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CHAPTER 17

eHealth

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LEARNING OUTCOMES

- Explore the meaning of eHealth including the associated terminology of telehealth and telecare
- Appraise the suitability of eHealth for use within community nursing practice
- Explore the professional and ethical issues in the use of technology within community nursing
- Discuss the educational needs of the future eHealth community nurse

INTRODUCTION

One of the most significant developments in health and social care in recent years has resulted from the increased use of information and technology (IT), in particular the Internet and the World Wide Web. Accelerating the uptake of digital technologies and providing support for its implementation was identified as one of the recommendations to address the nine characteristics of good quality care in district nursing (Maybin et al 2016). Considering the changing demographics of society and the fact that advances in technology can save time and money, national strategies have identified eHealth as an approach to improve healthcare (Cruikshank *et al.*, 2010, Department of Health 2014, Scottish Government 2015, Welsh Government 2015, Health and Social Care Board 2016).

All four UK countries have identified national IT programmes which support the diverging health policies in the UK countries. Northern Ireland, Scotland and Wales all have identified specific strategies to address eHealth development, whereas England have introduced it in the 'Five Year Forward View' (Department of Health 2014) and have developed supporting work stream roadmaps (National Information Board 2015) and a resource for commissioners (NHS England 2015). eHealth is about improving health outcomes, the safety of care and providing efficient care; it is not just about technology (NHS England 2015, Scottish Government 2017, Welsh Government 2015, Health and Social Care Board 2016). However, it is also important to note the strategic direction in the four countries towards the provision of integrated health and social care and this will be reflected in future developments where organizational boundaries are not a barrier to care in the community (Scottish Government 2015, Welsh Government 2015, Gilbert 2016). It is therefore clear that eHealth needs to be an integral part of nursing practice and it is important that community nurses have the underpinning knowledge relating to this technology and can use it effectively to meet the healthcare needs of individuals, families and communities.

This chapter therefore aims to explore eHealth within community nursing. First, the associated terminology will be examined, then the evidence base to support its use will be explored. Finally, some professional, ethical and contemporary issues will be considered specific to nursing in the community.

ACTIVITY 17.1

Action point

Before reading this chapter, draw a concept map/mind map/spider diagram outlining what you think eHealth is. Include in your map not only what you think eHealth is, but also its main features and the infrastructure that needs to be in place in order to effectively implement it in community nursing. You may wish to use this concept map to inform Activity 17.4.

THE TERMINOLOGY

eHealth

The term eHealth first appeared in the literature in the 1990s (Booth, 2006) but has since been increasingly and inconsistently used. The widespread use of the term suggests it is a significant concept that is commonly understood despite the lack of a precise definition. Oh *et al.* (2005) undertook a systematic review of definitions and identified 51 unique definitions with no clear consensus. However, they did identify two universal themes, health and technology, and six less mentioned themes of commerce, activities, stakeholders, outcomes, place and perspectives. Therefore, it can be concluded that the various definitions reflect different perspectives, settings and contexts where technology is used to support healthcare needs. The World Health Organization (2016), which was not included within this systematic review, encompasses the two universal themes and defines eHealth as 'the use of information and communication technologies for health to, for example, treat patients, pursue research, educate students, track diseases and monitor public health.' Scottish Government (2015) suggest eHealth is an umbrella term with wide parameters and is defined as 'the use of information, computers and telecommunications to meet the needs of individuals and improve the health of citizens'.

Within this definition of eHealth it is recognized that there are many evolving terms encompassed, such as health informatics, nursing informatics, information communication technology, assistive technology, telemedicine, telenursing, telecare, telehealth, electronic patient record, and they are often used interchangeably (Cowie and Bain, 2011). It is not possible to cover them all in depth here; however, it is important that there is an understanding of the broad principles of the key terms, in order that technology can be used appropriately within the community.

Health and nursing informatics

Health informatics is generally defined as 'the knowledge, skills and tools which enable information to be collected, managed, used and shared to support the delivery of healthcare and to promote health' (Department of Health 2002). Despite this definition being dated it is still regularly cited today (Health Education England 2016). Nursing informatics is similar in that it is the collection of data and use of information to support nursing practice. This encompasses the electronic patient record. The development of infrastructures to support health and nursing informatics is a priority within national policy (Department of Health 2014, Scottish

Government 2017, Welsh Government 2015, Health and Social Care Board 2016).

