UNIVERSITY OF TWENTE.

The Sixth International Conference on eHealth, Telemedicine, and Social Medicine

eTELEMED 2014

March 23 - 27, 2014 - Barcelona, Spain
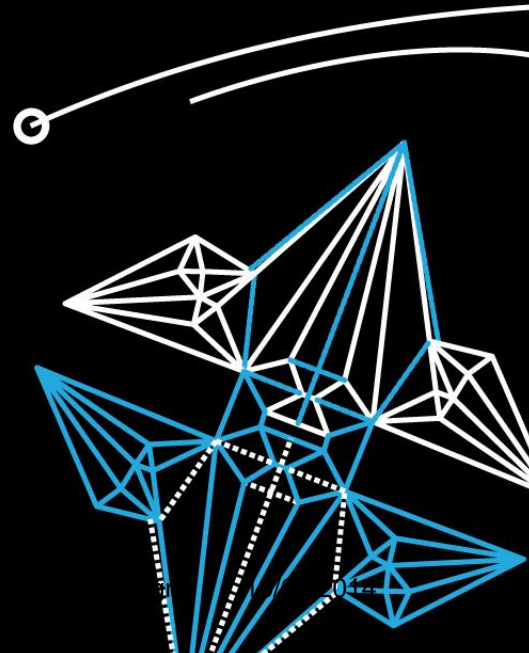
Panel eTelemed
lessons learned and future visions

Dr J Van Gemert-Pijnen; moderator

24-03-2014

Center for eHealth Research
and Disease Management

Panel eTelemed: multidisciplinair

18:45 - 20:15

Panel eTELEMED

Topic: Lessons Learned

Moderator
Lisette van Gemert-Pijnen, University of Twente, The Netherlands

Panelists
Rodrigo Mariño, University of Melbourne, Australia
Åsa Smedberg, Stockholm University, Sweden
Marike Hettinga, Windesheim University of Applied Sciences, The Netherlands
Terje Solvoll, Norwegian Centre for Integrated Care and Telemedicine, Norway
Conceição Granja, University Hospital of North Norway, Norway
Olga Kulyk, University of Twente, The Netherlands
Karin Blomberg, Örebro University, Sweden

Procedure panel

- Short Introduction Panellists

- Topics Lessons learned presentation by Panellists

- Discussion (round 1)

- Topics Future Visions presentation by Panellists

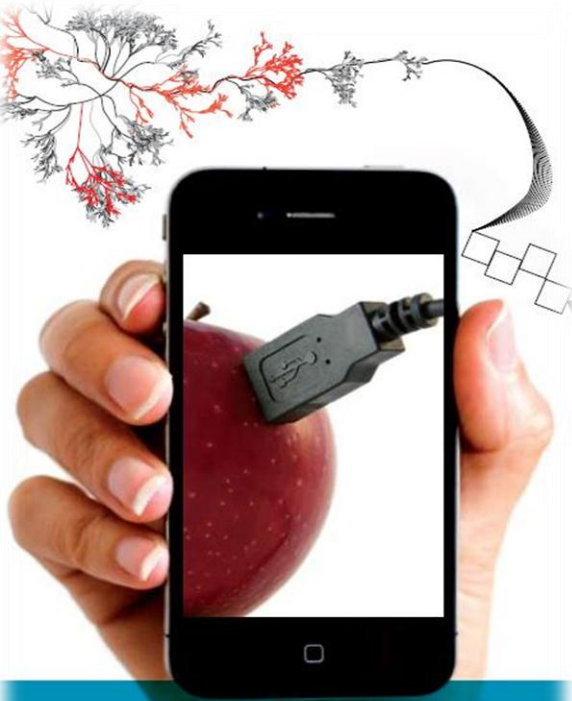- Discussion (round 2)

- Take Home Message

Design, Quality & Effects of eHealth

Dr. Olga Kulyk

eTelemed 2014

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Barcelona, March 24

Center for eHealth Research & Disease Management

- Healthy lifestyle & public health

- Healthy aging & self-management care

- Patient safety & infection prevention

Center for eHealth
Research and
Disease management

UNIVERSITY OF TWENTE.

