Carlisle Healthy City: Rural and Urban

Use of Digital Technologies in supporting the WHO Healthy City programme

Outline proposals from a workshop held in October 2015

1. The UK Healthy City Network (UKHCN)

The UK Healthy Cities Network is part of a global movement for place-based health that is led and supported by the World Health Organization (WHO). Its vision is to develop a creative, supportive and motivating network for UK cities and towns that are tackling health inequalities and striving to put health improvement and health equity at the core of all local policies.

Healthy Cities is a global movement that engages local authorities and their partners in health development through a process of political commitment, institutional change, capacity-building, partnership-based planning and innovative projects. Healthy Cities seek to apply Health for All principles such as equity, empowerment, intersectoral collaboration and community participation through local action in urban settings. Within Europe there are more than a 100 Healthy Cities and 30 National Healthy Cities Networks with designated status from WHO Europe.

Over 20 years and through many changes in political systems and public health initiatives, Healthy Cities has been steadfast in its focus on political leadership and partnership working to tackle the social determinants of health and health inequality. These values have stood the test of time and are as crucial now as they were when first proposed.

The aims of the UK Healthy Cities Network are to:

- Enhance learning and build capacity through sharing ideas, experience and best practice
- Widen participation in the Healthy Cities movement and support member towns and cities to develop and test innovative approaches to emerging public heath issues
- Become a strong collective voice for health, wellbeing, equity and sustainable development – informing and influencing local, regional, country and national policy.

2. Context: Carlisle Healthy City

First designated as a Health City in 2010 as part of phase VI, Carlisle identified the challenges and inequalities within the district, and the need to collectively work together to tackle these issues.

Carlisle, and District, is a mixture of rural and urban communities. The historic city of Carlisle is the largest settlement, with a number of smaller market towns and large villages spread across the district. The population of the district is currently estimated at 104,700. It has experienced steady growth since the turn of the century and this trend is predicted to continue over the next 20 years, particularly in the number of older people living in the district. Carlisle is the 122nd most deprived district out of 354 nationally, and a number of inner city wards feature in the 25% most deprived. A key characteristic of Carlisle is the variation between wards across a range of deprivation and health indicators which reveal, at times, considerable inequalities.

In October 2015, Carlisle was asked to host the UKHCN and in doing so took the opportunity to not only host a business meeting, but additionally invite local partners (including the University of Cumbria), to add value to the day and additional generate outcomes that could be advanced both locally and nationally. Additionally the need to engage in different ways, in order to reach a variety od communities was key.

3. What is Digital Health?

Within this report and all the work of the Cumbria Rural Health Forum, the term ‘digital health’ is used to encompass any use of digital technologies in the delivery and provision of health and social care. Terminology is not always used consistently, but other terms used include ‘telehealth’, ‘telemedicine’, ‘e-health’, ‘mobile-‘ or connected health’. These terms can be used to refer to a specific type of digital health (see diagram below), but are also sometimes used more generically. For clarity, a description of scope is given on our website and is summarised in Figure 1 below. In

section 5 some examples are given to bring to life how these technologies can be applied in health and social care.