Electronic patient record

Recordkeeping is an essential element of nursing practice and includes all records that are relevant to your scope of practice (NMC 2015a). The electronic patient record is, as it sounds, an electronic copy of a person's nursing or medical record. The aim within the NHS is for a single integrated electronic health record to be available to authorized users, including the service user (RCN, 2012b). In the UK the development of the healthcare record is at varying stages, with some GP surgeries having used electronic records for many years. However, the challenge is for the record to cross primary and secondary care boundaries, and to be a fully integrated health and social care record, allowing access to authorized individuals while safeguarding patient confidentiality (Department of Health 2014, Scottish Government 2017, Welsh Government 2015, Health and Social Care Board 2016).

CASE STUDY

Mrs. A is an 83 year old lady who lives alone in her own home. She has rheumatoid arthritis, chronic obstructive pulmonary disease and type 2 diabetes. Mrs. A has been assessed on numerous occasions by various health and social care professionals including the Occupational Therapist, Social Workers, the District Nurse, the Diabetes Specialist Nurse, and is also under the care of a hospital consultant for her rheumatoid arthritis, and her general practitioner. Until recently Mrs. A has had to repeat her story every time she was assessed by a new professional. Now using a shared Electronic Care Record all the professionals involved in her care have access to share information and co-ordinate care, and if she has an exacerbation of any of her co-morbidities out of hours there is adequate information to manage her care in a timely manner and ideally avoid hospital admission.

Telehealth

Telehealth is the provision of health services at a distance using a range of digital technologies and mobile technologies (Scottish Government 2012; Telecare Services Association, 2016). This can be to promote self-care, for example, to enable a patient to monitor their own vital signs such as blood pressure, or from a monitoring perspective, physiological data could be transferred to a remote monitoring centre to allow for health professionals to intervene if measurements fall outside of expected parameters. The RCN (2012c) suggests telehealth is not a new technology or branch of health care, but should be integrated within existing healthcare infrastructures. The services could involve consultation, patient monitoring, diagnosis, prescriptions or treatment and can be done in real time or delayed through media such as teleconferencing, videoconferencing or the Internet. It should be a targeted approach to enhance service delivery focused around the service user, enabling a more efficient and effective use of clinical resources (Cruickshank *et al.*, 2010; RCN 2012a, RCN 2012c, Telecare Services Association, 2016).

CASE STUDY

Mrs B is a 31-year-old lady who has recently been diagnosed with type 1 diabetes. She has been commenced on twice daily insulin and has received education from the diabetic clinic at her local hospital, and has been followed up by her practice nurse. Her blood glucose levels remain unstable.

She is therefore identified as suitable for the telehealth programme until her blood glucose stabilizes. A telehealth monitor is installed in her home and she is shown how to connect her glucometer to the telehealth monitor.

Mrs B then carries out a monitoring session using the telehealth monitor daily. The monitor gathers her blood pressure, heart rate, oxygen levels and weight, and some data from prescribed questions. Finally, she connects her glucometer to the monitor and the readings from the past 24 hours are transmitted.

Her data are then analyzed by a triage nurse at the local community hospital. The triage nurse then contacts her to discuss the readings that are outside of normal limits and provides the relevant education and support. A weekly report is then sent to the diabetic clinic.

Following 8 weeks of this high intervention Mrs B's blood sugars stabilize and she is confident to self-care for her condition.

Telecare is defined as the use of communications technology to provide health and social care direct to the patient (Barlow *et al.*, 2007). Earlier development of telecare also referred to assistive technology and smart homes or smart technology (Sergeant, 2008). Assistive technology is another collective term for devices for personal use to enhance people's functional ability. It may include fixed assistive technologies such as stair lifts or portable devices such as bath seats. Therefore, this can include telecare, but is not limited to the kind of technology normally considered within eHealth. Telecare Services Association, (2016) summarise the definition of telecare as 'support and assistance provided at a distance using information and communication technology. It is the continuous, automatic and remote monitoring of users by means of sensors to enable them to continue living in their own home, while minimising risks such as a fall, gas and flood detection and relate to other real time emergencies and lifestyle changes over time.'

