Research Group in Nursing Diagnostics and developments in integrated EHR

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Outline

• Research agenda on e-Health
• Nursing process and structure
• Sensor technologies and nursing diagnosis
• Developments multi-disciplinary EHR’s
• Interdisciplinary communication
E-Health

The transfer of health resources and health care by electronic means.

It encompasses three main areas:

• The *delivery of health information*, for health professionals and health consumers
• Using the power of IT and e-commerce to improve public health services
• The use of e-commerce and e-business practices in health systems management.
Research Agenda in Nursing Diagnostics

- Content development (NNN validation)
- Instrument development (Decision Support Systems)
- Prevalence and accuracy (Documentation)
- Diagnostic reasoning (Training development)
- Implementation (Phases of EHR-implementation)
- Standardized languages (SNL) (Data-base NNN)
- Relationship SNL and sensor techniques

Nursing Diagnosis and Sensor techniques

- International Master program sensor techniques in healthcare
  http://www.qsinstitute.org
  https://www.hanze.nl/NL/Schools/instituut-engineering

Linking sensor techniques and nursing diagnoses in the PES structure
Nursing Process and structure

- Assessment -> gather signs and symptoms, etiology
- Diagnosis -> define problem
- Planning -> outcome identification
- Implementation -> interventions
- Evaluation -> results and re-assess
Purpose:

Joined development of an implementable and accepted standard for transition documentation of patient information involving:

- Information structure
- Information elements
- Terminology systems and coding
Continuity of Care Record

• Developed by clinicians in cooperation with IT
• 17 Sections
• Snapshot of the EHR
• Covers 80% of handover items (shift change, setting change)

(ASTM E2369-05, 2006; Collins et al, 2011; Ferranti et al 200, Odenbreit, M. 2010)
## Continuity of Care Record

<table>
<thead>
<tr>
<th>1. Payers</th>
<th>10. Medical Equipment</th>
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<td>2. Advance Directives</td>
<td>11. Immunizations</td>
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<td><strong>4. Functional status</strong></td>
<td><strong>13. Results</strong></td>
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<td><strong>5. Problem(s)</strong></td>
<td><strong>14. Procedures</strong></td>
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<td>6. Family History</td>
<td>15. Encounters</td>
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<td>7. Social History</td>
<td>16. Plan of Care</td>
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<td>9. Medications</td>
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</tbody>
</table>
Continuity of Care Record

5. Problem(s)

- Problem type
  
  *Diagnosis*
  
  *Complaint*
  
  *Symptom*
  
  *Finding*
  
  *Physical condition*
  
  *Functional limitation*

- Name (code) *Medical concepts list*

- Date (start and end)

- Status (active/inactive)

- Relation with other problem or other CCR section
Medical concepts list

- Diagnosis
  - DHD-code + ICD-10 code, DRGs
  - DSM-IV
  - NANDA

- Complaints
  - SNOMED
  - NOC

- Findings
  - SNOMED

- Procedures
  - DHD-code, financial-code
  - NIC
CCR sections, contents

4. Functional status
   \textit{NOC}

5. Problem(s)
   \textit{Snomed-CT, NANDA NDx}

14. Procedures
   \textit{Medical procedures thesaurus, NIC, Snomed-CT}

16. Plan of Care
   \textit{Goals (NIC), and all above}
Information: CCR Plan of care

N Dx (P)  
- E  
  Bone metastasis due to mammaca  
- S  
  Expressed pain

Grieving, anticipatory  
- Loss of function  
- Uncurable disease

Goals:  
- Pain level ≤4 (0-10)  
- Adapt to functional disabilities ≥ 3  
- Knowledge, indicator 5 (1-5)  
- Family Coping, indicator ≥ 3 (1-5)

Interventions:  
- Pain Management  
- Coping enhancement
- Activities  
  - Medication management (4dd)  
  - Information (3)  
  - Instructions (1 dd)
- Anticipatory guidance (2)  
- Active listening (1 dd)  
- Truth telling (2)  
- Caregiver Support (1 dd)

Results:  
- Pain level 3  
- Adapt to functional disabilities 2  
- Knowledge indicator 3  
- Family Coping, indicator 4


References


Thank you
Questions?

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