National monitoring of nursing activities. The Belgian experience.

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National Monitoring of nursing activities

1. Introduction
2. The concept “(N)MDS”
3. Belgian-NMDS version 1
4. Development of B-NMDS version 2
5. Impact of NMDS; the future

Prof. Dr. Walter Sermeus
1. Introduction

- Nurses are the main human resource in healthcare delivery
- Up to 20% of nurses’ time is spent to documenting the care they provide
- Internationally: *nursing is viewed as invisible (in the record of care)*

(Goossen, 1998; Clark, 1999; Manias & Street, 2001; Korst, 2003)
1. Introduction

• A key problem = nursing terminology:

“If we cannot name it, we cannot control it, finance it, research it, teach it, or put it into practice”

Clark & Lang, 1992
1. Introduction

- Models & tools
  - Nursing Assessment
- Evidence based practice

Nursing record

Assessment

- Nursing Diagnoses
  (Problem identified)

Objectives Identified
(expected outcome)

Evaluate

- Agree expected outcomes with client

Implement

- Interventions can be care pathways

Select Interventions

- Interventions

Clinical Decision Making/Decision Support Systems

Objectives Identified

1. Introduction

Assessment

Diagnose

Problem identified

Implement

Clinical Decision Making/Decision Support Systems

Evaluate

Objectives Identified (expected outcome)

Select Interventions

Interventions can be care pathways

Models & tools Nursing Assessment

Evidence based practice

Standardised Nursing Languages

- Diagnoses (NANDA-I)
- Interventions (NIC)
- N.S. Outcome (NOC)
1. Introduction

- 1980’s: US → Financing health care based on “Diagnosis Related Groups” (DRGs)
- Belgian government & hospital managers wanted to revise the financing of health care
- DRG system is tempting....
- **Nurses wanted to be more involved in the hospital management** (DRG = medical approach).
## 1. Introduction

### Diversity of Patients

<table>
<thead>
<tr>
<th>2 Dimensions</th>
<th>Mean Patient</th>
<th>Typical Patient</th>
<th>Individual Patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Care</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Typical Care</td>
<td></td>
<td></td>
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<tr>
<td>Individual Care</td>
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**Management**

- DRGs, Clinical Pathways, Analysis of variances, profiles, Practice guidelines, protocols
- NMDS
2. Concept (N)MDS

REALITY → DATA → INFORMATION → KNOWLEDGE

a sea of data
patient records
archives

get through to information

professional insight & goodwill

NMDS
2. Concept MDS

- The **Nursing Minimum Data Set** (NMDS) is a classification system which allows for the standardized *collection of essential nursing data*.
- The collected data are meant to provide an *accurate description of the nursing process* used when providing *nursing care*.
- The NMDS allow for the *analysis and comparison of nursing data* across populations, settings, geographic areas, and time.
2. Concept MDS

The validity of a **NMDS** is predicated on identifying

1. ‘*core*’ elements of nursing practice, those which are used frequently by
2. the *majority of nurses*
3. *across care settings*, to yield a

‘**powerful but limited set of nursing data**’

(Goossen 2002)
2. Concept MDS

Three stages in the development of a NMDS

1. Selection of data terms

2. Turning data into information
   Establishing the validity and reliability of data; devising a database for data storage and useful analysis

3. Application
   Use dataset in clinical, managerial, educational or quality evaluation applications

(Sermeus, 2002)
2. Concept MDS

- The minimum dataset concept has been utilised in different areas of healthcare
- Sometimes on a multidisciplinary basis
- Example of a comprehensive suite of MDS application: see [www.interrai.org](http://www.interrai.org)
interRAI is an international collaborative to improve the quality of life of vulnerable persons through a seamless comprehensive assessment system.

Our consortium strives to promote evidence-informed clinical practice and policy decision making through the collection and interpretation of high-quality data about the characteristics and outcomes of persons served across a variety of health and social services settings. Read More >>
2. Concept MDS

NMDS in other countries:

- Australia (Turley, 1992)
- Finland (Turtiainen, 2000) adapted the B-NMDS to Finland
- Netherlands (Goossen, 2001)
2. Concept MDS

- International Nursing Minimum Data Set (i-NMDS)
- Based on US-NMDS and Belgian-NMDS
- uses the International Classification for Nursing Practice (ICNP®)
- Australia, Thailand, Japan, Netherlands, Switzerland, Finland, Canada, en Ireland
- Visit:  [www.nursing.umn.edu/ICNP](http://www.nursing.umn.edu/ICNP)
2. Concept i-NMDS supports:

- Describing client health status, nursing interventions, care outcomes, and resource consumption related to nursing services
- Improving the performance of health care systems and the nurses working within these systems worldwide
- Enhancing the capacity of nursing and midwifery services
- Addressing the nursing shortage, inadequate working conditions, uneven distribution and inappropriate utilization of nursing personnel
- Testing evidence-based practice improvements
3. Belgian-NMDS

• Main purpose of the Belgian-NMDS =

1. To improve *nursing performance conditions*
   (increase budget & better allocation of resources)

2. to increase the *effectiveness of nursing care*
3. Belgian-NMDS version 1

**General**

- Compulsory by law since 1988
- All Belgian acute Hospitals (n=141)
- Sample: 15 days / 4 months
  - (first half of March, June, Sept, Dec = 60 days/year)
- Government chooses at random 5 days out of each month (incl. 1 weekend day) = reference database
- >20 Million nursing records since 1988
- Largest Nursing Dataset in the world
3. Belgian-NMDS version 1

Content

• General information about hospital

• Patient demographics:
  • Age; gender; date of admission and discharge from hospital; hour of admission and discharge from nursing unit

• Nurse staffing data per ward:
  • number FTE; number of hours worked/nurse; qualification; number of beds in ward
3. Belgian-NMDS version 1

23 nursing interventions:

1. Care in relation to hygiene (degree of help: 4 categories)
2. Care in relation to mobility (degree of help: 4 categories)
3. Care in relation to excretion (degree of help: 4 categories)
4. Care in relation to nutrition (degree of help: 4 categories)
5. Tube feeding
6. Oral care
7. Prevention of pressure ulcers (by alternating positions)
8. Help with clothing (daywear)
3. Belgian-NMDS version 1

23 nursing interventions:

9. Care of endotracheal canule or ETube
10. Nursing anamnesis
11. Selfcare training (occasionally or programme)
12. Care of emotional problems
13. Care of desorientated patient (protective measures)
14. Isolation measures to prevent contamination
15. Registration vital parameters (most frequent parameter)
16. Registration fysical parameters (most frequent parameter)
3. Belgian-NMDS version 1

23 nursing interventions:

17. Supervision traction, plaster, external fixator
18. Blood samples (number/24h)
19. Medication (IM, SC, ID) (number/24h)
20. Medication IV (number/24h)
21. Supervision IV-infusion (number of lines)
22. Woundcare (surgical wound)
23a. Size of traumatic wound (4 categories)
23b. Woundcare of traumatic wounds (times/24h)
Hygiene
Mobility
Excretion
Nutrition
Tube feeding
Oral care
Pressure ulcer prevention
Clothing
Tracheostomy
Anamnesis
Self support
Emotional care
Desorientation
Isolation
Vital parameters
Physical parameters
Traction/plaster cast/external fixation
Venous puncture
Medication IM/SC/ID
Intravenous medication
IV Infusion
Surgical woundcare
Size traumatic wound
Woundcare (trauma)