Telecare has now become an umbrella term for all assistive and medical technology that enables people to maintain their independence in their own environment (Doughty *et al.*, 2007. Telecare Services Association, 2016), which is more commonly their own home but it can be in any care setting. The Audit Commission (2004) identified three components of telecare: providing information; monitoring the environment; and monitoring the person. Telecare was then categorised into three generations (Brownsell *et al* 2008).

- First-generation telecare refers to equipment found in most Community Alarm schemes. It involves user activation, for example a cord is pulled which triggers an alarm at a control centre where someone can organize a response of some kind. They have the benefit of providing 24-hour care; however, a major limitation is the reliance on the user to raise the alarm.

- Second-generation telecare is based on first generation but provides a more sophisticated and comprehensive support to managing risk and is less reliant on the user. It involves sensors to collect and transmit information, such as a door opening, movement within the home and bathwater running.
- Third-generation telecare is based on the automatic detection of the second generation, but with the increased availability of broadband, wireless and audiovisual technology it offers the potential for virtual or teleconsultations between the service user and the health professional or support worker. This has the potential to reduce home visits or hospital appointments and provides more opportunities for people unable to leave their own homes.

While the 'generation terms' are still used by some in the literature, they are becoming increasingly redundant as technology continues to evolve. Recent strategy documents and organizations such as Telecare Services Association and Joint Improvement Team no longer make reference to these categories within telecare.

CASE STUDY

Mrs B is an elderly lady living in sheltered accommodation. She has a medical history of rheumatoid arthritis, angina, deafness and a history of falls.

Following discharge from hospital after a fall she was assessed by a district nurse who arranged for care workers to attend four times a day to meet her personal needs. However, Mrs B became increasingly confused and was getting out of bed and wandering through the sheltered housing complex at night.

Mrs B was then referred for a telecare assessment to identify the risks and to see if there were any interventions that could manage these risks. This resulted in the property being fitted with an activity monitor which is used to monitor movements within the home, flood detectors, a gas sensor and a bed sensor, which will detect if Mrs B has failed to return to bed in the time set. This ensures that if she gets out of bed and falls the warden can intervene accordingly.

mHealth and mCare

mHealth or mCare refers to mobile health or mobile care and uses mobile devices to extend the principles of telecare and telehealth (Telecare Services Association, 2016). This technology has made significant advances in recent years and continues to evolve from both a practice and education perspective. One key feature of mobile technology is the use of Apps which are software applications. While currently there has been limited evaluation of the use of mHealth, Guo et al (2015) in their literature review identified that mobile technologies can potentially improve access to information, enhance productivity of care, reduce errors, increase engagement with learning and support evidence based decision making at the point of care delivery. Clearly within community nursing the advances in mHealth have great potential from both a professional and service user perspective to support self-care. The activity below will allow you to explore the potential usage of mHealth within community nursing.

ACTIVITY 17.2

Action point

Access a mobile app of your choice related to your role as a nurse working in the community. Critique it using the following questions adapted from the European Commission (2016)

Is the app primarily for health or social care purposes?

What category does the app fit into:

- Patient decision making and self management
- Clinical decision making support tool
- Support behavior change
- Diagnostic or monitoring function
- Access to electronic health records
- Controls medical devices
- Documentation function
- Tracking device
- other

Who are the principle beneficiaries of the app?

Is there a cost?

Are there any risks in its use such as safety? Data protection?

Is the app usable and accessible?

Is the app desirable?

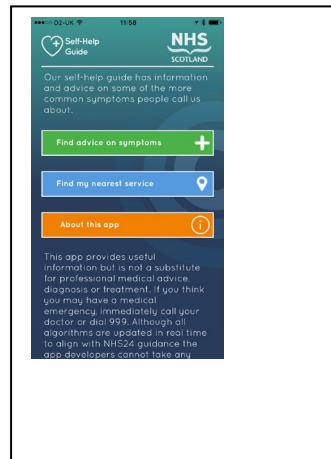
Is the app credible and supported by an evidence base?

Is the app reliable?

Has the app been validated by a group or organization?