Barcelona, March 2014

Lessons learned

Challenges in eHealth:

✓ Persuasive Design:

- Engage & motivate users!
    - Serious gaming
    - Personal coaching
- Match user needs with right technology!
- Innovate!
    - Think beyond current state-of-the-art
    - Future technologies

Lessons learned

Challenges in eHealth:

✓ Evaluation:

- • Measure & predict user behavior
  - – Usage: log data analysis
  - – Predictive modeling: machine learning
- • Integrate HCI evaluation methods:
  - – Subjective & objective
  - – Long term effects: field studies

Quality & Impact

✓ When can we call an eHealth application succesful?

✓ What effect measurements are reliable?

Success criteria

eHealth pilots in public eHealth:

  ✓ Evaluation of effects

  • Effectiveness, effect on behavior change etc.

  ✓ Quality & consistency of healthcare service

  ✓ Flexibility & sustainability

  ✓ Privacy & security guarantees

Success criteria

✓ Target user needs well analyzed

✓ Measurability of results:

- – Evaluation with users & experts

✓ Added value & innovative aspect

✓ Integration with other applications

Challenges
eHealth Design & Implementation

- Uniformity, quality & consistency

  - ✓ eHealth services vs F2F healthcare

- Standardization of privacy & security issues

- Implementation plan

  - ✓ Training users & healthcare professionals
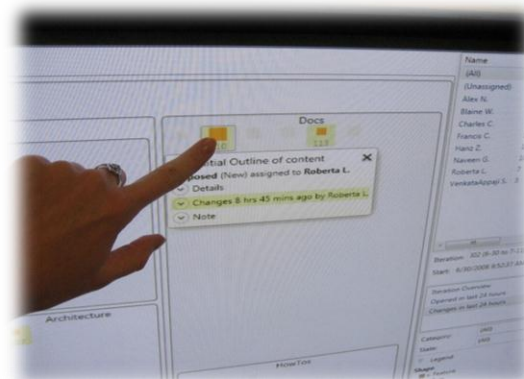
The quest for sustainable financing of eHealth

Marike Hettinga, Ruud Janssen, Marijke Span
eTeleme d 2014, Panel Contribution March 24, 2014

Research Group
IT Innovations in Health Care

a multidisciplinary, enthousiastic team of care and IT experts

Research themes

Windesheim

Research line 1: Sensortechnology	Research line 2: Data Management

Main theme:
Towards sustainable
IT innovations in health care

Research line 3: Evidence based eHealth	Research line 4: Content of care at a distance

Sustainably financed eHealth: how to reach this goal?

- focus is on **financial** benefits and costs
- focus is not on **quality** of care

- focus is on **short** term: innovations have to be profitable immediately
- focus is not on **longer** term, e.g. prevention

- project funding focusses on **development** of innovations
- project funding does not focus on **implementation** and scaling

Statement 1
Project funding needs to be revised:

no financial aid for development of innovations, but only for implementation of innovations in daily care

or:

pay back project funding if project was unable to arrange sustainable financing

Statement 2
Financial benefits do not convince care professionals to use eHealth, so:

find out what will convince care professionals, informal carers, and care consumers

involve them in your research,
make it a co-design process

Self-management and the changing relations in healthcare

Asa Smedberg, Stockholm Sweden

Self-Management and the New Patient Role

➢ The patient role is becoming more self-managing.

➢ Self-management includes taking care of one's body and illness, adapting in order to carry out daily activities, the changed conditions and roles, and managing emotional changes and uncertainty about the future.

➢ Self-management is about empowerment, i.e., patients "having the knowledge, skills, attitude, and self-awareness necessary to influence their own behavior and that of others to improve the quality of their lives".

➢ Patients, and citizens, benefit from this….in health promotion and coping with illnesses!

What Does it Mean for the Patient – Healthcare Relations?

Self-management puts new demands on the healthcare system and the care professionals.

- ➤ The new collaborative relation is less characterized by the physician telling the patients what to do and more about appreciating the different types of expertise of the physician and the patients.

- ➤ It includes self-management support to patients: to enhance their problem solving skills, day-to-day decision making skills, skills to access relevant resources, and ability to make short-term action plans and carry them out.

- ➤ Self-help groups online let patients exchange knowledge and experiences, and to help one another develop new skills and attitudes.

Issues to Manage for the Healthcare

➢ Increased complexity in the patient – healthcare.relation

➢ Greater patient participation and control through self-management tools

➢ Healthcare with more patient-centered focus – organisation and coordination around the patient and his or her needs

Teledentistry: opportunities and challenges

Rodrigo Mariño

eTELEMED 2014 "International Conference on eHealth, Telemedicine, and Social Medicine"

Barcelona 23- 27 March,2014

Oral Health crc

Objectives

This presentation describes our experience with recent teledentistry field tests at Residential Aged Care Facilities (RACF) in Victoria to identify barriers to their widespread introduction.

