Technology Enabled Care and Wellbeing @ Home

University of Cumbria
Carlisle
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Developments in Telehealth: How Consumers will Change the Way that Services are Provided

Telehealth Quality Group

dmu.ac.uk
DE MONTFORT UNIVERSITY
LEICESTER

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Patient / Consumer No 1

Consumer
Active and involved
Financially secure
Health literate
Decision-maker
… but not enabled to self-manage her health?
Survivor
Digitally literate?

southgippsland.vic.gov.au

Patient / Consumer No 2

Future consumer
Active and involved
Learning about his health
Future decision-maker
Definitely going to be digitally literate
Definitely needs to be enabled self-manage his health?

theherald.com.au

Perspective on Patients

- *Patients = people = consumers*
- *Technological world*
- *Increasing digital literacy*
- *Widening access to services and information*
  - *smart telephony devices*
  - *laptops and tablets*
  - *interactive TV*
- *Changing aspirations*
- *Changing expectations*
- *Challenging old service frameworks*

Perspective on Demographics

- ***Ageing population***
- ***Increased numbers of older people with support needs***
- ***Increased numbers of older people <u>without</u> support needs …***
  - *living longer healthier lives*
  - *but often out of the workplace*
  - *often unnecessarily dependent*
  - *victims of ageist views and 'negative planning'*
- ***Think of 'age-ratios' <u>not</u> 'dependency ratios***

European Retirement Crisis: Chart looks at senior dependency ratios

According to a chart posted by *Economic Policy Journal*, the projected old-age dependency ratio (number of citizens over 65 as a percentage of citizens between 16 and 64) is becoming a major problem in many European countries. It's a problem, because much like the U.S., these states use Ponzi scheme style of their respective retirement benefits. In other words, these countries rely on new workers to pay for retired workers' benefits. This is a disaster just waiting to happen.

Economic Collapse News January 11th 2016

If current working patterns continue, the 'old age dependency ratio' (that is, **the number of people over the state pension age for every 1,000 people of working age**) is likely to increase: In 1971 the ratio was 280 per 1,000; in 2009 this ratio increased to 314 per 1,000; by 2032 the ratio will become 349 per 1,000, *even with implementation of higher state pension ages*. Per King's Fund

Perspective on Clinically Driven Services

- **Saturated with ICT**
- **Driven by need for clinical outcomes (cure, management)**
  - *medication and therapy regimes*
  - *assumption of 'patient' compliance*
  - *services <u>delivered</u> (a one-way process), not 'provided'*
- **Focus on hospitals and secondary (even tertiary) health care**
  - *under-recognition of public and preventative health agenda*
  - *insufficient attention to behaviours and lifestyles*

Perspective on Politics

- *Focused on doing good for/to (needy) people*
- *Ageist views ('retired', dependency, lower worth, separation, segregation)*
- *Reluctant to move on pensions and retirement issue; worried about votes!*
- *Worried because of generational rivalries*
- *Trapped by legislation framed in a different era*
- *Pressure from clinicians to maintain status quo*
- *Pressure from profit-driven 'big pharma'*
- *Failure to adequately recognise all-age agenda*

Perspective on Ethics

- **Accessibility, configurability, usability?**
  - services and technologies
  - access to EHRs / PHRs
  - ownership of personal data (GDPR applies)
  - supporting self-management
- **Interoperability**
  - services and technologies
- **Matters of risk and liability**

… more risk-sharing (links with choice)

- **Reducing costs?** (links with choice)

… and now to telehealth

Telehealth is

…the means by which technologies and related services that are concerned with health and wellbeing are accessed by people or provided for them at a distance irrespective of their location

… a subset of eHealth
… embraces telemedicine

Telehealth Service Domains

Health and motivational coaching

Activity, behavioural and lifestyle monitoring

Gait, seizure and falls monitoring

Point of care testing, and support for diagnoses/decision making

Vital signs monitoring

mHealth

Prompting for medication or therapy adherence

Rehabilitation and (re)ablement

Responding to 'events'