Does the app use language suitable to its target audience?

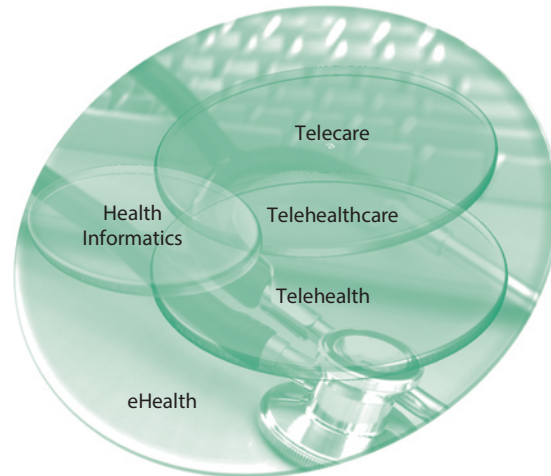
Does the app have longevity?



Telehealthcare

Considering all the definitions above, it is evident that there are interrelationships between all the terms. Doughty *et al.* (2007) have reviewed the terminology used and acknowledge it will evolve as technology develops, although to avoid confusion the term telehealthcare may be more appropriate as it clearly integrates both telehealth and telecare. However, they suggest this does not necessarily include traditional forms of assistive technology. NHS 24 and the Scottish Centre for Telehealth (2010) also acknowledge this. Although there will be parallel developments between telecare and telehealth, as technology develops there will be the convergence of telecare and telehealth to provide effective high-quality healthcare, particularly around services delivered in the community. The key terms within eHealth are conceptualized in Fig.17.1.

Fig 17.1 eHealth



ACTIVITY 17.3

Discussion point

Considering the terminology of eHealth and areas of telehealth and telecare convergence, reflect on how eHealth can support your role as a community nurse.

- What are the challenges?
- What are the opportunities?

Taking into account all the various concepts within eHealth, it is clear that there are many overlaps and all have a potential use within community nursing. The opportunities and challenges are summarized in Table 17.1. There are also many ways that eHealth can be used by a variety of methods, some of which are identified in Table 17.2.

Table 17.1 Summary of strengths and challenges of eHealth

| Strengths | Challenges |
|--|--|
| <ul style="list-style-type: none"> • Reinforces existing advice • Overcomes challenges of distance • Addresses needs of remote and rural areas • Reduces unnecessary outpatient appointments • Out of hours access • Quicker access to specialist advice • Improved safety because of up to date recording of | <ul style="list-style-type: none"> • May be expensive to develop • Lack of access to software and hardware • Lack of eHealth in curriculum • Technical problems and compatibility • Relies on technical competence of staff and service users • Potential health and safety risk with equipment • Maintaining confidentiality |

| | |
|---|--|
| <p>information</p> <ul style="list-style-type: none"> • Improved continuity of care • Portable information • Improved health outcomes • Early diagnostic capability • Evidence based health care accessible to all 24 hourly | |
|---|--|

Table 17.2 Examples of how eHealth can be used

| Method | Example | Uses |
|-------------------------|---|---|
| Telephony | Mobile phones: calls and txt | Message delivered via text to reinforce health education; phone applications to monitor health status |
| Videoconferencing | Patient monitoring | Remote advice from specialists |
| Internet/world wide web | Use of search engines and Touch screen internet kiosks | Accessing clinical decision support systems Provide healthcare advice and education |
| Digital Imagery | Digital cameras, webcams, Podcasts | Image of wound of housebound patient can be shared with specialist |
| Gaming | Games consoles | Interactive games can provide education |

| | | |
|----------------------|---|---|
| Email | Communication at a distance | Referral between health professional |
| EHealth Record | Patient held medical record | Care pathways can be shared amongst professionals |
| Sensors | Fall detectors, flood detectors, smoke detectors, bed occupancy detectors | Allow high risk people to stay in their own home |
| Electronic Databases | Caseload management | Audit practice and aid planning |

There have been several projects across the UK to ensure that eHealth becomes an integral part of community care provision. However, one of the challenges has been to accurately quantify the benefits, due to the small scale of the projects and the differing methods of evaluation. To further confirm the contribution of eHealth to healthcare, evaluation needs to integrate monitoring, outcomes and personalized feedback (Currell et al., 2000; Verhoeven et al., 2007, Fatehi et al. 2016).

