Developments in and Standards for Telecare and Telehealth Services

Medetel 2017

Dr Malcolm J Fisk
malcolm.fisk@dmu.ac.uk
Consumer
Active and involved
Financially secure
Health literate
Decision-maker
... but not enabled to self-manage her health?
Survivor
Digitally literate?
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?
Telecare and Telehealth: What Difference?

• If you must ...
  o definitions based on the technology provision – by others (top-down)
    o often narrow ...

alarms (and peripherals) = telecare
vital-signs monitoring = telehealth

o separation unsustainable (for many) in context of way people can now access and use services

o separation ethically difficult to justify because of practice oriented to empowerment and inclusion

• Need to define from service user perspective
  o first (and best) reference point is the TQG definition of 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
... includes telecare
Telehealth for Everyone, Everywhere, Anytime

at home

in school

at college

in work

on the move
Different Ages, Different Contexts, Different Technologies

Skype
VoIP
www.katimorton.com
www.ifa-fiv.org

Computer at home
Email

Smart Phone on the move
Texts, Calls

blog.thethreedayrule.com
i.dailymail.co.uk
Telehealth for Everyone, Everywhere, Anytime

- **Telehealth as an ‘opportunity’**
  - people exercising choices, taking more responsibility
    ... as opposed to
- **Telecare as a ‘trap’**
  - purporting to facilitate independence
    - technologies for the home ... echo of institutional norms
- **New normative framework of telehealth absolutely necessary**
  - provided by the TQG in the definition
    ... and the International Code of Practice for Telehealth Services (a crucial and important standard)
Telehealth (including Telecare)...

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

... but what about (other) standards?
Broad Perspective on Standards

- Standards as ‘voluntary tools’ … to define a ‘repeatable way for doing something’
  [EY 2015 ‘Independent Review of the European Standardisation System]
  - products and services
  - increasing interoperability
  - reducing costs / increasing competitiveness
  - fostering innovation
    - supporting
      - health and safety
      - accessibility
      - environmental protection, etc.
European Standards (EN = European Norm)

- *Transposed as national standards in EU and EFTA states*
  - with withdrawal of any conflicting national standard

- **CEN, CENELEC and ETSI are recognised European standardisation organisations**
  [CENELEC – standards in electro-technical field; ETSI – standards in ICT and telecommunications field]

- **Internationalisation and increasing co-ordination [?]**
  - with ISO, etc.
Standards for Telehealth and Telecare
- in context of changing service paradigms

- For technologies:
  - key issues around accessibility, usability and user empowerment / control

- For services:
  - key issues around prescriptiveness versus consumer / user choice

- European Commission committed to ‘Design for All’ approaches

- Process of ‘standardisation’ includes ANEC (Consumers), ETUI (Trade Unions) and ECOS (Environment) but (and because) ‘participation by civil society remains weak’

[Hauert et al (2015) from INTERNORM project]
# Standards for Telehealth and Telecare
- what’s out there? 1

<table>
<thead>
<tr>
<th>UK</th>
<th>EU</th>
<th>Spain</th>
<th>Australia</th>
<th>Germany</th>
<th>New Zealand</th>
<th>Australia</th>
<th>Netherlands</th>
<th>UK</th>
<th>France</th>
<th>Canada</th>
<th>US</th>
<th>US</th>
<th>EU and International</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Alarms</td>
<td>Social Alarm Systems</td>
<td>Servicio Asistencia</td>
<td>PER Services</td>
<td>Staying at Home</td>
<td>Telecare Services</td>
<td>eHealth: Telehealth Services</td>
<td>Personal Alarm Services</td>
<td>Telecare and Telehealth</td>
<td>Télémédicine</td>
<td>Telehealth</td>
<td>Telehealth Services</td>
<td>Telehealth Services</td>
<td></td>
</tr>
</tbody>
</table>
Standards for Telehealth and Telecare - what’s out there? 2

- Increasing number of standards
- Some through ‘recognised’ national / international standards bodies
- Focus in this presentation on ‘home’ telehealth, telecare and social alarms
Standards for Telehealth - what’s out there? 3

• Main focus on technologies and service operation (‘this is how you do it’) ... therefore prescriptive, often clinical perspective
• Most require performance indicators to be met
• Low level of awareness of social care agenda
• Little or no attention to potential positioning in relation to service ‘integration’
• Little or no realisation of potential for standards to support ‘paradigm shift’ ... towards user self-management, behaviour and lifestyle change

Source: Pivotell
Source: India Vision
Standards: Three Trends or Markers of Change?

Potential Measures

- Increasing flexibility (less prescription) ... service frameworks not blueprints?

