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technologies used in health and social care. (Unpublished)

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Digital technologies used in health and social care

Overview

The technologies that we have come to depend on in our everyday lives – for booking holidays, staying in contact with distant friends and family, doing our banking, shopping, sharing our thoughts, photos and ideas – can be of huge benefit in delivery of health and social care services. The concept is not new. Over the last decade many companies (large and small) have developed innovative products and services. A significant number have been as a result of ideas from clinical or other professionals who really understand what is needed. Already many GPs offer online web access for appointment booking and repeat prescriptions, some provide telephone consultations and a few also offer secure messaging or email access. Panic buttons, fall detectors and other monitoring devices that are linked to a call routing service and alert friends and family by telephone if something has happened to an elderly or vulnerable person at home are widely available. Less widely available is the use of video-conferencing for consultations and sometimes even for procedures. Few are currently in widespread use, but an example is the Telestroke service that provides out of hours access to specialist stroke consultants, making it possible to provide cover across Cumbria at all times. Some of the exciting emerging technologies include apps for mobile devices and the use of wearable sensors to monitor physiological signals (such as pulse rate, temperature, blood glucose level).

There are a number of terms in use to describe the different technologies and innovations, which are summarised in Figure 1 below. As an umbrella term, many people in healthcare use the term ‘telehealth’ to cover all these areas. Other terms used are ‘digital health’, ‘connected health’ and ‘virtual health’. In social care, the term ‘telecare’ is widely and consistently used. A relatively new term, used by NHS England, is ‘technology enabled care services’, which has the advantage of encapsulating both healthcare and social care.

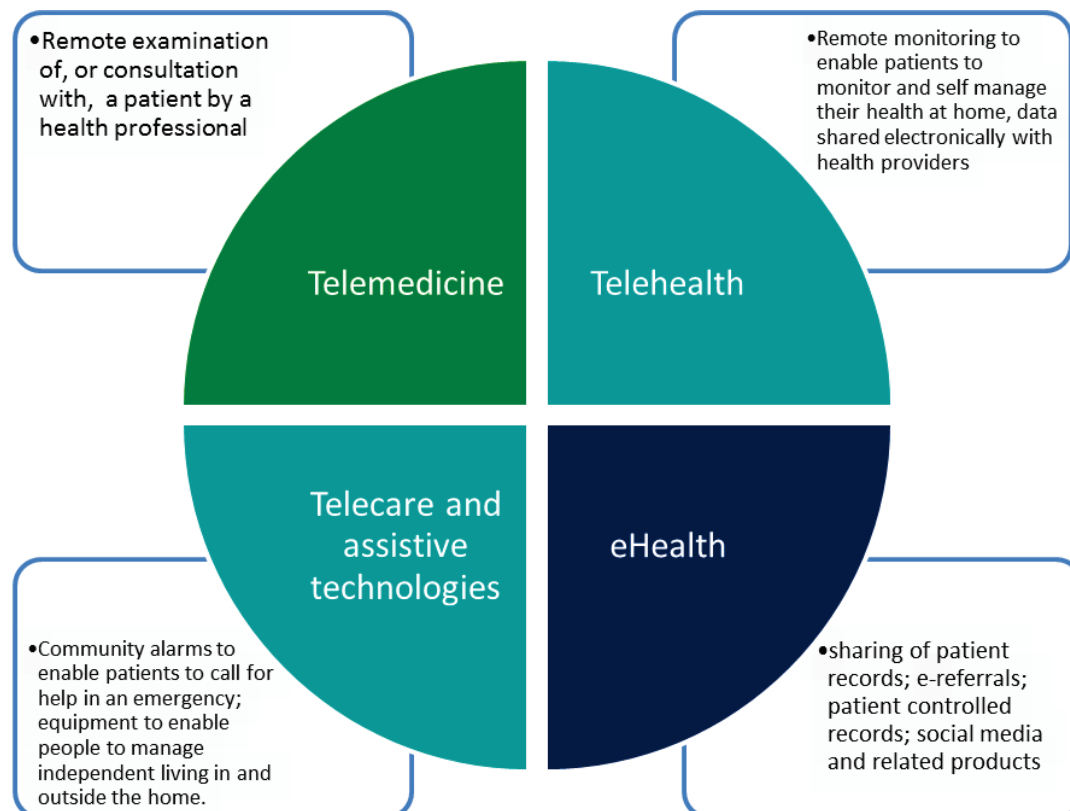


Figure 1: Definitions of different categories of digital technologies used in health and social care