EHEALTH TECHNOLOGY WITHIN COMMUNITY NURSING

The evidence to support the use of eHealth and in particular telehealthcare by community nurses to manage individuals in the community is increasing. However, as new technology develops and eHealth is integrated within everyday practice the evidence base at the highest levels of reliability remains variable. This can provide a dilemma for the practitioner, who until the evidence gap is addressed faces difficult decisions about adopting such concepts into their practice. However, current government policy does support the development of using technology in practice as discussed previously and it is clear that eHealth has huge potential, particularly in the management of long-term conditions (Cruikshank *et al.*, 2010, Healthcare Improvement Scotland 2016a).

The evidence base

There is literature that does explore the clinical effectiveness of the use of telehealthcare to support the management of many long term conditions such as diabetes, mental health, high-risk pregnancy monitoring, dermatology, heart failure and cardiac disease (Bensink *et al.*, 2006;

Barlow *et al.*, 2007, Healthcare Improvement Scotland 2015, Healthcare Improvement Scotland 2016a Healthcare Improvement Scotland 2016b). However, there is consensus that more robust evaluations and research is required to address the limitations of the current evidence (Davies and Newman 2011).

In reviewing the literature it is important to consider the hierarchy of evidence (Aveyard *et al* 2016). There are many hierarchies of evidence available, however, some are more suitable for specific different research questions (Davis and Newman 2011). The hierarchy of evidence best suited for determining the effectiveness of an intervention is most commonly developed from Sackett *et al*'s (1996) work. This hierarchy identifies systematic reviews of randomized controlled trials at the top with anecdotal evidence being at the bottom. This is illustrated in fig 17.3.

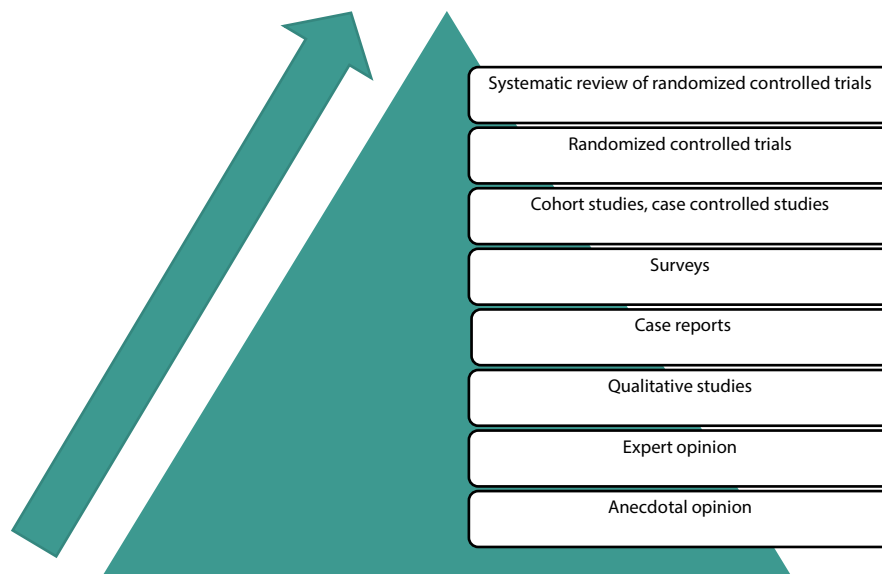


Fig 17.3 Hierarchy of evidence for reviewing the effectiveness of an intervention

Fatehi *et al* (2016) acknowledge that research methods specific to telehealth will depend on the maturity of the intervention. To address this, they proposed a five stage model as a framework to support research within eHealth: concept development; service design; pre-implementation; implementation and post-implementation. While this framework could equally be applicable to other areas of service evaluation, it is useful as an additional tool to appraise research and its applicability and validity relating to the development of emerging technology to address healthcare needs from various perspectives.

ACTIVITY 17.4

Action point

Identify an area of practice relevant to your role, and then undertake a small literature review to examine the evidence base to support the use of

telehealthcare to manage healthcare needs in your chosen area.