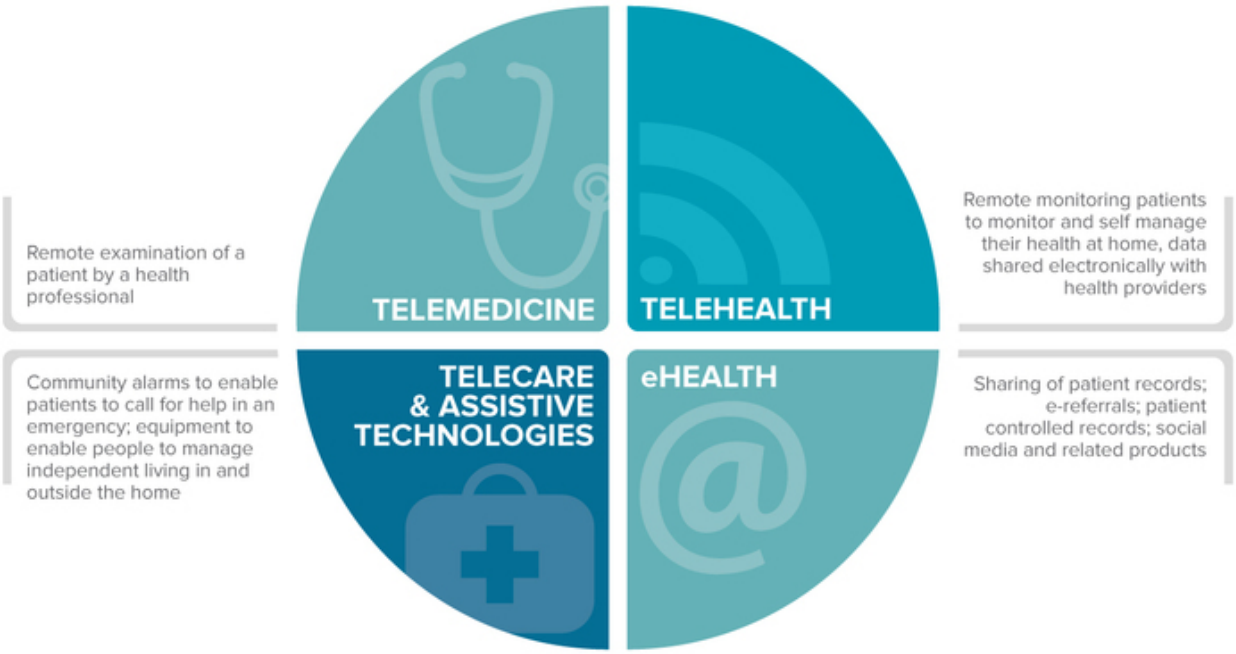

Figure 1: Overview of different modalities of digital health and social care

4. Cumbria Rural Health Forum Overview

The Cumbria Rural Health Forum[1] has developed the Cumbria Strategy for Digital Technologies in Health and Social Care[2] and is conducting a number of digital implementation workshops, between October 2015 and March 2016, with the aim of proposing specific ways in which digital technologies should be implemented within a pathway, place or around a particular group of individuals. As with all our activities, workshops bring together professionals from the public, private and third sectors, linking to suitable technology providers as needed. The scope for our work on digital technologies includes telemedicine, telehealth, telecare and assistive technologies, e-health products and services that are commercial available[3] .

This digital implementation workshop focused on health promotion and wellbeing to address long term conditions and risky behaviours. The objectives described and reported here are:

- Share an understanding of what is possible, what technologies have been used in health promotion and public health, in Carlisle and elsewhere, and how successful they have been found to be;
- Brainstorm and propose opportunities for implementing digital technologies with the identified group in Carlisle (and elsewhere at other WHO Healthy Cities);
- Develop and agree an action plan for the group, to influence change in Carlisle, within the WHO Healthy Cities network and within other partner cities.

[1] See www.ruralhealthlink.co.uk
[2] See http://www.ruralhealthlink.co.uk/about-us/cumbria-strategy-for-digital-technologies-in-health-and-social-care/
[3] See http://www.ruralhealthlink.co.uk/assets/uploads/reports/Briefing_paper_Digital_technologies.pdf for a fuller discussion

5. Use of digital technologies in health promotion and wellness: how has it been used?

Digital technologies in health encompass a range of technologies and modes of use. Public health professionals and policy makers need an awareness of the different modalities.

Telemedicine is the use of video links for scheduled and unscheduled consultations (or other non face to face types of contact, possibly including phone, email, sms). These consultations can be undertaken with or without a nurse, carer, GP in attendance at the patient's home or local clinic. There are a number of technologies available, ranging in price (and quality) depending on the requirements. Some are free (such as Skype or Facetime), but if high quality video is required then more specialised equipment can be used. Telemedicine is also used to link different professionals, for example to enable multi-disciplinary teams to discuss a case. One benefit of telemedicine is the upskilling of health and care professionals, for example, if they attend alongside a patient in a specialist consultation with a remotely located clinician.

Telehealth refers to the use of monitoring equipment linked to a remote data centre that can respond if there are problems and also can analyse trends in symptoms. The monitoring centre may be staffed by, or linked to, health professionals who can respond directly to the patient. Telehealth provides support for people with long term conditions, enabling them to maintain working life and minimise impact on family/friends (symptom management, pain management).

Telecare and assistive technologies are in widespread operational use by social services as well as many private providers. This segment includes falls detection, assistive devices to support independent living at home for longer, or outside the home to extend independence. Telecare can also be used for activity monitoring for wellbeing and fitness, during rehabilitation.

The underlying IT provision and software only based products are called e-health services. These are often about data and information sharing, including patient record sharing between services, patient or carer owned records, information services, forums, social networks - health prevention, education. Here we would also include consumer smartphone or tablet apps that are used by both patients and their carers, often independently of the health services.

