Swiss eHealth Summit 2014:
Opportunities and Challenges of Medical Apps
Based on the Pain Diary App CatchMyPain

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CEO & Chronic Pain Patient
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Twitter: @CatchMyPain
Personal Experience as a Patient
Remembering and Documenting the Story
Getting the Problem Solved
Over 50,000 users in total

1,400 new users per week
Zeitspanne
Von: 30.01.2014 - 06:45
Bis: 30.01.2014 - 11:45
Dauer: 5 Stunden

Lokalisierung
Schmerzintensität wählen:

Schmerzstärke

Beschreibung

Weitere Angaben

Kommentar

Zoom: 205%
Schmerzeintrag erstellen

Wie fühlen sich Ihre Schmerzen an? Wählen Sie passende Beschreibungen aus und/oder erfassen Sie Ihre eigenen:

Suchen oder hinzufügen...

- bedrohlich
- blitzartig
- bohrend
- brennend
- drückend
- dumpf
- ekelhaft
- ermüdend
- erschöpfend
- erstechend
- gemein
- haßlich

Ausgewählte Beschreibungen für diesen Schmerzeintrag:
- hämmernd
- stechend
- elektrisierend
Pain Chart Based on Single Entries

Use two-finger pinch to zoom in and out. Having zoomed in, you can scroll the chart to the left or right.
Tracking Medications

Aerius 5 mg

Occasionally  Recurring taking

Please specify the details of your recurring taking:

- **Start**: 03/17/2014
- **End (opt.)**
- **Frequency**: Daily

**At which times of the day do you take your drug?**

- Morning
- Afternoon
- Evening
- Night

**1**

**Save taking**
Planned: Effect of Medications
Accurate Medical History
### Work in Progress: Care Provider Cockpit

<table>
<thead>
<tr>
<th>Patientennummer</th>
<th>Registriert</th>
<th>EQol</th>
<th>BPI PSS / PIS</th>
<th>HADS</th>
<th>ODI</th>
<th>Tagebuch-einträge</th>
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**Patientennummer:** 52341432

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<th>Resultate Fragebogen</th>
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<th>letzte Zeichnung</th>
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</table>
Demo - Integration in SAP EMR Unwired App
Demo-Integration in SAP EMR Unwired App
Getting the Problem Solved
Chronic Pain

19% of adults are suffering from chronic pain.

Half of them have been suffering for more than 7 years!

81% are between 18 and 60 years old.

Source: Harald Breivik et. al, European Journal of Pain, 10, 2006
Asking Dr. Google

About 424,000,000 results (0.14 seconds)

Nighttime back pain

I have read many posts from people who wake up in the middle of the night with back pain. I have had this problem for years. It would always go away in the morning after I got up and began moving around. I deduced through trial and error that the pain was due to the low back muscles cramping up and tightening due to inactivity that is inherent with sleep. I solved the problem by sleeping with a one foot square insulated cover over my low back. This warmed the area and prevented cramping. That worked for a few years and then the night pain returned. I solved it again by using thermal heat pads (the kind you buy at the drug store and they heat up when you open them). These can become expensive over time. The pain is back again no matter what heat I apply. I have determined that the low back muscles need some stimulation while I sleep to prevent cramping. I have ordered an inexpensive TENS unit that I will try next. These are easily found and purchased online and most have timers you can set to come on a few hours after you fall asleep. Two Aleve tablets before bed also helps. Good luck with the remedies that you try.
"Back Pain"
Learning from other Patients around the World

Clustering based on:
- Onset of pain
- Pain location
- Pain quality (hot, dull, etc.)
- Time of occurrence
- Additional symptoms
- Effect of medications
- Diagnosis
- etc.
After Clustering
Mockup: Information About One Cluster

**Patient X**

**Overall Statistics of Specific Cluster**

**Prevalent Diagnoses:**
- 45% ...
- 20% ...
- 16% ...

**Promising Treatments:**
- 33% ...
- 27% ...
- 21% ...

**Top 100 Most Similar Patients**

- **92%**
  - Diagnoses: ...
  - Treatments: ...
  - anonymous contact

- **90%**
  - Diagnoses: ...
  - Treatments: ...

- **89%**
  - Diagnoses: ...
  - Treatments: ...
Pain Diary

Education & Coaching

Community

Pain Knowledge

Diagnosis
Best Treatment
Research
Recruiting
Opportunities

• Documentation of medical history where it actually happens
• The patient becomes co-author and co-owner of his medical record
• Learning from similar patients around the world
• Focusing on the needs of the patient
Challenges

- Privacy & data security
- Care Provider entering data into the cloud
- Abuse of data
- Giving wrong advice
Tackling Challenges

• Collect as little personal data as possible
  → Challenge: eMail address
• Password protected accounts
• Encryption
• Store personal data separate from medical data
• Publishing of data by the patient not the care provider
• Educate patients about possible consequences
• Updated jurisdiction
Patients' Perspective on Privacy

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<td>Show 23 more, Follow</td>
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<td>dragonflynamaste</td>
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<td></td>
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</tbody>
</table>

Screenshot from www.PatientsLikeMe.com
Tackling Challenges

• Collect as little personal data as possible
  → Challenge: eMail address
• Password protected accounts
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Partners & Supporters
## Medical Advisory Board

<table>
<thead>
<tr>
<th>Name</th>
<th>Position and Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. med. Konrad Maurer</td>
<td>Head of the pain research unit, University Hospital of Zurich</td>
</tr>
<tr>
<td></td>
<td>Head of the ambulant pain treatment unit</td>
</tr>
<tr>
<td>Dr. med. Reto Agosti</td>
<td>Neurologist, Headache Center Hirslanden</td>
</tr>
<tr>
<td>Dr. phil. Rolf Aeberli</td>
<td>Psychologist specialized on pain</td>
</tr>
<tr>
<td></td>
<td>Board member of the SGSS</td>
</tr>
<tr>
<td>Dr. med. Martin Oehri</td>
<td>FMH Rheumatologist, Pain Clinic</td>
</tr>
<tr>
<td>PD Dr. med. Peter Reilich</td>
<td>Neurologist &amp; Researcher, Friedrich-Baur-Institute, Neurological clinic, University of Munich</td>
</tr>
<tr>
<td>Christian Gröbli</td>
<td>Physical therapist and instructor</td>
</tr>
<tr>
<td></td>
<td>CEO of Swiss PhysioCare</td>
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<tr>
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<td>CEO of David G. Simons Academy</td>
</tr>
<tr>
<td>Dr. Jan Dommerholt</td>
<td>Physical therapist, Myopain Seminars, USA</td>
</tr>
<tr>
<td>Dr. med. Niklaus Egloff</td>
<td>Chronic pain treatment unit, Inselspital Bern</td>
</tr>
<tr>
<td>Dr. med. Marc Fouradoulas</td>
<td>Chronic pain treatment unit, Inselspital Bern</td>
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