Caring from a distance: the role of telehealth

Abstract

Background
Telehealth is used to help people manage their health and maintain independence, but has proved difficult to integrate into routine practice.

Aim
To explore the barriers to telehealth and find out what helps to improve its adoption among nursing staff.

Method
Case studies were compiled from four community health services in the Yorkshire and Humber region that were using telehealth to monitor patients. The case studies used interviews with 84 community nursing, technical and support staff, and 21 managers. Some 40 telehealth users and 12 carers were also interviewed.

Results
Factors serving as barriers to the use of telehealth, including lack of planning, insufficient training, lack of time and technological problems. Factors encouraging uptake included giving nurses time to experiment with the technology, a clear service pathway, establishing telehealth champions to troubleshoot and disseminate information, and successful care using telehealth.

Discussion
Factors improving the adoption of telehealth in community nursing include: better planning of how the service operates and installing appropriate technology, good communication with nurses and service users, establishing telehealth champions and providing ongoing training and support.

Conclusion
Many of the barriers in using telehealth can be avoided with better planning and collaboration.

Keywords: Community nursing/Telehealth/Monitoring/Qualitative research

5 key points
1 Nurses may have negative perceptions of telehealth due to poor training
2 It is crucial to have a period of experimentation when introducing new technologies that change how care is delivered
3 Many of the barriers to using telehealth can be avoided with better planning and collaboration
4 Outdated technology and poor connectivity can deter nurses from engaging with telehealth
5 Local telehealth champions can encourage colleagues to use telehealth

Real-time data on a patient’s health status can be accessed by the patient and nurses.
Method
We used qualitative research to build case studies of how telehealth was used in four community health services in the Yorkshire and Humber region. The sites were using telehealth to monitor patients with chronic obstructive pulmonary disease and chronic heart failure in routine clinical practice. These patients were under the care of advanced community nurses (community matrons, specialist respiratory nurses and specialist heart failure nurses), who were the primary source of referral to telehealth.

Each site used specialist telehealth equipment to obtain vital signs and symptoms from patients, who took their own readings at home. Readings were monitored; if they showed signs of deterioration or exacerbation, they were telephoned by either a nurse or a support worker. This varied by site, as did the number of telehealth units and users, and the organisations involved in delivering the service.

To develop the case studies, we interviewed:
- 84 community nursing, technical and support staff;
- 21 managers;
- 40 telehealth users;
- 12 carers.

The accounts of how telehealth was being used were analysed to examine the barriers and facilitators to staff and user adoption. After completing the case studies, we continued to work with community nursing teams and other telehealth stakeholders on service improvement projects. This aimed to address some of the barriers to staff adoption and success and, in some cases, to secure longer-term investment in telehealth.

Results
Barriers to using telehealth
Lack of planning
Telehealth is often introduced without considering why it is being used and for whom, and how it might affect the nurses expected to deliver it. As one community nurse said:

“The kits were bought and then we were asked to use it. There wasn’t any input into how we would be able to use it before... that’s how it happened.”

Poor design, under-resourced services and inadequate equipment can lead to teething problems that continue beyond the early stages of implementation, and create unforeseen consequences. This can be frustrating and cause additional work for nurses, leading to negative perceptions of telehealth, which can be long lasting and difficult to challenge.

Insufficient training and support
Staff training, although vital, is difficult to roll out across teams and is sometimes focused on technical aspects only. Despite having received training, nurses who participated in our study expressed lots of ongoing uncertainties. These included:
- How, why and when they should use telehealth;
- How to identify suitable patients;
- How to tailor monitoring to individual needs.

Not surprisingly, many nurses lacked confidence using telehealth in their clinical practice and thought more training or using it more often would be beneficial:

“I think people need to be more aware and not be frightened of it, so I think a bit more training about how it’s used is needed.”

(Community nurse)

“This is the thing with technology, you have to be constantly working with it to keep yourself OK with it.”

(Community nurse)

Time pressures
Getting accustomed to using telehealth takes time and it usually needs to be adapted to the local context and service. Other priorities and ongoing organisational change can mean using it is not something nurses automatically think about; in fact, they may actually prefer not to use it:

“If people feel they are working enormous caseloads they are going to be quite resistant to it because they can only see that implementing something like that at the beginning is going to actually cost a lot of time.”

(Community nurse)

Understanding its role in delivering patient care can take time, and acceptance of the system can wax and wane until the benefits are realised in practice.