Tele-consultation

… and (much) more

Take look at International Code for update

(www.telehealth.global)

Telehealth for Everyone, Everywhere, Anytime

at home

in school

at college

in work

on the move

And, Importantly, Telehealth is **not** just …

- about the 'delivery' or top-down management of care
- concerned with clinical and acute conditions
- about vital-signs monitoring
- about saving money and avoiding hospital admissions

Telehealth **is** …

- about empowering people to manage their own care … fostering consumer behaviour?
- about maintaining and changing lifestyles and behaviours
- about better mental health as well as physical health
- about public and preventative health (as well as clinical health)
- as relevant to a 26 year old managing her diabetes as it is to
- an 86 year old being helped with his dementia

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So telehealth is all about people as consumers of services doing things, accessing services in new ways.

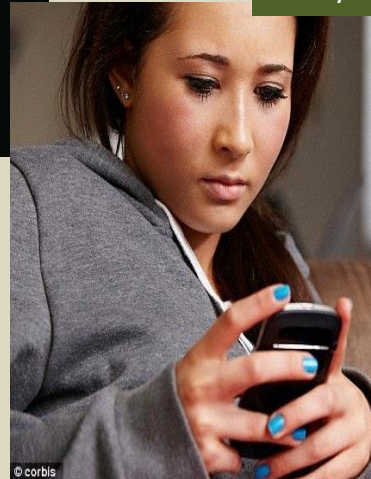# Different Ages, Different Contexts, Different Technologies

Skype
VoIP

www.katimorton.com

www.ifa-fiv.org

blog.thethreedayrule.com

i.dailymail.co.uk

Computer at home
Email

Smart Phone on
the move
Texts, Calls

Telehealth for <u>Older</u> People

- *Particular needs / challenges because of*
    - *greater social isolation (incl. more single households)*
    - *poor mobility, frailty, low incomes, poor digital literacy, etc.*
    - *depression and multi-morbidity (including dementia)*
- *But older people will increasingly show their consumer*
    - *credentials because …*
    - *there is increasing digital and health literacy amongst them (and carers)*
    - *they will demand (are demanding) greater consideration of accessibility and usability*
    - *they will 'vote' (are voting) with their savings and incomes*
    - *they will be (are being) increasingly engaged in work, education or training*

Telehealth for <u>Younger</u> People

- **Particular needs / challenges because of**
  - peer pressure (and social media)
  - social isolation and depression (+ self-harming behaviours)
  - lifestyle challenges with health implications (obesity, diabetes)
  - real wish to interact with health services in new ways (new technologies being a clear choice)
- **Younger people will show their consumer credentials because …**
  - commonplace usage of texts, emails, Skype, phone, etc.
  - their 'trust' of the same (and social media) … less stigma, confidentiality, etc.
  - convenience of timely communication in relation to need
  - they see the scope for better (easier) self-management

  … helping establish a longer term pattern for service access and usage.

What does Telehealth mean for Clinicians? ... and Health and Social Care Providers

- *Research **Findings for LTCs***
  - *installed equipment, etc.*
  - *reduced admissions and more timely discharges*
  - *better self-management*
  - *but services often add-ons, not embedded as 'normal' practice*
  - *evidence flawed*

  http://vbn.aau.dk/files/229134615/fc_xsltGalley_5257_78075_7_PB.pdf
  [J Med Internet Research 2016 18(3):e53 Dinesen et al DK & US]

- ***Emerging issues for new service approaches***
  - *... based on limited experience to date*

What does Telehealth mean for <u>Clinicians</u>? ... and Health and Social Care Providers