**Number of quantifiable PIs**

- Away from top-down towards consumer oriented (user-driven) approaches

**Number of clauses concerned with working with clients, patients, etc. (numerator) in relation to total number of clauses**

- Towards wider perspective that relates to service integration

**Use of term ‘patient’ rather than person, consumer or user**

... overall, may consider other terms such as service ‘delivery’; or specific clause content around ethics?
### Standards for Telehealth - taking a selection 1

<table>
<thead>
<tr>
<th>UK</th>
<th>EU</th>
<th>Spain</th>
<th>Australia</th>
<th>Germany</th>
<th>New Zealand</th>
<th>Australia</th>
<th>Netherlands</th>
<th>UK</th>
<th>France</th>
<th>Canada</th>
<th>US</th>
<th>US</th>
<th>EU and International</th>
</tr>
</thead>
<tbody>
<tr>
<td>📚 <strong>Social Alarms</strong></td>
<td>📚 <strong>Social Alarm Systems</strong></td>
<td>📚 <strong>Servicio Asistencia</strong></td>
<td>📚 <strong>PER Services</strong></td>
<td>📚 <strong>Staying at Home</strong></td>
<td>📚 <strong>Telecare Services</strong></td>
<td>📚 <strong>eHealth: Telehealth</strong></td>
<td>📚 <strong>Personal Alarm Services</strong></td>
<td>📚 <strong>Telecare and Telehealth</strong></td>
<td>📚 <strong>Téléassistance</strong></td>
<td>📚 <strong>Telehealth</strong></td>
<td>📚 <strong>Telehealth Services</strong></td>
<td>📚 <strong>Telehealth Services</strong></td>
<td></td>
</tr>
<tr>
<td>📚 <strong>ASAP Code of Practice</strong></td>
<td>📚 <strong>UNE 158401</strong></td>
<td>📚 <strong>VDE ARE 2757-2</strong></td>
<td>📚 <strong>Code of Practice</strong></td>
<td>📚 <strong>Code of Practice</strong></td>
<td>📚 <strong>Guidelines</strong></td>
<td>📚 <strong>Quality Mark</strong></td>
<td>📚 <strong>TSA Code of Practice</strong></td>
<td>📚 <strong>NF X50-520</strong></td>
<td>📚 <strong>Standard</strong></td>
<td>📚 <strong>Guidelines</strong></td>
<td>📚 <strong>ISO TS 13131</strong></td>
<td>📚 <strong>TQG Code of Practice</strong></td>
<td></td>
</tr>
</tbody>
</table>
# Standards for Telehealth

- taking a selection 2

[NB. approx figures ... work in progress]

<table>
<thead>
<tr>
<th></th>
<th>UNE Spain</th>
<th>TSA Code of Practice UK [*]</th>
<th>Accreditation Canada Standard</th>
<th>International (TQG) Code of Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Clauses</td>
<td>52</td>
<td>&gt;250 (all modules)</td>
<td>78</td>
<td>54</td>
</tr>
<tr>
<td>Quantifiable Pls</td>
<td>8</td>
<td>14</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>User / Customer Clauses (%)</td>
<td>6 (12%)</td>
<td>~22 (~8%)</td>
<td>~15 (~19%)</td>
<td>12 (22%)</td>
</tr>
<tr>
<td>Consistent use of term ‘patient’</td>
<td>No (User)</td>
<td>No (User)</td>
<td>No (Client)</td>
<td>No (User)</td>
</tr>
</tbody>
</table>

[*] New Code to be launched in the summer
Observation 1

• Similarity in approach / perspective between the Canadian and International (TQG) Code e.g. no PIs

Accreditation Canada 2.2
‘The organization sets measurable goals and objectives ... to guide day to day telehealth activities’

13.3 The service ‘identifies measurable objectives for its quality improvement initiatives and specifies the timeframe in which they will be reached’ and 13.4 ‘identifies the indicators that will be used to monitor progress for each quality improvement objective’

International Code (Telehealth Quality Group, TQG) A7
‘Services shall determine the relevant measures of performance ... a set of relevant measures should be determined so that there is a framework against which future measurement of performance can be made’

... ‘It is highly desirable that services honestly and openly display a range of such measures on their website or in other publicly available material. A clear declaration regarding compliance, specific to the telehealth service, shall be placed on the website.'
Observation 2

• Difference in perspective of the TSA (Integrated) Code and International (TQG) Code e.g. number of clauses and prescriptiveness

TSA Perspective
‘Telehealth is the remote exchange of data between a patient at home and their clinician(s) to assist in diagnosis and monitoring typically used to support patients with LTCs’

International Code (TQG Perspective) reminder
‘Telehealth is the means by which technologies and related services concerned with health and well-being are accessed by people or provided for them irrespective of their location’

TSA Code PI (example) for Call Handling
97.5% of calls – answering time not to exceed 1 minute; 99% not to exceed 3 minutes