Technology problems
Telehealth depends on being able to share and access information electronically. At the time of the study, community nurses were in the process of becoming “mobile workers”, using electronic patient record systems and working from laptops and mobile phones as part of their daily practice. Outdated technology and poor connectivity can make this difficult, and has an impact on how well nurses engage with telehealth. Many nurses participating in the study expressed a need for more effective mobile working technologies:

“The main thing for me is that you can’t access the information and the spreadsheets and the patient’s recordings until you come into a base computer. And we don’t work in a base; we work in the community.”

(Community nurse)

Making telehealth work
Time to experiment and learn
A period of experimentation is crucial when introducing new technologies that change how care is delivered. Where they had time to learn about and test different ways of working with telehealth, the nurses in this study were able to identify:

- Why they were using the technology;
- How it could benefit patients and their own practice.

As one community nurse explained:

“We realised that, yes, it would have a place because it could be put in and monitored in the short term and then withdrawn and used as a tool... You can trend it and step in and out, whereas patients were thinking it’s every day and all the time.”

There are numerous reasons for using telehealth in community nursing; being aware of these helped nurses to better assess whether their patients might benefit.

Establishing local telehealth champions
Having a telehealth coordinator and local champions can help to engage individual

BOX 1. COMMON UNCERTAINTIES
- How long patients should use telehealth?
- Who should be referred and why?
- How to assess and review patient progress
- Who will monitor patients’ vital signs and symptoms, and provide clinical triage and support?
- Who will install telehealth equipment and provide technical support?
Research

Nursing Practice

nurses and whole teams to use telehealth by sharing stories of success and practice-based learning. A coordinator or telehealth manager can also push forward service improvements and secure resources for additional roles or equipment. In our study, these roles proved invaluable for improving ongoing training and support for nurses about how to monitor patients remotely rather than face to face:

“We have a telehealth coordinator who is always there, so we can always ring … and she comes along and has a look or sorts us out or just points us in the right direction.”

(Community nurse)

Personal experience of success

Experiencing success with a patient who is able to use telehealth for self-management or to prevent exacerbation or hospital admission was often a key turning point for nursing staff. It gave them confidence to identify suitable patients on their case-load, and also to recommend telehealth to colleagues and wider clinical teams:

“At the beginning it was quite time-consuming and I think that was just getting used to the system itself ... but we had some quick benefits straight away from patients ... it made us start to think that ‘Oh, actually, we can start to use telehealth in different ways for different people.’”

(Community nurse)

A well-designed pathway

There are often many uncertainties about how best to use telehealth (Box 1) but establishing a service pathway from referral to discharge can help to address these. Service improvement projects can help ensure the necessary changes are implemented and in this study nursing staff were able to make key improvements to their telehealth service. Without dedicated time and resources, however, this can be difficult to achieve.

Discussion

With better planning, some of the problems that often occur when telehealth is introduced can be addressed. Working in partnership with all stakeholders who use, deliver, manage or commission telehealth can help to ensure that everyone is working towards the same goals.

Although telehealth is still relatively new, learning from the mistakes of others can be invaluable for those introducing it to their services. Take time to plan carefully and develop a clear service design; this can inform decisions about what technology and equipment you need. In addition, identify new roles to coordinate or deliver telehealth.

In our study, one or two key individuals, who were also telehealth champions, worked beyond their normal duties to tackle the barriers. This important role has been confirmed in other studies (Wade et al, 2014; Hendy and Barlow, 2012). However, the efforts required were significant and it was not always possible for these people to make the required changes or secure financial investment. Working with commissioners and those with purchasing power can help ensure telehealth champions and coordinators are supported in their role.

Engaging commissioners means ensuring new ways of delivering care are evaluated so they add value. Unfortunately, many new technologies are ‘complex interventions’, involving many staff and services. This can affect the cost of care in ways that are difficult to measure; unsurprisingly, evidence about whether telehealth saves money or improves health outcomes is mixed (Henderson et al, 2013; Steventon et al, 2012). Clinical services, therefore, have a role in helping to evaluate telehealth locally. This is vital to engage commissioners and secure future investment.

Finally, it is important to consider that not all barriers can be overcome. Many issues documented in our research are associated with adopting other new technologies and innovations more generally (Greenhalgh et al, 2004). An initial learning curve, new skills, changing roles, and uncertainty are all part of using new technologies so it is vital to make sure nursing and other frontline clinical and technical staff are adequately supported.

This article is a summary of Taylor J et al (2014) Examining the use of telehealth in community nursing: identifying the factors affecting frontline staff acceptance and telehealth adoption. Journal of Advanced Nursing; 71: 2, 326-337.

References


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