From undertaking activity 17.3 you will have recognized that integrating telehealthcare within your nursing practice requires different clinical skills and approaches to care. The following practice recommendations can be made:

- Practitioners must assess the suitability of telehealthcare to manage healthcare needs on an individual basis.
- The use of telecommunications is feasible for the motivation and management of patients with long-term conditions, and can be cost-effective and reliable.
- Telehealthcare is feasible and acceptable for educating patients, monitoring and assessing clinical outcomes.
- Telehealthcare is more meaningful to service users if delivered by specialized nurses and prescribers.
- More complex systems such as web-based medical records and permanent healthcare professional support can achieve significant benefits in improving clinical outcomes.
- Effective management and improved clinical outcomes in the management of long-term conditions involves medicines management.

PROFESSIONAL & ETHICAL ISSUES

A comprehensive understanding of professional and ethical issues is a fundamental part of community nursing and is discussed more fully in Chapter 3. This section therefore focuses on some of the main issues related to eHealth. Baker *et al.* (2007) explored professional and ethical issues that have emerged with the use of technology and articulated a gap between the potential of eHealth as positively perceived by eHealth leaders and the reality experienced by nurses in clinical practice. However, all respondents clearly identified the global eHealth future. Nearly a decade later it is still recognized that strong professional leadership is essential to enhance the provision of health and social care through eHealth (Raeve et al 2016).

Professional and ethical issues of eHealth can all be directly mapped to the Nursing and Midwifery Council's (NMC, 2015a) Code: Professional Standards of Practice and Behaviour for Nurses and Midwives and in particular to the following clauses:

2.2 recognise and respect the contribution that people can make to their own health and wellbeing

3.3 act in partnership with those receiving care, helping them to access relevant health and social care, information and support when they need it

5.2 make sure that people are informed about how and why information is used and shared by those who will be providing care

5.4 share necessary information with other healthcare professionals and agencies only when the interests of patient safety and public protection override the need for confidentiality

5.5 share with people, their families and their carers, as far as the law allows, the information they want or need to know about their health,

care and ongoing treatment sensitively and in a way they can understand

6.1 make sure that any information or advice given is evidence-based, including information relating to using any healthcare products or services

8.6 share information to identify and reduce risk,

10.1 complete all records at the time or as soon as possible after an event, recording if the notes are written some time after the event

10.4 attribute any entries you make in any paper or electronic records to yourself, making sure they are clearly written, dated and timed, and do not include unnecessary abbreviations, jargon or speculation

13.5 complete the necessary training before carrying out a new role.

19.2 take account of current evidence, knowledge and developments in reducing mistakes and the effect of them and the impact of human factors and system failures

21.6 cooperate with the media only when it is appropriate to do so, and then always protecting the confidentiality and dignity of people receiving treatment or care

In reality many of the professional and ethical issues are not different from other areas of nursing practice, but because of the evolving nature of eHealth the issues are perceived to be more challenging to address.

ACTIVITY 17.5

Reflection point

Reflect on the case examples of telehealth and telecare provided in this chapter, or examples of the use of eHealth available in your area of practice, and consider the following:

- What are the professional and ethical issues?
- How can eHealth support you to manage healthcare needs in the community in a more effective and timely manner?

While undertaking Activity 17.4 many professional and ethical issues will have been identified. You may also have considered the following issues.

Access to information

Assessment of individuals, families, carers and communities as identified in Chapters 1, 7, 8 and 9 is a core skill in community nursing to address healthcare needs. However, often the first assessment of a change in health status is not undertaken by a health professional, but by the individual. In 2006 The Picker Institute estimated that a third of the 80% of people actively accessing information about their health first do it through the Internet. Ten years later in 2016 89% of households have internet access; 82% of adults access the internet on a daily basis; and 70% of adults access the internet on a mobile phone (Office for National Statistics 2016). While the use of technology is perceived by many to be a generational issue for both healthcare professionals and service users', one must be careful not to make assumptions on this. Institute for the Future (2016) in their international poll identified that 79% of people 55 years and over regarded technology as important to improve healthcare,

compared to 69% of those aged 18 – 34.

