EASY ASSESS

DEVELOPMENT AND EVALUATION OF A WEB-BASED APPLICATION FOR DIGITAL FINDINGS AND DOCUMENTATION IN PHYSIOTHERAPY EDUCATION

Bernadette Spieler, MSc
bs@bspieler.com

FH-Prof. Ing. Dipl.-Ing. Dr. techn. Harald Burgsteiner
Mag. Karin Messer-Misak
Barbara Gödl-Purrer, MSc
Beate Salchinger, MMSc

eHealth 2015

FH JOANNEUM
University of Applied Sciences
Motivation - 1

Background

Cooperation
- Institute for eHealth
- Institute for Physiotherapy

Study course of Physiotherapy
- Use of a paper based general finding report
- Multidisciplinary: For all investigations
- Starting point for the Java based web-application EasyAssess - a tool for reporting physiotherapy documentations online
**Motivation - 2**

**Research Topic**

**Challenges**
- Standardized documentation in Physiotherapy
- Quality assurance and reducing the workload
- Transparency of clinical decisions
- Acceptance of new technology
- Interoperability

**Key question**
- What steps are necessary for a successful implementation of a web-application for diagnostic assessment in physiotherapy education?
RESEARCH DESIGN AND RESULTS - 1

EASY ASSESS

Requirements

- Functionality: Security, data protection

Efficiency, effectiveness and usability

<table>
<thead>
<tr>
<th>Nr.</th>
<th>Deployment</th>
<th>Subject group</th>
<th>Usability-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beta-Version</td>
<td>February 2014</td>
<td>52 Students from PTH11</td>
<td>Use during internship, online survey</td>
</tr>
<tr>
<td>Version 2</td>
<td>May 2014</td>
<td>Subjects from PTH</td>
<td>Moderated usability-test</td>
</tr>
<tr>
<td>Version 3</td>
<td>August 2014</td>
<td>Self test by developer</td>
<td>Heuristic evaluation WCA-Guidelines</td>
</tr>
</tbody>
</table>
Übersicht PatientInnen

<table>
<thead>
<tr>
<th>Name</th>
<th>Geburtsdatum</th>
<th>Diagnose</th>
<th>Erstattung</th>
<th>Status</th>
</tr>
</thead>
</table>

Anmerkungen von BetreuerInnen: Bitte ergänzen die PatientInnen aus deinem zweiten Praktikum!

B. E.

Planung der Untersuchung: Hypothesen

Hypothesen hinzufügen:

1. Physische Beeinträchtigung und assoziierte Ursaachen in den Strukturen/Gewebe
2. 
3. 
4. 
5. 
6. 
7. 
8. 

Sensibilitätsstörung

<table>
<thead>
<tr>
<th>Hypothese</th>
<th>Bestätigung</th>
<th>durch Test / Bemerkungen</th>
</tr>
</thead>
<tbody>
<tr>
<td>PNP n. ax. Schmerz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wundheilungsphase</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zelluntergang, fehlender Abtransport</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hypothese hinzufügen: 

Sensibilitätsstörung

Tatsächliche speichern
Research Design and Results - 2
Added Values

- Easy access and distribution through web portal
- Efficient patient management
- Create a clinical documentation with one click
- Interactive assessment and feedback loops
- Reduction of bureaucracy and format effort
- Stick to statutory requirements and standards
- Familiarity with the existing finding
- Follow a clear didactical path (CR-cycle)
- Usage on tablet and smartphone
FUTURE PERSPEKTIVE

EDUCATION AND COMMERCIAL USE

State-of-the-art learning tool for physiotherapy education
- 6th semester students: Obligatory during their internship
- Autumn: Every class inserts findings in EasyAssess

Commercial versions
- Extended student version (app)
- Trial version for outpatient clinics (students internship)
- Versions for therapists, patients
  - Interfaces: Automatically billing support and feedback from doctor,
  - ELGA, hospital information system

Benefits approved through:
- Collaboration with degree program PTH, experts and students
- Usability testing

General tool for standardized documentation in Physiotherapy