- ***Emerging issues for new service approaches***
  - *... based on limited experience to date*
  - *when and how to use / promote use of different digital technologies*
  - *issue of prior direct contact?*
  - *fear of not acting promptly (liability, etc.)*
  - *increase in workload?*
  - *substitution for 'traditional' modes of service provision*
  - *challenges for the provider–patient relationship (treatment, therapy, collaboration)*
  - *challenges for systems (technical failures, information into PHRs, new kinds of errors, cyber-crime)*
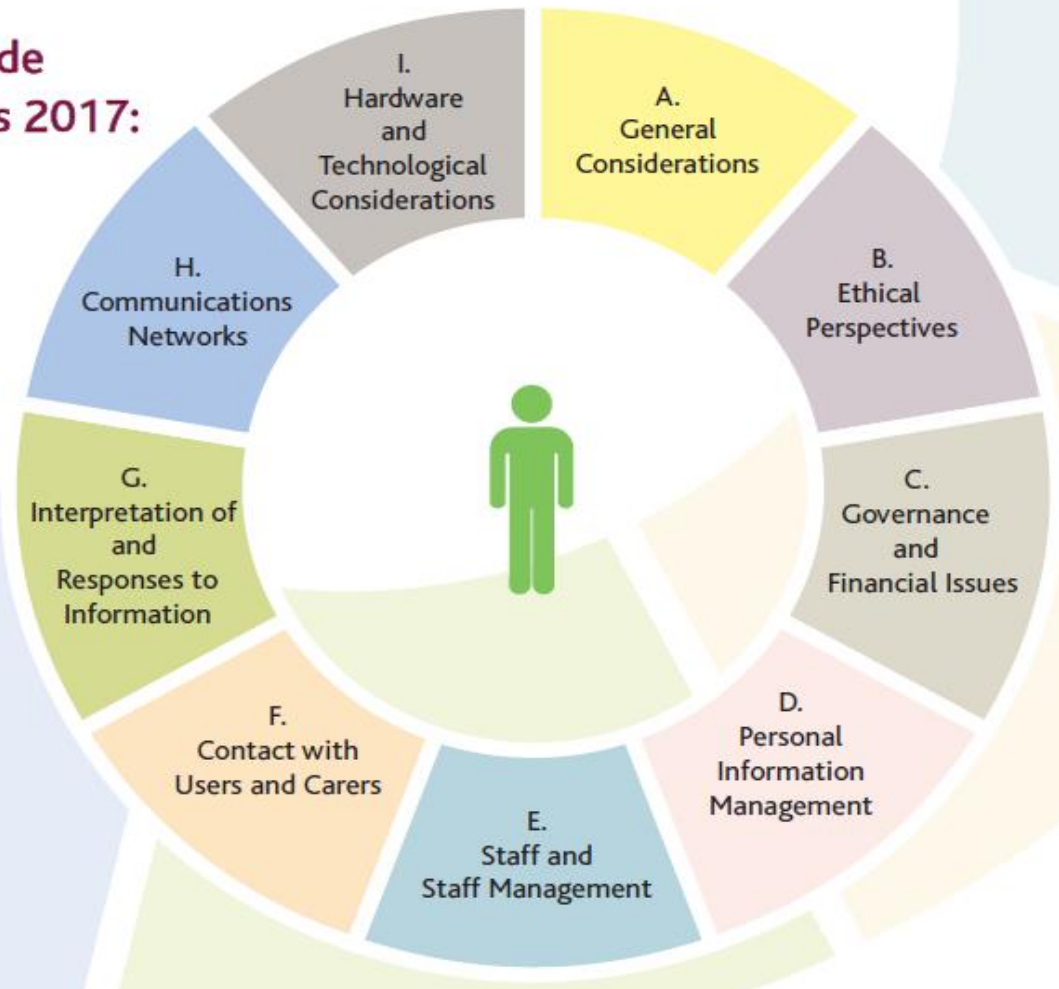 - *consent and confidentiality*

- **_Need for Standards, Protocols, etc. to recognise_**
  - _the realities of our 'new' digital world of health_
  - _the aspirations, choices, etc. of growing numbers of_
  - _patients = people = consumers_
- **_International Code of Practice for Telehealth Services (2017)_**
  - _from the Telehealth Quality Group - downloadable_
  - _(www.telehealth.global)_
  - _consumer = people = patient focused (all ages)_
  - _supporting use of new technologies_
  - _supporting self-management_
  - _physical and mental health, wellbeing and lifestyles_
  - _incorporates ISO/TS13131 Health Informatics: Quality Planning Guidelines_