For some examples of uses of digital health and social care, see the mapping section[4] on the Cumbria Rural Health Forum website.

6. Exploring options for digital technologies within the WHO Healthy Cities programme

After a general discussion on which technologies might be suitable for which types of applications, delegates worked in groups to identify specific ideas for implementation, either within Carlisle or one of the other Healthy Cities, or as a recommendation to the UK Healthy Cities Network.

Groups categorised their ideas by target group and/or risk factors and considered benefits and barriers, resource requirements and scalability.

[4] See http://www.ruralhealthlink.co.uk/activities/

Technology idea	Target group	Risk factors addressed	Details
App with tags linked to walking routes to schools, with prizes for those who walk most	Healthy Safe Young People	Obesity	Benefits: incentivised behaviour change Resources/costs = low Scalability = high
Share NHS A&E data with social services *(note – work already in progress in Cumbria through Strata project)*	All	Risky behaviours	Benefits: families – social services will understand health issues better Barriers: confidentiality issues Resources/costs = low Scalability = high
App for access to EHC (Education, Health and Care plan), condoms, home testing, prevention messages	Young people/All	Sexual health	
App (or Florence) with reminders for accessing ante-natal appointments with tips on lifestyle, breastfeeding or other individual requirements	Pregnant women	Risky behaviours	
App to monitor alcohol units intake	All	Alcohol	
GPS tracking with healthy text (nutrition) alerts – eg. when going into supermarket '*buy fruit and veg'*, when in a coffee shop calorie information		Diet	Benefits – all, make healthier choices Resources/costs = low Scalability = high
Real time information at bus stops – how many minutes it will take you to walk to the next stop and 'beat the bus' – and how much money you can save. By text or on screen information at bus stops		Sedentary lifestyle	Barriers: need infrastructure (real time information), display screens, connectivity etc. Resources/costs = medium Scalability = high
Find people in local vicinity who want to join a 'casserole club' (app or social media?) – cook an extra portion and eat together, deliver to an elderly neighbour	Socially isolated		Benefits: social contact, more healthy eating Resources/costs = low Scalability = high
Use social media to send messages about harm minimisations			

Other points made by groups are summarised below:

- Be aware of the risks of over-reliance on technology
- Be aware of information sharing and confidentiality risks – 'exposing too much information online'
- Consumer apps like fitbit, vivofit, sleep and inactivity monitoring will grow and spread organically. Making them 'public interventions' could 'kill their use'
- What are Healthy City partners doing already (telecare, apps, Virtucare)?
- Need to determine the problem carefully, then use co-production with potential end users
- Don't reinvent the wheel
- What about 'fusion' ideas – link technology and apps to existing interventions such as 'couch to 5 km'/ Park Runs.

7. Action plan and recommendations from the group: what should be implemented?

Following sharing of ideas to the full workshop and discussion, the separate groups then discussed implementation and came up with some tangible actions that they wish to implement.

ACTIONS:
1. Looking into what Apps are available and recognised – quality assurance? (see http://myhealthapps.net) **UKHCN** to research what apps are available which related to Phase VI themes[5] and put on the Phase VI grid.
2. Audit: What is each UKHC member City already using? e.g. Telecare, apps, Virtucare…
3. Consider developing a Digital Health briefing paper that could be shared and circulated around the network and other partners
4. UKHCN Members – choose top 5 apps – test them and feedback at the next network meeting.
5. Look into digital health promotion tools e.g. "*Beat the Bus*", or "C*asserole Club*" concept for implementation in Carlisle and additionally into the use of Change for Life tools such as Change4Life apps.
6. Explore future awareness / training pathways for those interested in this field. Note course modules are available from University of Cumbria at www.cumbria.ac.uk/digitalhealth. Consider discussion around what else might be valuable (eg. short courses and other approaches) to support development and learning.

4. Authors and affiliations

The workshop was led and co-ordinated by Alison Marshall and Elaine Bidmead, University of Cumbria. It was hosted by Carlisle City Council within a meeting of the UK Network of WHO Healthy Cities. This report is produced jointly by all the attendees of the workshop, listed in alphabetical order:

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Questions and requests for further information can be co-ordinated by email to alison.marshall@cumbria.ac.uk .

[5] The WHO Healthy City programme has a number of designated themes for those participating in Phase VI of the programme. These are summarised here http://www.healthycities.org.uk/phase-vi-themes.php?s=196 and on associated web pages.