

**Multimedia Appendix 1.** Dimensions (content areas) of eHealth literacy conceptual models and measures.

Background Information	Dimensions (Content Areas)
<p><b>Conceptual Models</b></p> <p><b>Author:</b> Norman &amp; Skinner [14]</p> <p><b>Name:</b> Lily Model</p> <p><b>Purpose:</b> To develop a model that accounts for the unique attributes of health literacy in an electronic/networked world.</p> <p><b>Guiding Framework:</b> Consumer eHealth</p>	<p>Context-Specific Literacies</p> <ul style="list-style-type: none"> <li>• Health literacy (<i>ie, basic literacy in the context of the health</i>)</li> <li>• Science literacy (<i>ie, understand the scientific process</i>)</li> <li>• Computer literacy (<i>ie, use computers to solve issues</i>)</li> </ul> <p>Analytic-Specific Literacies</p> <ul style="list-style-type: none"> <li>• Traditional literacy/numeracy (<i>ie, basic or prose literacy</i>)</li> <li>• Information literacy (<i>ie, resource awareness</i>)</li> <li>• Media literacy (<i>ie, critical thinking</i>)</li> </ul>
<p><b>Author:</b> Gilstad [27]</p> <p><b>Name:</b> A comprehensive model of eHealth Literacy</p> <p><b>Purpose:</b> To develop a comprehensive model of eHealth literacy that accounts for the competencies and analytic notions of what makes a user “eHealth literate.”</p> <p><b>Guiding Framework:</b> Extends from Norman &amp; Skinner’s Lily Model; Self-Efficacy Theory</p>	<p>Contextual Factors</p> <ul style="list-style-type: none"> <li>• Propositional literacy (<i>ie, learning through facts, theory</i>)</li> <li>• Cultural literacy (<i>ie, cultural knowledge</i>)</li> <li>• Social literacy (<i>ie, norms, values, rules, and regulations</i>)</li> <li>• Procedural literacy (<i>ie, experiential or physical learning with</i>)</li> <li>• Contextual literacy (<i>ie, understanding the social and health</i>)</li> </ul> <p>Situational Factors</p> <ul style="list-style-type: none"> <li>• Type of health question</li> <li>• Type of eHealth technology</li> </ul> <p>Context-Specific Literacies</p> <ul style="list-style-type: none"> <li>• Health literacy (<i>ie, basic literacy in the context of the health</i>)</li> <li>• Science literacy (<i>ie, knowledge of the scientific method</i>)</li> <li>• Computer literacy (<i>ie, knowledge about using a computer a</i>)</li> </ul> <p>Analytic-Specific Literacies</p> <ul style="list-style-type: none"> <li>• Traditional literacy/numeracy (<i>ie, understanding, communic</i>)</li> <li>• Information literacy (<i>ie, using information to identify and so</i>)</li> <li>• Media literacy (<i>ie, analyze visual and audio information</i>)</li> </ul> <p>Communicative Expertise (<i>ie, interaction with an offline healthcare p</i>)</p>
<p><b>Author:</b> Bautista [16]</p> <p><b>Name:</b> N/A<sup>a</sup></p> <p><b>Purpose:</b> To develop a conceptual model of eHealth literacy that can guide operational measures.</p> <p><b>Framework:</b> Health &amp; Digital Literacy</p>	<ul style="list-style-type: none"> <li>• Contextual factors (<i>ie, social and individual factors</i>)</li> <li>• Lifespan (<i>ie, age group</i>)</li> <li>• Quality of life (<i>ie, maintenance and improvement</i>)</li> <li>• Healthcare context (<i>ie, health promotion, prevention, cure, reha</i>)</li> <li>• Actions (<i>ie, search, acquire, comprehend, appraise, communicat</i>)</li> <li>• Use of technologies (<i>ie, PC, mobile device, Internet, social media</i>)</li> </ul>

