European Nursing care Pathways
Giving Nursing a Language

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Sebastian Kraus
(RN, B.A., cand M.Sc.)

- Objectives
- Development
- Organising principle and structure
- Systematic further development
- Evidence base
**Nursing classification and organization system**

- **A classification is an organisational system based on the principle of class formation.** A classification structure is a listing of terms or concepts represented in a **hierarchical structure**.

- The sorting of different **nursing phenomena or concepts** in groups, classes, categories (resulting from the organisation according to criteria and types of features), can be called a **nursing classification**.

Reference: HIMSS 2006
A major challenge: (Dis)Orientation within the nursing process
Structured illustration of the nursing process in the context of documentation in a standardized professional language

- Support of the communication process
- Support of processes and transitional care
- Support of performance transparency in nursing
- Structuring of the current nursing knowledge
- Support of quality development, nursing staff calculation and outcome measurement

Outline of the ENP history

1989: Beginning of the inductive development
- "Nursing performance can be practically illustrated with a standardized terminology."

1994: First publication of the catalogue
- Containing nursing problems, outcomes and interventions

1996: Representation of the ENP catalogue in IT

1998: Establishment of a research department
- Continuous further development in projects with end users and through literature analyses

from 2000: evidence-based development
- (validation studies, cross-mapping, systematic reviews, ...)

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Division into **three** sections

- ENP... as a **nursing classification system** for a total of seven groups
- ENP... as **pre-combination** of the elements of this nursing classification system
- ENP... as **practice guidelines** developed from the pre-combination

Pictures: www.istockphoto.com
Seven groups: components

- Nursing problems / phenomena
- Characteristics
- Etiologies
- Resources
- Nursing objectives
- Interventions
- Intervention specifications
The patient is impaired in **verbal communication** due to **motor aphasia** (Broca's aphasia).
The patient is impaired in verbal communication due to motor aphasia (Broca's aphasia)

Characteristics/Symptoms
- Strongly pronounced agrammatism
- Strongly halting speech flow
- Uses commonplace phrases
- Uses meaningless phrases and/or stereotypes
- ...

Etiologies
Pathophysiologic causes
- Degenerative process of the brain
- Congenital vascular malformations
- ...
Disease-related causes
- Cerebral vascular accident
- Encephalitis
- ...
Illustration of the nursing process in the form of a care pathway representing the current knowledge, individualized for each patient!
The structure of ENP: Summary
- Topics are organized from general to specific
- On each hierarchy level a further distinguishing feature is added
- Concepts are assigned to exactly one generic term
## Group: Nursing problems / phenomena

<table>
<thead>
<tr>
<th>Domain</th>
<th>Class</th>
<th>Category</th>
<th>Subcategory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional/physiological area</td>
<td>Personal hygiene/clothing</td>
<td>Self-care deficit washing</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Self-care deficit oral hygiene</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Self-care deficit hair care</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Self-care deficit dressing</td>
<td></td>
</tr>
<tr>
<td>Respiration</td>
<td>Ineffective self-cleansing function of the respiratory tract</td>
<td>The patient has insufficient respiration due to dyspnoea</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Insufficient respiration</td>
<td>The patient is ventilated, there is a risk of insufficient respiration</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Risk of respiration insufficiency</td>
<td>The patient has serous foamy sputum associated with acute dyspnea, there is insufficient respiration</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Risk of suffocation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Risk of aspiration</td>
<td>...</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Risk of atelectasis/pneumonia</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Risk of impaired respiration postoperatively</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Current status: scope and evidence level of ENP

<table>
<thead>
<tr>
<th>Terms/concepts of the group</th>
<th>Items v2.5</th>
<th>Items v2.6</th>
<th>Items v2.7</th>
<th>Items v2.9 (new)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing diagnoses</td>
<td>521</td>
<td>542</td>
<td>548</td>
<td>552</td>
</tr>
<tr>
<td>Characteristics / Symptoms</td>
<td>2230</td>
<td>2719</td>
<td>2905</td>
<td>3984</td>
</tr>
<tr>
<td>Etiologies</td>
<td>1799</td>
<td>2282</td>
<td>2426</td>
<td>3526</td>
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<tr>
<td>Ressources</td>
<td>379</td>
<td>457</td>
<td>473</td>
<td>648</td>
</tr>
<tr>
<td>Nursing objectives</td>
<td>1435</td>
<td>1683</td>
<td>1724</td>
<td>1852</td>
</tr>
<tr>
<td>Nursing interventions</td>
<td>2494</td>
<td>2511</td>
<td>2558</td>
<td>2615</td>
</tr>
<tr>
<td>Intervention specifications</td>
<td>3652</td>
<td>4285</td>
<td>4461</td>
<td>4797</td>
</tr>
</tbody>
</table>

Each item has a unique and unchangeable ID number!

- Systematic literature-based revision of about 1/5 of all practice guidelines
- Growing number of ENP validation studies (completed and in progress):
  - Implementation and evaluation in nursing practice
  - Securing content and criteria validity
  - Cross-mapping, expert rating
  - Student theses

Each systematically revised nursing diagnoses is supported by a definition:

**The patient is impaired in verbal communication due to motor aphasia (Broca's aphasia)**

Impaired or lacking ability to actively participate in verbal communication after completion of language acquisition due to a central speech disorder with the lack of grammatical structures in the sentence structure as a leading symptom.

(DGN 2012, Wehmeyer et al. 2006, ICNP Aphasia [10002438], ICF Communicating with - receiving - spoken messages [d310], ICF Speaking [d330])

The revision history and the level of evidence (based on NANDA-I) is shown for the respective ENP nursing diagnosis:

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ENP practice guideline</td>
<td>ENP nursing diagnosis</td>
</tr>
<tr>
<td>Level of evidence:</td>
<td>LoE 3.2</td>
</tr>
</tbody>
</table>
Systematic further development today

Influencing factors on the further development

- Practice projects with institutions
- New scientific findings (studies, guidelines, etc.)
- Findings of previous ENP validation studies
- Analysis of user databases
- Feedback from end users

Elements of the systematic further development

1. Determination of the topics to be revised
2. Determination of a revision strategy
3. Systematic literature review and analysis
4. Revision of the ENP catalogue and consensus
5. Validation of the additions/changes/deletions

European Nursing care Pathways (ENP), starting version

European Nursing care Pathways (ENP), new version

Systematic translation of ENP (English, Italian, French)

Hypotheses for nursing research
Limits of ENP

- ENP can (and should) not replace the nurses expert knowledge
  
- ENP is not complete:
  - i.e. about 23% of the NANDA-I nursing diagnoses can not be illustrated with ENP
  - About 18% of formulations in nursing care plans had to be added individually (2007)

- Currently, there are only a few validation studies which include a review of an entire practice guideline

- The operationalized scales for outcome measurement are partly not yet validated (e.g. own developments)

- ENP is not yet tested in some areas in practical use (e.g. recovery room, operating theatres, neonatal intensive care unit)

- Not all important questions for management, research and education can be answered from the data obtained with ENP

References: Wieteck 2007, Wieteck 2004, Berger 2010
What is next?

- Development of a new system to specify the levels of evidence (in cooperation with NANDA-I)
- Systematic revision of all nursing diagnoses and practice guidelines
- Supporting the international implementation and use of ENP
- Networking and exchange
- Establishment of strategies and concepts for analyzing the data generated with ENP
Thank you for your attention!

Sebastian Kraus (skraus@recom.eu)