Oral Health crc

Methods

- Registered nurses were trained to manipulate an intra-oral camera and use ICT infrastructure to send the information for remote examinations.

- *Training* involved:
    - **3 hours** of direct contact,
    - a 66-page **training manual** with contents organized in 5 modules
    - up to **10 hours** of practice examinations , and
    - **compensation** for their time.

Results

	Examination by nurse no supervision	Examination by nurse under supervision	Examination by oral health professionals	**Total**
RACF 1 (urban)	6	4	**11**	**21**
RACF 2 (urban)	4	0	3	**7**
RACF 3 (rural)	4	4	14	**22**

Oral Health crc

Conclusions

Despite training and material compensation to the RACFs for their time; the successful use of RNs in other areas of dentistry, for most of the exams, RNs were unable to properly manipulate the intraoral camera and transmit video images.

Oral Health crc

Conclusions

Further training and further analyses of how different types of constraints operate to support or dissuade the adoption of a teledentistry model need to be performed.

Find a solution for a problem not a problem for a solution

- Learn as much as u can about the user
- To make a solution that is suitable, Interdisciplinary involvement is needed to understand the full process of the problem
- Anchor the solution in the organisation

Use methods from HCI and CSCW including participatory design

- Use the expertise of engineers and involve the users in the design and development of the solution
- Test the solution using developed scenarios from real situations using real users as test users

Lessons learned, Impact technology

- Impact on **work**; unemployment, tech eats our jobs vs networked society for work; collaborative leadership

- Online **learning**; ecosystem learning hive; MOOCs vs context driven learning

- **Digital natives**, technology a way of living; quantified self and responsibilities

- Data management at home (monitoring+smart **coaching)**, responsibilities self-control, safety

- New **business** models for ehealth

  - Blended formats; well-connected systems

  - Public private investments

Lessons learned, involvement and engagement Design

- Participatory and user centered design, searching for new concepts to **engage** and **inspire**
    - Privacy vs sharing data in social networks (traffic light privacy defender social networks, visualisation and personalisation, teenagers at hospital)
    - Gamification, learning by gaming

- **Persuasive technology**
    - Tailoring and personalisation; narratives
    - Computer adaptive testing to tailor interventions (Q&A)

Lessons learned; Effects

- **New methods** for assessment effects (beyond RCTs, pre/post designs)
- Process data and subjective data to understand usage, users
  - Logdata to predict adherence; to increase returns; to understand prompts for persuasion
  - machine learning to increase efficiency (paths that matter; usage profiles)
  - Longitudinal measurements
  - **Characteristics of tech , what elements contribute to success?**

MOLTES GRACIAS

IMPROVING EHEALTH

J.E.W.C. van Gemert-Pijnen
O. Peters
H.C. Ossebaard

eleven

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www.boomlemma.nl

eHealth interventions, nsrii, 20th June 2014, University of Twente

Health Information Technology

- Health IT denotes an enormous potential to improve health care cost effectiveness and quality of care

- Health IT has been failing to demonstrate its foreseen benefits, and its involvement in the care process is limited to specific fields

- A reason may be found on the focus of health IT on improving individual tasks rather than supporting value added care processes

Focus on the process

- When supporting individual tasks, IT is focusing on the provider
- This contributes to a lower quality and high cost health care
- Process focused care is centered on the patient
- It integrates the team work to provide high quality and efficient care throughout the care process

Understand the process

- Processes that are not modeled and re-engineered consistently and without a careful analysis will replicate the existing inefficiencies

Understand the process

- Processes that are designed having a full understanding of: what they are meant to do, how resources act on it, how information is generated and required, and how they interact with other processes, provide the necessary knowledge for health IT to reduce inefficiencies and manage complexity

Participatory process modelling

- Process re-engineering may require new activities and reorganization of the existing activities
- It should be done along with an interdisciplinary team that represents the care team and the provider
- In the case of processes that involve patients, patients should be included in the re-engineering team.

Value added care processes

- Comprehensive models of care processes and interoperable health IT will enable the patient to cooperate with health personnel in a virtual care team, contributing to patient empowerment during the process of care

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