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<p><b>Author:</b> Kayser et al. [30]</p> <p><b>Name:</b> Expanded User-Task-Context Matrix for eHealth Literacy</p> <p><b>Purpose:</b> To conceptualize eHealth literacy of Health IT Systems.</p> <p><b>Framework:</b> User-Task-Context Matrix</p>	<ul style="list-style-type: none"> <li>• Health and digital literacy</li> <li>• Healthcare context</li> <li>• User Domain <ul style="list-style-type: none"> <li>• Knowledge about one’s health</li> <li>• Ability to interact with information</li> <li>• Ability to engage with technology</li> </ul> </li> <li>• Task Domain <ul style="list-style-type: none"> <li>• Access to technologies that work</li> <li>• Access to technologies that suit individual needs</li> </ul> </li> <li>• User-Task Domain <ul style="list-style-type: none"> <li>• Feel that using technology is beneficial to address a health m</li> <li>• Feel in control and secure in using a technology to address a</li> </ul> </li> </ul>
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**Measurement Instruments**

<p><b>Author:</b> Norman &amp; Skinner [15]</p> <p><b>Name:</b> eHealth Literacy Scale (eHEALS)</p> <p><b>Purpose:</b> To assess knowledge, comfort, and perceived skills at finding, evaluating, and applying electronic health information to health problems.</p> <p><b>Framework:</b> Reflects the Lily Model, but items do not correspond with model literacies.</p>	<ul style="list-style-type: none"> <li>• Locate electronic health information</li> <li>• Evaluate electronic health information</li> <li>• Apply knowledge gained from electronic health information</li> </ul>
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<p><b>Author:</b> Koopman et al [31]</p> <p><b>Name:</b> Patient Readiness to Engage in Health Internet Technology (PRE-HIT)</p> <p><b>Purpose:</b> To measure readiness or motivation, a key aspect of “competence,” to use eHealth.</p> <p><b>Framework:</b> Dimensions were derived from focus groups with chronic disease patients</p>	<ul style="list-style-type: none"> <li>• Health information need</li> <li>• Internet experience</li> <li>• Computer anxiety</li> <li>• Preferred mode of interaction</li> <li>• Relationship with doctor</li> <li>• Cell phone expertise</li> <li>• Online privacy</li> <li>• “No news is good news”</li> </ul>
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<p><b>Author:</b> Chew &amp; Yuqian [32]</p> <p><b>Name:</b> eHealth Literacy</p> <p><b>Purpose:</b> To measure eHealth literacy as the ability to use information technology to search, locate, process, and understand health information to improve health and healthcare.</p> <p><b>Framework:</b> Included items from the Health Information National Trends Survey (HINTS) that</p>	<ul style="list-style-type: none"> <li>• Health literacy</li> <li>• Science literacy</li> <li>• Media literacy</li> <li>• Computer literacy</li> <li>• Traditional literacy/numeracy</li> <li>• Information literacy</li> </ul>
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align with core literacies of the seminal Lily Model.

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**Author:** Bhalla et al [33]

- Self-motivation and self-regulation in eHealth task completion

**Name:** eHealth Readiness Scale

**Purpose:** To assess user preparedness to engage in eHealth interventions.

**Framework:** Bandura's Social Cognitive Theory (SCT)

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**Author:** Seçkin et al [34]

- Cognitive literacy (*ie, trust in the credibility of web-based health*)
- Interactional literacy (*ie, communication with offline health care*)
- Behavioral literacy (*ie, action related to evaluating and appraising information*)

**Name:** e-Health Literacy Scale (e-HLS)

**Purpose:** To develop an eHealth literacy scale that assesses how well people provided digital health content can discern high quality from low-quality information.

**Framework:** eHealth literacy is grounded in the concept of health literacy, thus dimensions were derived from a review of the literature

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**Author:** van der Vaart & Drossaert [35]

- Operational skills (*ie, to use the computer and Internet*)
- Navigation skills (*ie, to navigate and orient on the Internet*)
- Information searching skills (*ie, to use correct search strategies*)
- Evaluation skills (*ie, to evaluate the reliability and relevance of v*)
- Self-creation skills (*ie, to add self-generated content to web-bas*)
- Privacy protection skills (*ie, to protect and respect privacy while*)

**Name:** Digital Health Literacy Instrument (DHLI)

**Purpose:** To develop and measure a self-reported and performance-based measure Web 1.0 and Web 2.0 skills.

**Framework:** Dimensions were derived from formative research examining the eHealth performance of patients with rheumatic diseases

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N/A: not applicable.