Digital Health Literacy

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Outline

1. Contextualizing the situation

2. Case Study: Turning Internet use into the main ally in the fight against NCDs in the region of the Americas

3. Next steps
1. Contextualizing the situation

World’s offline population, 2016

Source: International Telecommunications Union (ITU)
1. Contextualizing the situation

Some statistics on ICT

- 47% Individual users connected to the Internet
- 13% Landlines per 100 population
- 47% Households with a computer
- 99% Mobile lines per 100 population

Source: International Telecommunications Union (ITU), 2016.
1. Contextualizing the situation

eHealth ecosystem

Source: http://hitconsultant.net
1. Contextualizing the situation

eHealth ecosystem

- **eHealth governance**
  National, regional, and global eHealth coordination tools

- **Electronic health record**
  Information on the health of every patient recorded in digital format

- **Standards and interoperability**
  Communication between different technologies and software applications, using standards for the effective, accurate, and reliable exchange and use of data

- **Telehealth (and telemedicine)**
  Health services delivery using ICT, especially where distance is a barrier to receiving health care

#HowToImproveHealth

- **mHealth**
  Medicine and public health supported by mobile devices such as cellphones, patient monitoring devices, and other wireless devices

- **Digital Health literacy**
  Set of skills, knowledge, and attitudes that a person needs in order to develop functionally in the Information Society

- **Social networks**
  Use of social networks in health promotion

- **Big data**
  Use of unconventional data for decision-making in public health

First Meeting of the WHO GCM/NCD Working Group on Health Literacy for NCDs
Digital Health Literacy for NCDs (Geneva, 27-28 February, 2017)
1. Contextualizing the situation

Some statistics on eHealth

- **78%** Lack of skilled personnel
- **77%** Inadequate infrastructure
- **59%** Lack of business models
- **55%** Lack of political commitment

Source: eHealth and innovation in women’s and children’s health: A baseline review. WHO, 2013. Sample: 64 countries
1. Contextualizing the situation

Digital Health Literacy

- Digital health literacy (or eHealth literacy) is 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.

<table>
<thead>
<tr>
<th>Variables influencing Digital Health Literacy</th>
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<tr>
<td>Age</td>
</tr>
<tr>
<td>Health status</td>
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<tr>
<td>Educational background</td>
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<tr>
<td>Digital literacy skills</td>
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<td>Motivation for seeking information</td>
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Digital Health Literacy

- Information overload: 575 million results are returned by Google when searching for “cancer” and 250 million when searching for “diabetes.”

- Eight out of the 10 health-related consultations on health information were performed on search engines like Google, Yahoo or Bing.

- Google controls 64% percent of the search market.

- One out of 20 searches on Google is related to health.

- About 72% of US adult Internet users search for health information and more than a third of them search the Internet for self-diagnosis. In the case of the European Union, 59% of people have used the Internet to search for health-related information.
2. Case Study: Turning Internet use into the main ally in the fight against NCDs in the region of the Americas

Introduction

- **NCDs**: Thirteen out of the 23 leading causes of death are related to NCDs.
- **Internet penetration**: Increasing number of people with Internet access (43%).
- **Social media**: High percentage of social media users (70% of the population with Internet access use social media).

2. Case Study: Turning Internet use into the main ally in the fight against NCDs in the region of the Americas

Objective

- To know how national health authorities release information about the leading causes of death related to NCDs (in the 18 countries part of this study) through their institutional websites (including positioning of their content in Google) and their profiles in the main social media channels.

Methodology & Limitations of the study

- **Methods**: direct observation and comparative analysis. Key words used: WHO terminology and DeCS descriptors.

- **Geographical analysis**: 18 Spanish-speaking Latin American and Caribbean countries (ARG, BOL, CHI, COL, COR, CUB, ECU, ELS, GUT, HON, MEX, NIC, PAN, PAR, PER, DOR, URU, and VEN).

- **Chronological framework**: searches on search engines (Apr. – May. 2015) and social media analysis (Apr. – Sept. 2015).
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Results

Access national health authorities’ information on NCDs: the case of Google

– A Google search on the leading causes of death related to NCDs will show that the probability of finding information from webpages of official ministries and secretaries of health in these countries in the first page of Google results is 10.62%.

– The ministries and secretaries of health do not have available information within the first 10 Google search results for six out of 13 leading causes of death related to NCDs (colorectal cancer, breast cancer, prostate cancer, hepatic cirrhosis, hypertensive heart disease, and Alzheimer’s) – representing 46.15%.
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### Availability of information from national health authorities among the top 10 search results on Google

- **Breast cancer**
- **Alzheimer’s disease**
- **Colorectal cancer**
- **Prostate cancer**
- **Lung cancer**
- **Stomach cancer**
- **Kidney disease**
- **Liver cirrhosis**
- **Chronic obstructive pulmonary disease**
- **Hypertensive heart disease**
- **Diabetes**
- **Ischemic heart disease**
- **Stroke**

**Legend:**
- Blue: Information from national health authorities available
- Red: Information from national health authorities not available
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Results

Talking with national health authorities about NCDs: the case of Facebook

- In the case of institutional presence of national health authorities (ministries and secretaries of health) on Facebook, the community of followers is 0.79% of the domestic population with Internet access.

- The possibility of finding content on the leading causes of death related to NCDs on Facebook is 10%.
2. Case Study: Turning Internet use into the main ally in the fight against NCDs in the region of the Americas

Map with percentage of leading causes of death related to NCDs found on Facebook, by country
Conclusions

– The active participation of patients in their own care highlights the need for healthcare systems that are more transparent and responsive to the needs and demands of their users.

– National health authorities are aware of the relevance of having a presence on social media.

– It is increasingly necessary to have reliable and quality information, especially when it comes to the health of populations and the leading causes of death, in order to increase the empowerment of citizens.

– National health authorities can still improve in terms of the role they can play and their participation in conversations on social media regarding the leading causes of death that affect their countries.
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RESEARCH ARTICLE

Social media in public health: an analysis of national health authorities and leading causes of death in Spanish-speaking Latin American and Caribbean countries

David Novillo-Ortiz and Tony Hernández-Pérez

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3. Next steps

3 questions to be answered...

– Who should participate in the conversation?

– What are the most cost-effective digital health interventions (telehealth, mHealth, social media, etc.) for health literacy on NCDs?

– What lines of action should a digital health literacy work plan contemplate?
Key Messages
Key Messages

- Digital health literacy (or eHealth literacy) is 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.

- Eight of the 10 health-related consultations on health information were performed on search engines like Google, Yahoo or Bing, and one out of 20 searches on Google is related to health.

- The increasing number of users on social media, the frequency of use, and the interaction they generate have favored health interactions, including health promotion.

- Health institutions play a key role in facilitating reliable and trustworthy health information within a context in which anyone can post health-related information.