Exploring a methodology for eHealth indicator development

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About the authors

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Introduction

• Indicator = a measurable element of practice or system for which there is evidence or consensus that it can be used to assess a defined aspect of the practice or system in question.

• eHealth policies are similar, related indicator-work is lagging behind, indicators are ambiguous or missing.

• Recent workshop on eHealth indicators concluded:
  – Indicators context-specific: stakeholders, their goals, system quality important aspects of indicator definition
  – gaps in existing classifications used to group eHealth indicators
    – no one classification suffices?
  – gaps in lists of indicators proposed by the experts - need for a more robust generic methodology for indicator definition
Objective of this study: explore a methodology for defining and classifying eHealth indicators.

The work is initiated by the IMIA Working Group on Technology Assessment and Quality Development and the EFMI Working Group on Assessment of Health Information Systems (http://iig.umit.at/efmi)
Methods

• Results of the “first round” in iterative development of the methodology will be presented

• Two-step process has been followed:
  – Quick desk-top-review of literature on existing indicator methodologies and related processes on defining indicators (also outside the field of eHealth)
  – Identification of classifications of indicators, to provide a basis for grouping indicators
    • EUnetHTA-classification [7], eHealth evaluations-classification [6], Delone & McLean classification
    • These classifications were also tested to classify data from eHealth expert workshop on eHealth indicators reported in previous presentation
The literature on eHealth indicator methodology could be grouped into 3 categories

– Articles discussing suitability of specific indicators as measures in a specific field (e.g. drug treatment data as an epidemiological indicator)
– Articles describing a methodology for defining indicators for a specific assessment topics (e.g. care process quality indicator)
– Articles describing a generic framework for defining indicators for specific policy goals (e.g. sustainable development)

Category 3 was most suited as a starting point
One systematic review of generic indicator methodologies was found (in the field of sustainable development)

- two main approaches for indicator definition: Expert-led top-down and community-led bottom-up

- Top-down methodology: predominant in fields focusing on monitoring implementation of policies and their impact on society level (e.g. economic growth, main aim also in European level eHealth indicator work [1]).
  - expert-led and predominantly science-based.

- Bottom-up methodology: predominant in the fields aiming to monitor or assess policy or strategy implementation and impacts on micro level – e.g. on local environment.
  - indicators tailored to the needs and resources of the indicator users, still rooted in the policy in question (e.g. sustainable development in environmental policy)
Common phases of the two approaches

• Defining the context (human and environmental) for measurement. Two primary components:
  – identifying key stakeholders and
  – defining the relevant area or system

• Defining the goals.
  – Top–down approaches rarely include this step, goals are pre-determined by Government offices

• Defining methods for indicator selection, grouping.
  – Selection by reviewing expert knowledge, literature, standards, existing indicator work E.g. RAND-method
  – Grouping by literature-based classification E.g. eHealth IT eval classification

• Defining the data.
  – Data are collected, analyzed, reported and feedback is acquired from different user groups.
Discussion

• The suggested four-phase indicator methodology
  – provides a transparent way to define context-sensitive eHealth indicators
  – The methodology is in line with experts views from the MIE 2011 indicator workshop
  – The methodology is compatible with general guidelines for health IT evaluation practice as reflected in the GEP_HI guidelines

• Validation of the methodology
  – Another systematic literature review still needed?
  – Testing of methodology in the ongoing Nordic eHealth research network (T02 Panel on evaluation)
More information about Nordic eHealth indicator work in the panel at 11.15 – 12.45 and in the following website:


(information page, from which a link to network website to be opened during September)

Thank you!

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