10.5334/ijic.1417


Table 1 - Demographic information of Health Care Professionals

<table>
<thead>
<tr>
<th>Participant indicator</th>
<th>Job role</th>
<th>Experience (Years)</th>
<th>Age</th>
<th>Experience of telehealth</th>
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<td>With patients</td>
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<tr>
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<td>Participant indicator</td>
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<td>Diagnosis</td>
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<tr>
<td>JQ</td>
<td>72</td>
<td>Female</td>
<td>Bone cancer</td>
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</table>
HCP Interviews
1) Interviews coded as a whole data set
2) Codes collated into themes based upon the principles of SDT

Patient Interviews
1) Interviews coded at individual time point level and collated into themes
2) Exploration of convergence and divergence across time-points
3) Collating of codes across each time point into themes based upon the principles of SDT
4) Cross case analysis conducted exploring divergent and convergent themes across patient cases

Exploration of convergence and divergence across stakeholder groups into themes based upon the principles of SDT

Figure 2: Overview of Data Analysis process