Digital health literacy

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This presentation

• Definitions: digital health, digital health literacy, health literacy
• Models
• The possibilities brought by digital technology advances
• The digital world and social and health inequalities
• A health literacy approach to digital health: Building digital capacity
• Some thoughts
Definitions

• Digital health: ‘... is the convergence of the digital revolution and genetics revolutions within healthcare...empowering us to better track, manage and improve healthcare...reduce inefficiencies in healthcare delivery, improve access, reduce costs, increase quality, and make medicine more personalised.’ ¹

• E-health literacy: ‘the ability to seek, find, understand, and appraise health information from electronic sources and apply the knowledge gained to addressing or solving a health problem’ ²

• Health literacy: ‘the personal characteristics and social resources needed for individuals and communities to access, understand, appraise and use information and services to make decisions about health’ ³

Individual, family community capacities  

Health Literacy  

System demands and complexity

HLS-EU CONCEPTUAL MODEL

Sorensen K et al: Health literacy and public health: A systematic review and integration of definitions and models, BMC Public health, 2012
The possibilities brought by digital technology advances

• Clinical care
  • Telemedicine (remote exchange of data between an individual and healthcare professionals e.g. monitoring of heart failure) and telehealth (remote monitoring of an individual e.g. sensors to monitor falls)
  • Higher quality and accuracy in collecting and sharing health data across platforms
The possibilities brought by digital technology advances

• Self-care
  • Better functionality with external access for patients, clinicians and researchers e.g.
  • Managing contacts (consultations, medication requests)
  • Access to records
  • E-health (e.g. websites) and m-health (e.g. apps)
  • Wearables (e.g. activity tracker, pulse monitoring)

• Preventing illness and promoting health
  • E-health
  • M-health
  • Wearables
Time spent on health – people with long-term health conditions

Focus of digital research and service development

1.5%
3% ¹

Clinical care
Self-care

Preventing illness and promoting health

95.5%

35%

56%

9%

Example: Patient access to their own medical records in the UK

**Capability:** technology available to 92% of patients

**Awareness:** 5.2% of patients aware that this is available

**Usage:** 0.9% of patients used the service
Prevalence of use of internet to search for health information (EU)

Range: Netherlands 74% to Romania 49%

Reasons for using the internet

- Information to promote health or prevent illness (e.g. diet, exercise) 55%
- Information about an illness 54%
- Information about a medical treatment or procedure 23%
- To get a second medical opinion 10%
- Other 3%
- Don’t know 1%

Social inequality and internet use

FREQUENCY OF COMPUTER USE, BY AGE GROUP, 2006 AND 2015

Significance (Website of the UK Royal Statistical Society)
### Social inequality and internet use

<table>
<thead>
<tr>
<th></th>
<th>Ever used the internet?</th>
</tr>
</thead>
<tbody>
<tr>
<td>No formal qualifications</td>
<td>55%</td>
</tr>
<tr>
<td>Degree level education</td>
<td>2%</td>
</tr>
<tr>
<td>Semi-routine or routine occupation</td>
<td>33%</td>
</tr>
<tr>
<td>Management or professional occupation</td>
<td>9%</td>
</tr>
<tr>
<td>Annual income less than £20,000</td>
<td>17%</td>
</tr>
<tr>
<td>Annual income more than £43,000</td>
<td>2%</td>
</tr>
</tbody>
</table>

*Significance (Website of the UK Royal Statistical Society)*
Social inequality and internet use

• Compared with people with higher health literacy, people with low health literacy are less likely to have access to the internet (Odds Ratio 10.75, 95% CI 7.08 to 16.33, \( p< 0.0001 \)) or to use the internet to gather health information (OR 2.35, 95% CI 1.53 to 3.60, \( p< 0.001 \)) \(^1\)

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\(^1\) Estacio & Protheroe, 2017.
Building digital skills for health

• Ran from 2013 to 2016
• Designed for ‘digital muggles’ – older people, socio-economically deprived and excluded groups
• Locally embedded – aimed to develop self-sustaining momentum
• Partnerships between communities and local providers
• 221941 people trained
• 387470 additional people reached
• 8138 local Digital Champions and volunteers trained
• 56% of learners went on to find information on the internet about health conditions, symptoms or tips for staying healthy.

• 54% of learners in need of non-urgent medical advice said they would now go to the internet before consulting their GP, to look at sites such as NHS Choices.

• 51% of learners have used the internet to explore ways to improve mental health and wellbeing.
Learn how to use the internet

Free courses on using a computer, browsing the web, sending an email and finding work online.

Start learning now  Play the game
Digital health literacy: some thoughts

• Digital technology brings many potential benefits for health, especially the prevention and treatment of NCDs
• As with many other health advances, those with the most need benefit least
• A health literacy approach can build citizens’ confidence and skills to develop digital skills, and hence benefit from digital technology
• Such an approach will reduce, rather than widen, digital inequalities
• Do we need a new definition of digital health literacy to capture the breadth of the concept?