COPD EXACERBATION EVENT Example Patient Journey with TECS support ideas

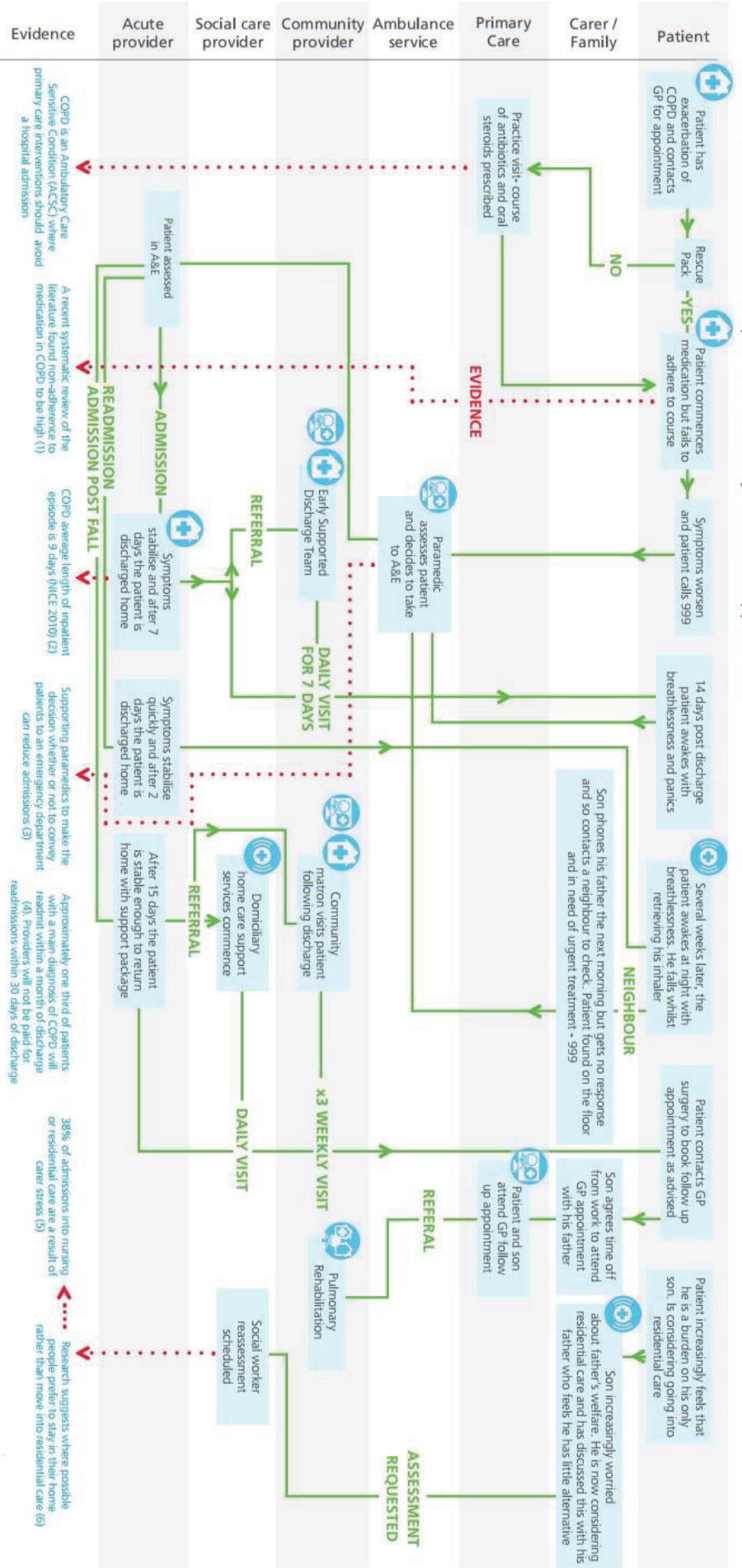


Figure 2: COPD EXACERBATION VENT Example Patient Journey with TECS support ideas. Taken from the NHS England TECS Resource for Commissioners available [online](#)

Digital technologies within a care pathway

Many of the innovative products and services becoming available are best considered within an integrated system, with appropriate support from individual services and underpinned by shared data and federated IT structures. This requires a strategic approach, beyond what is possible for an individual professional or service. However, it is feasible for a strong local partnership to devise a new care pathway using the best of digital technologies to support high quality professional care. [NHS England Technology Enabled Care Services Resource for Commissioners](#) includes the example shown in Figure 2. Examples of usage in Cumbria can be found at <http://www.ruralhealthlink.co.uk/activities/>

The benefits and some of the evidence

Digital technologies can significantly improve the patient or user experience, with the potential to improve clinical outcomes. Technology should be able to streamline processes to enable professionals to work more productively and ultimately to have more 'quality time' for their patients and clients. Some examples are:

- A remote consultation given by video link will save travel time, cost, possibly time of work. It can improve clinical outcomes if it can be provided sooner than a face to face appointment.
- People with long term conditions can benefit through more regular monitoring and reminders about their treatment (see [case study of the Florence Telehealth system](#)).
- Remote consultations with [patients in care homes, prisons or those who are housebound](#) has been shown to reduce hospital admissions, exacerbations and the need for emergency care.

Measurement of outcomes needs to be considered at the outset, using a suitable outcomes framework, such as:

[NHS Outcomes Framework](#).
[Adult Social Care Outcomes Framework](#).
[Public Health Outcomes Framework](#).
[Quality and Outcomes Framework](#).
[Better Care Fund Metrics](#).

Using digital technologies in practice

There is a wealth of information available on the web, but an individual practitioner may find it hard to navigate, select and review best practice. A useful starting point is the [NHS England Technology Enabled Care Services Resource for Commissioners](#), which provides an overview of the benefits, guidance on how the different types of technology enabled care services (TECS) can be used to support commissioning priorities and example care pathways. There is no nationally accredited list of suppliers, although some commissioning bodies (both clinical and social services) will maintain a register. The Telecare Services Association (TSA) accredits telecare and some telehealth companies and has a searchable list of services on [its website](#). There are two good libraries of health and care apps, providing a searchable database with some reviews. These are the [NHS Health Apps Library](#) and [My Health Apps](#). Many apps are free or cost just a few pounds, so can be recommended for anyone who has access to a smartphone or mobile device.



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