Telehealth
Quality
Group

The International Code of Practice for Telehealth Services 2017
a flexible code that supports service innovation

Structure of the International Code of Practice for Telehealth Services 2017:

Source: Dignio AS

A. General Considerations

B. Ethical Perspectives

C. Governance and Financial Issues

D. Personal Information Management

E. Staff and Staff Management

F. Contact with Users and Carers

G. Interpretation of and Responses to Information

H. Communications Networks

I. Hardware and Technological Considerations

The International Code of Practice for Telehealth Services 2017
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Telehealth Service Domains covered by the International Code:

- Vital signs monitoring.
- Telecare and social alarms (PERS)
- Activity and lifestyle monitoring.
- Gait, seizure and falls prediction / management.
- Medication or therapy adherence.
- Tele- and video-consultations.

- Tele-psychiatry.
- Health / motivational coaching and advice.
- Rehabilitation and (re)ablement.
- Mobile health technology systems (e.g. apps).
- Point of care testing and diagnoses.
- Safeguarding and monitoring in care settings.

The International Code of Practice for Telehealth Services 2017
a flexible code that supports service innovation

What it is:

- The international quality benchmark for telehealth services.
- Incorporates International Standard ISO/TS 13131 Quality Planning Guidelines for Telehealth Services.
- Compatible with
  - European Standard EN 50134-7 Alarm Systems. Social Alarm Systems: Application Guidelines;
  - telehealth-related standards developed in Australia, Canada, France, Germany, the Netherlands, New Zealand, Spain, the United Kingdom and the United States.
- Fits in with World Health Organisation and European Commission aspirations for telehealth.
- Relevant to people of all ages, in all places, including while travelling.
- Meets the needs of people who access services via mobile or fixed devices.
- Compatible with operational codes and protocols for different aspects of service provision
  - including vital signs monitoring, telecare, PERS, tele- and video-consultations, activity monitoring and mHealth.
- Operates at local and international levels.

The International Code of Practice for Telehealth Services 2017
a flexible code that supports service innovation

Benefits for Users and Service Providers:

- Helps improve service quality.
- Supports self-management and the development of knowledge among users, clients and patients.
- Provides a strategic context that promotes service innovation in responsible ways.
- Reassures users, insurers, and service procurers / commissioners.
- Can be a requirement for government bodies and regulatory agencies.

Certification:

- Services can be certified following self-assessment or external assessment. A rigorous process applies.
- External assessments against requirements of the Code are undertaken by approved bodies such as DNV GL.

DNV·GL

http://dnvglhealthcare.com

- ***Need for Standards, Protocols, etc. to recognise***
    the realities of our 'new' digital world of health
    the aspirations, choices, etc. of growing numbers of
    patients = people = consumers
- ***Standards around 'Active and Healthy Ageing'***
    the <u>PROGRESSIVE</u> *project that is establishing a 'dynamic*
    and sustainable framework where the contribution of
    standards and standardisation for ICT can be maximised
    for Active and Healthy Ageing (AHA)'
    (www.progressivestandards.eu)

PROGRESSIVE

- ***European Commission funded project led by DMU …***
  healthy ageing seen as relating to health in widest sense …
  physical and mental health
  the physical environments in which people live
  Partners Age Platform Europe, Telehealth Quality Group, EHTEL and 4 national standards bodies (Germany, Italy, the Netherlands and Spain)
  close working with European standards bodies CEN, CENELEC and ETSI
  www.progressivestandards.eu

In Conclusion

- *Demographic, political, technological change*

- *Ethical imperatives*

- *Barriers to overcome*

… but

- *There are <u>new certainties</u> attaching to the behaviours of patients = people = consumers as they harness the tools of telehealth to access and use services in new ways* ●●●

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Thank You
... *Diolch yn Fawr*

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