Combating digital health inequality: libraries on the front line

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Introduction:
A revolution in digital health is going on all around us. Consumer technologies & networks are being used to encourage healthy behaviours and long term lifestyle change through coaching, incentives and reminders. Smart phone and web applications are supporting self diagnosis and self management. Patients are being helped to make decisions and navigate healthcare systems through apps and decision aids. Electronic transactions such as appointment bookings and access to online personal health records are increasingly the norm in developed healthcare systems.

In 2014 the US institute Pew Research sought the views of 2,500 experts and members of the public on what our digital life would be like in in 2015 (1). They concluded: "In ten years the internet will be readily available, everywhere, at low cost – embedded in people's lives for good & ill. The greatest impact will be on personal health. Health care will become self-administered. We will detect, monitor, diagnose, get advice & treatment, through mobile, wearable & implanted network devices." However despite these exciting opportunities there is a significant challenge: "We risk a dangerous divide between the digital haves & have-nots. Networked transactions may benefit smaller & smaller segments of the global population".

Objective:
The objective for healthcare services must be to ensure that nobody is left behind in this digital health revolution. 70% of people in Europe use the internet weekly – but that still leaves 30% who do not. 20% of the European population have never used the internet in their lives. Lack of use and access to digital resources (often called digital exclusion) is closely related to social deprivation and health inequalities. 47% of Europeans have insufficient digital skills to make best use of websites, apps and tools. Amongst socially disadvantaged people this rises to 64% (2).

Those who are least likely to be online are exactly those who make the most use of health services and experience the greatest burden of ill health (older people, people with low incomes, people with long term conditions and disabilities). In the UK, 12 million people lack basic digital literacy skills and 6 million people have never been online in their lives. 33% of people with a disability have never used the internet. (3)

As information about health and illness is increasingly (and often exclusively) available in digital form, digital literacy is a key precondition of health literacy. Increasingly this is a public health challenge: we know that low health literacy is closely linked to poor health outcomes and mortality (4, 5).

In the UK, government health policy has recognized that if we are to deliver the benefits of the digital revolution in health we need to take active steps to improve digital skills and access for the most disadvantaged:

"Technology – including smartphones – can be a great leveller and, contrary to some perceptions, many older people use the internet. However, we will take steps to ensure build the capacity of all citizens to access information, and train our staff so that they are able to support those who are unable or unwilling to use new technology". (6)

"We need to ensure that the digital opportunity is inclusive. We currently lack high-quality evidence for how best to support certain key communities with information and services. We will support the development of a number of pathfinder projects to build better insight into the barriers to digital inclusion, and widen the current programme of digital inclusion". (7)

Methods:
In the UK, a National Health Service (NHS) programme called Widening Digital Participation is mobilizing libraries in socially deprived communities to teach digital skills for health, supporting people who may never have used the internet to get online to take more control of their own health.

NHS England has worked in partnership with a not-for-profit organisation, the Tinder Foundation (www.tinderfoundation.org), which specializes in supporting the development of digital skills for socially deprived people. Tinder coordinates a network of UK Online Centres where people who lack digital skills or confidence in using online resources can use computers in a supported environment and gain online skills. 96% of public libraries are part of the UK Online Centres network, which also includes community centres, health centres, sheltered housing schemes – even a fish and chip shop.

Through the Widening Digital Participation programme, two simple online courses have been developed on the LearnMyWay platform (www.learnmyway.com/what-next/health). The first introduces people with limited digital skills to health information using the national website NHS Choices (www.nhs.uk). The second covers online health transactions including booking a doctor's appointment or requesting medication prescription online.

Over the three period 2013-16, 350,000 people have been involved in the programme through events, workshops, and online access to health information resources. Of these 200,000 have gone through the online LearnMyWay health courses, usually with support in a library or other community setting.

Results
Libraries are ideally placed to reach population groups who may be excluded from health services. Libraries provide safe, trusted spaces where people who may be alienated from other public services can access information and support in a non-judgmental environment.

Evaluation of the Widening Digital Participation programme (8) has produced very encouraging results with people trained in digital skills through libraries in socially deprived communities showing greater confidence in managing minor ailments, reduced dependence on health services, and improvements in lifestyles.

- 82% of people trained were socially disadvantaged and likely to be experiencing health inequalities
- 85% say they now feel more confident managing their health using online tools
- 34% say they feel more self reliant and have reduced their use of the NHS for minor ailments
- 63% say they have improved their diet
- 38% say they have saved time by doing something online
- 72% say they have saved money (eg avoiding travel costs)

In addition to quantitative data on outcomes and benefits, there have also been many case studies providing compelling qualitative evidence of significant health improvement and transformation of lives when people have gained digital skills (9).

Following the success of the initial three-year Widening Digital Participation programme from 2013-16, NHS England has now committed to further action to combat digital inequality in the period to 2020. At the end of 2015, the UK Secretary of State for Health asked the internet pioneer, digital champion and Twitter board member Martha Lane Fox to advise on next steps to accelerate digital take-up and reduce digital exclusion. Her recommendations (10) are:

- Providing accessible, free of charge, infrastructure (wi-fi) throughout all NHS premises to enable patients and carers to access digital tools and technologies at point of care
- Building the digital skills capability of the NHS workforce at all levels (from leadership to front-line) so staff have the knowledge and motivation to act as digital champions, supporting and encouraging take-up of digital services
- Embedding digital inclusion in all areas of NHS work, nationally and locally, with "reaching the furthest first" a core principle of all we do. If we can get digital health services right for the hardest to reach groups they will be right for everyone.

Conclusion

Universal access to digital health tools and services, with the skills to use them, has the potential to be one of the great public health advances of the twenty-first century. Those who lack access to the public utility of the internet will, like those who lacked access to the public utility of clean water and sanitation in the nineteenth century, be at risk of increasing inequality and poorer health status. In the UK, libraries are on the front line in combating digital health inequality. In an era of austerity, libraries are having to justify their role. Today they are showing the way as agents of equality - bridging the gap between the digital haves & the digital have-nots

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