Tele-health and patients with hip fracture - exploring how to support self-care and empowerment in future healthcare

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Odense University Hospital
Approximately 7,000 individuals with hip fracture per year in DK - approximately 700 are treated at OUH
MARGIT

- 81 years old; widow; living in a house with a garden
- One daughter and family in USA; one daughter ‘occupied with her job’
- Always been very active
- Many good neighbors
- Fell on the lawn
- Operation, mobilization and discharge
- Worries:
  - Many new pills
  - Mobility
  - Ability to read
  - Letters?

Patients with hip fracture are the largest group of acute admissions in an orthopedic department in Denmark
• Reduced bone mass is main predictor of fracture 1
• Bone mass decreases with age: 80 yrs ~ bone mass reduced 50% 2
• Increasing elderly population 3 => increase of hip fractures
• Hip fractures have serious individual implications
• Hip fractures account for the majority of fracture-related healthcare expenditure 4

"SETTING THE SCENE": VISION FOR THE HEALTH SERVICES IN (SOUTHERN) DENMARK

The health services in (the Region of Southern) Denmark are for the citizens. The health services contribute actively to preventing and treating diseases and thereby improving the health of citizens.

Success is built on dialogue, equality and cohesion. We focus on quality and punctual treatment, and the best results are achieved when everyone takes responsibility.

You take responsibility for your health – together we take care of your illness
• Positive development in healthcare creates rising health costs 1
• Individuals to take active part in own health; to be empowered and able to perform self-care
• Systematized programmes to improve efficiency 2
• Patient empowerment through engagement in treatment decisions 3
• Use of information and communication technologies can support patients 4,5

**Motivation:** how do patients experience these implications and can we find a new way of organizing future healthcare services?
OVERALL RESEARCH QUESTION:

Can treatment of patients with osteoporotic hip fracture be promoted by tele-health\textsuperscript{1}, so that the patient's self-care\textsuperscript{2} and empowerment\textsuperscript{3} are being supported?

Criteria for inclusion:

- 65 years or older;
- independent prior to fracture;
- discharged to own home;
- cognitive ability to participate;
- fragility fracture of the hip\textsuperscript{4,5}

\textsuperscript{1} WHO. Health and sustainable development. Telehealth 2018.
\textsuperscript{3} WHO. Health Promotion Glossary. 1998:25.
\textsuperscript{4} WHO. Guidelines for preclinical evaluation and clinical trials in osteoporosis. Geneva. 1998
Participatory Design
Participatory Design\textsuperscript{1,2} – a brief overview

- Derives from action research\textsuperscript{3}
- ‘Scandinavian workplace democracy movement’ in the 1970s
- Democratic ideal
- Involvement – ‘genuine’ participation
- Cooperation between end-users and designers -> mutual learning
- Inspired by ethnography; understanding practice
- Design for future solutions/end-users
- Iterative processes; Collective ‘reflective-in-action’
- Evaluation\textsuperscript{4}
- Solution ready for use/implementation

Participatory Design in health sciences

PHASE 1: IDENTIFICATION OF NEEDS
Future end-users: patients
Systematized hip fracture pathway conducted at OUH according to guideline 1,2

1. RKKP. Danish Regions. DrHoftebrud. Denmark: 2015.
2. Lauritzen J. Patientforløbsprogram - hoftnære frakturer (Hipfracture pathway) Infonet: Odense University Hospital; 2016
FINDINGS

- Wish for autonomy but lack of involvement and influence.

- Accept of short LOS.

- Felt being treated as 'a hip fracture'– not as individuals:
  
  "I thought, oh no, now I have become one of them". (81-year-old woman, living alone)

  "I was just lying in the bed [at the hospital] the first two days. . .with the bedcover over my head. . .crying and thinking: oh am I now going to a nursing home. . . and everybody will forget about me."
  (78-year-old woman, living with her husband)

  "...this is not the way I had thought of to end my days.” (82-year-old man, living with his wife).
A gap between what the system provided and patients’ needs and wishes
Understanding praxis

Focus group discussions with different healthcare professionals.
Discussing potential effects of systematised pathways on patients’ psycho-social status created awareness amongst HPs of a need for more holistic approach to care.

“..we actually spend a lot of time on nursing the system – instead of nursing the patients..”
[Nurse – Phase 1]

“...we stand with our hand on the door knob instead of on the patients' hearts..”
[Social and Healthcare Assistant – Phase 1].
CONCLUSION (from phase 1)

• Empowerment of patients should include empowerment of healthcare professionals by providing them with skills to support patients’ in a shock-like state of mind

• There is a need for providing healthcare professionals with a more targeted means of informing and educating patients
PHASE 2: DEVELOPMENT OF SOLUTION TO COVER NEEDS

Future end-users = patients and healthcare professionals

Methods

• Workshop with different healthcare professionals and representatives from IT-company
• Face-to-face workshops with patients
• Phone interviews with patients from phase 1
CONCLUSION (Phase 2)

- Empowerment of healthcare professionals

Findings from phase 1

- Education in crisis theory

Targeted means of information

- An app: "My Hospital – My Hip Fracture"

- Recognizable corresponding with the electronic patient record

- "Pick and choose" solution

- Accomodate different learning styles
PHASE 3: TEST AND EVALUATION OF SOLUTION IN CLINICAL SETTING

25 patients were introduced to the app/ iPad™

Findings

• The app supported patients’ desire to perform self-care and rehabilitate

• The app – presented on the iPad™ – supported autonomy

• Age was not an issue for use

• Support from relatives or care staff promotes use of the app

• The app supported care staff

• The app is not a stand-alone solution
CONCLUSION (Phase 3)

• ‘My Hip fracture Journey’ supports individuals in gaining greater control over decisions and actions affecting their health

• Tele-health in the form of an app has the potential to support self-care and empowerment and thus promote treatment of individuals with a hip fracture and short LOS

• The app is not a stand-alone solution but can support today’s care and treatment
Findings, from my study, indicate that healthcare professionals can support information and education for patients with a hip fracture using an app that accommodates different learning styles. In perspective, apps used for dissemination of health knowledge can be used by elderly hip fracture patients even if they are not used to technology.

“I only have one thing to add: please don’t stop this project with the iPad! I have been so pleased with all the information and I am SO sure future patients will be too”. (82-year-old woman from phase 3)
IMPLICATIONS FOR CLINICAL PRAXIS

- The app is implemented – downloadable from Appstore
- Using findings in other patient pathways
- The app is used for education of staff and students

Healthcare system: A hip fracture is a routine case requiring uncomplicated treatment

The patient: A hip fracture is an intensely unpleasant and serious incident that has severe effects on individuals’ life situation.
“If only had I known”: a qualitative study investigating a treatment of patients with a hip fracture with short time stay in hospital

Charlotte M. Jensen, Anthony C Smith and Jane Clemensen

Bridging the gap: A user-driven study on new ways to support self-care and empowerment for patients with hip fracture

Charlotte Myhre Jensen1,2,3, Soren Overgaard1,2, Uffe Kock Wiil3,4, Anthony C Smith3,5 and Jane Clemensen3,6

Can Tele-Health Support Self-Care and Empowerment? A Qualitative Study of Hip Fracture Patients’ Experiences With Testing an “App”

Charlotte M. Jensen, PhD1,2,3, Soren Overgaard, PhD1,2, Uffe Kock Wiil, PhD3,4 and Jane Clemensen, PhD3,5