Information is most often accessed via a search engine on the Internet. Although there are many benefits to this, such as quicker access to information, there is the danger that service users can access incorrect information or it can be of variable quality (BMA, 2010). However, the NHS in the UK provides much credible information to the public via the Internet promoted through media campaigns. For example, NHS Inform online allows users to check their symptoms online and provides advice accordingly, and similarly there are many mobile apps which provide access to health information. This technology is changing the balance of power between health professional and the public. However, it provides nurses with the opportunity to empower and enable people (National Information Board 2014)), which has always been a key concept within nursing practice (NMC, 2001, 2004, 2015).

Decision-making

When an individual chooses to consult with a community nurse or is referred to a community nurse, eHealth can play a supportive role in the decision-making process of the assessment. Clinical decision support systems can be utilized for this purpose (Stacey et al 2014). Increasingly, these clinical decision systems are being integrated with electronic patient records or are applications that can be downloaded onto a mobile phone and are therefore a useful tool for the community nurse, who is often working in people's homes. However, as with all expert systems, they should be seen as tools and not as a replacement to clinical judgement.

Activity 17.6

Reflection point

Reflect on your experience of computerized decision support systems. How do they enhance your practice? What are the challenges in their use? How does it impact on your ability to make a decision? What is the evidence base behind the system?

Equity and access to services

A major challenge in addressing healthcare needs within the community is the concept that everyone should have equal access to services regardless of where they live, which has been a core concept of the NHS since its inception. This can be considered on two levels: first, access to clinical services and, second, equity of access to eHealth services (Audit Scotland, 2011). However, often there is a sound reason for unequal approaches to addressing healthcare needs. For example, third-generation telecare relies on the availability of broadband; however, in some areas of the UK this may be limited, or patients may not have the ability to adapt to such technology. This is when the concepts of telehealthcare need to be embedded into care pathways, and, following the assessment of the service user, have suitable exit criteria for its use (Cruikshank *et al.*, 2010) and the use of ethical frameworks by the practitioner needs to accompany this process (Eccles, 2010).

Social Media

The use of social media is another development within ehealth. Social

media tools includes social networking platforms such as Twitter and Facebook, blogs, microblogs, wikis, virtual reality and gaming environments. There are many different uses of social media tools from the patient's, the carer's and the professional's perspective. Social Media can be used in the promotion of health, and support of those with long term conditions and their carers, as well as practitioners using them to keep up to date and share the latest evidence (Moorley and Chinn 2014).

As a professional it is essential that you are aware of professional and personal boundaries within online practices. The NMC (2015b) has produced additional guidance which underpins the Code (NMC 2015a) that it is essential you are aware of. A term that has been emerging in recent years is digital professionalism that supports the professional /personal boundaries when engaging online. Ellaway (2010) identified seven principles of digital professionalism:

Establish and sustain an online professional presence that befits your responsibilities while representing your interests. Be selective in which channels and places you establish a profile.

Use privacy controls to manage more personal aspects of your online profile and do not make anything public that you would not be comfortable defending as professionally appropriate in a court of law.

Think carefully and critically about how what you say or do will be perceived by others and act with appropriate restraint in online communications.

Think carefully and critically about how what you say or do reflects on others, both individuals and organizations, and act accordingly.

Think carefully and critically about how what you say or do will be perceived in years to come; consider every action online as permanent.

Be aware of the potential for attack or impersonation, and know how to protect your online reputation and what steps to take when it is under attack.

An online community is still a community and you are still a professional within it. The call for 'is there a doctor. . .' may come online as well as on a 'plane or in a theatre'

Activity 17.7

Reflection point

Reflect on the social media tools that you are aware of. If you are unfamiliar with any you may choose to access <http://wecomunities.org/> which is a website that supports the use of Twitter to connect professionals and share information through online chats. What are the benefits of social media to support nursing in the community? What are the challenges?

eRostering and workforce planning

The principles of caseload management and workforce planning are discussed in detail in chapter 15. However, it is well recognized that the use of technology to support rostering, workforce planning and caseload management are not consistent across the UK. Maybin et al (2016) identified the potential for technologies to enable remote working and to improve efficiency and productivity with timely access to for example patient's records and to support caseload management. This in turn would release more time for professionals to deliver quality services.