International Code (Telehealth Quality Group, TQG)
G1 ‘Services that provide remote monitoring shall ensure that timely action is taken where there is a known or indicated change in health, well-being and/or personal circumstances’

A7 points to usefulness of operational measure (amongst other things) for ‘time taken with regard to examining data and/or responding to needs indicated through enquiries or device activation’

F1 requires response protocols to be set out in agreements with users / carers.
Think-piece around Video-consultations (1)

• **Particular needs / challenges (for older people) because of**
  social isolation – exacerbated by poor mobility, frailty, low incomes,
  poor digital literacy, etc.
  greater incidence of depression and multi-morbidity (incl dementia)

• **Need to ...**
  build digital and health literacy (users and carers)
  demand greater consideration by product designers and manufacturers to accessibility and usability
  service configurations to facilitate wider engagement and service access

• **Needs of younger people may drive changes**
  peer pressure (and social media)
  social isolation and depression (including self-harming behaviours)
  lifestyle challenges with health implications (obesity, diabetes)
  wish to interact with health services in new ways
Think-piece around Video-consultations (2)

• Overall emerging issues ...
  technologies (reliability, security, confidentiality)
  recording, storage and access
  timely communication in relation to need
  better self-management
  establishing longer term pattern for service access
  what role for serious games?

• Issues for clinicians
  changes in modes of service provision
  when and how to promote?
  prior direct contact, nature of relationship
  liability
  implications for workload
  new kinds of errors

• Standards?
Think-piece around Video-consultations (2)

• Standards?
  Australia – ACCRM (Australian College of Rural and Remote Medicine) ... focused on clinical settings (2014)
  USA – American Telemedicine Association ... offering accreditation to services (2015)

• International Code of Practice for Telehealth Services
  covers video-consultation ...
Tele-consultations (including Video-consultations)

Requirement:

Services shall have policies, where included as part of the contracted service, for tele-consultations with users and carers (via telephone, video-links, Skype, VSee, etc.).

Applicability:

Applicable when undertaken as part of the service.

Guidance:

Tele-consultations (including video-consultations) shall only be undertaken by authorised staff and shall follow clear procedures. These shall include

★ agreement with users and carers or other relevant persons for the visits and/or due advance notice being given;

★ a record being made of the visit, its purpose and its outcome;

★ how interaction with users and/or carers is afforded the necessary level of privacy e.g. taking account of the potential presence of others;

★ audible and/or visual signals given to the user and/or carer; and

★ the adequacy for the consultation of the location (accommodation) in terms of space, comfort and privacy.
Tele-consultations (including Video-consultations)

Authorised staff undertaking such consultations shall clearly identify themselves on-line at the beginning of the encounter. There shall be the means in place by which the identity of all persons involved is readily verified. Authorised staff shall, where not explicit, make it clear the reason for their ‘visit’. No opening of video or audio channels shall take place until the ‘call’ has been accepted by the user or carer (or an authorised member of staff on their behalf who is at the location of the user/carer).

Provision shall be made for tele-consultations (including video-consultations) to be initiated by or organised for users and/or carers as well as by the service provider. Provision shall also be made for users and/or carers to easily terminate such consultations. It shall, in either case, be clear to them when video and/or audio links have been closed.

It shall be borne in mind that inherent within such consultations is the transmission of personal information. Therefore services shall make it clear to users and carers when such consultations operate via non-encrypted public networks and systems.

Where tele-consultations (including video-consultations) initiated by services are delayed, notification shall be made to users and carers and/or other relevant persons.
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:

- 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
- J. Source: Dignio AS
The International Code of Practice for Telehealth Services 2017

*a flexible code that supports service innovation*

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.
- Compatible with
  - 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.

http://dnvglhealthcare.com
In Conclusion

• Standards have a role to play – but there are choices
• Trends in telehealth standards means that changes in service paradigms are beginning to be accommodated (and promoted)
• Trends (for telehealth service standards) appear to relate to
  - diminishing prescriptiveness, greater use of frameworks … from ‘how you do it’ to ‘these are your options’
  - less use of PIs;
  - move away from top-down (clinically or technology driven) telehealth towards the user / carer; and (maybe)
  - growing recognition of ‘integration’, public and preventative health agendas.
• Are these trends a good thing? ...
Trends in Standards: Are these Good?

Yes

... but at the same time we must guard against the adoption (or enforcement) of ‘inappropriate’ standards that are rooted in the old service paradigms

• Let’s, instead, look to flexibility and choice
• Let’s look to standards that offer a clear user perspective
• More than this ... let’s look to standards that help to drive the agenda within which services (that truly empower their users) develop
Thank You

… Diolch yn Fawr

Source: www.southgippsland.vic.gov.au

Source: Dignio AS

Dr Malcolm Fisk  malcolm.fisk@dmu.ac.uk