Activity 17.8

CASE STUDY

Action point

There are many case studies available online illustrating the benefits from eRostering.

<http://www.rotamaster.co.uk/case-studies/case-study-lcwucc/>

<http://www.ehealthireland.ie/Case-Studies-/eRostering/>

<http://www.nhsemployers.org/case-studies-and-resources/2012/02/case-studies-five-high-impact-actions>

<http://www.skillsforhealth.org.uk/services/item/16-realtime-rostering>

Please access a selected case study or reflect on a case example from your own area. What are the challenges of implementing electronic packages to support rostering, caseload management and workforce planning? What are the advantages?

It is clear from considering the above that the professional and ethical issues in the use of eHealth are similar to other areas of nursing practice and many of the skills are transferable. However, the focus can be different and there is a need to develop new approaches and additional knowledge to use eHealth efficiently and effectively to address healthcare needs in the community.

EDUCATING THE FUTURE EHEALTH COMMUNITY NURSE

It is evident that technology will not address healthcare agendas unless practitioners are provided with the education (Booth, 2006) to use it effectively. Up until recent years the emphasis in nurse education has been on computer literacy rather than information literacy and eHealth. However it is evident that community nurses need to understand the technology and be confident in its use to adequately address healthcare needs (RCN, 2012a) and this requires more than information literacy. It is suggested that particularly undergraduate nursing must take a proactive approach to integrating eHealth within the curriculum, and educators should take a leading role in this (Booth, 2006).

In recent years educational programmes have embedded the principles of eHealth within curriculum in both undergraduate and postgraduate studies. Additionally national career frameworks have been explicit in that community nurses must be able to use a range of technology to support patient care (Health Education England 2015, NHS Education Scotland 2016). In the Queen’s Nursing Institute/Queen’s Nursing Institute Scotland (2015) *Voluntary Standards for District Nurse Education and Practice* the following competence was developed:

‘Source and utilise eHealth technology and technology assisted learning systems to support self-care and improve efficiency and effectiveness of the district nursing service’.

Clearly, eHealth education is an essential requirement to address both the theoretical foundations of integrating technology within healthcare and to provide the practical skills of using technology. While tomorrow’s educated nurses may have these skills, the needs of experienced practitioners who have not accessed formal education in recent years must also be considered. The RCN (2012d) in their eHealth survey identified that two thirds of respondents had received training in their workplace to support their use of information technology. UK governments acknowledge the importance of training and identify the development of their workforce as a key priority (Scottish Government 2015).

ACTIVITY 17.9

Training need analysis

Reflect on your role. Make a self-assessment on your knowledge and skills by considering some of the concepts you have explored in this chapter. You may have a tool in your local area that you can access or you may wish to develop a tool such as in the table below that can be used within your team. Consider any supporting evidence to demonstrate your knowledge and skills, and then identify any areas where you would benefit from further training, education and development.

| Outcome: | 1 | 2 | 3 | Evidence |
|---|----------|----------|----------|-----------------|
| 1. Demonstrate understanding of how and why information technology is able to support clinical practice and ways of working | | | | |
| 2. Demonstrate understanding of how electronic health records are used in your practice | | | | |
| 3. Demonstrate understanding of assessment tools used to assess the use of telecare as a nursing intervention | | | | |
| 4. Demonstrate understanding of the key NHS national initiatives to support eRostering | | | | |
| 5. Describe the principles of digital professionalism | | | | |

1. I require training and development in most or all of this area
2. I require training and development in some aspects of this area
3. I am confident I already do this competently

CONCLUSION

This chapter has provided an overview of eHealth considering some of the key terminology. The suitability of its use has been briefly explored within community nursing and some of the associated professional and ethical issues have been highlighted. It is recognized that eHealth is not just about technology, it is about using technology to communicate more effectively to address healthcare needs. Although eHealth is becoming an integral part of government policy, applying the principles in practice can be a challenge and it is therefore essential that healthcare professionals are provided with appropriate education and training to prepare them for the development of eHealth.

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FURTHER RESOURCES

www.ehealthnurses.org.uk – Health Nurses Network
<http://sctt.org.uk/> Scottish Centre for Telehealth and Telecare
<https://digital.nhs.uk/> NHS Digital