

# Update 2

National Council for the Professional Development of Nursing and Midwifery

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## The Irish Nursing Minimum Data Set

Information about the development of an Irish Nursing Minimum Data Set undertaken by the School of Nursing and Midwifery at Dublin City University and the School of Nursing, Midwifery and Health Systems at University College, Dublin was included in the National Council's report *Evaluation of the Extent of Measurement of Nursing and Midwifery Interventions in Ireland* (National Council, 2006, pp15-16). This factsheet contains an update on this Irish project based on information kindly provided by Professor Anne Scott, Deputy President and Registrar of Dublin City University, who is still involved in the ongoing development of the data set.



### What is a Nursing Minimum Data Set?

A nursing minimum data set (NMDS) provides a formal structure for electronic data sets to support nursing (and midwifery) care in all settings. What distinguishes it from other healthcare data sets is the inclusion of nursing care elements (i.e., nursing diagnoses, interventions and nursing outcomes).

#### A NMDS AIMS TO:

- establish comparability of nursing data across clinical populations, settings, geographic areas, and time
- describe the nursing care of patients/clients and their families in a variety of settings, both institutional and non-institutional
- demonstrate or project trends regarding nursing care provided and the allocation of nursing resources to patients/clients according to their health problems or nursing diagnoses
- stimulate nursing research through links to the detailed data existing in nursing information systems and other health care information systems
- provide data about nursing care to influence clinical, administrative, and health policy decision-making (American Nurses' Association, 1994).

Log on to the website of the International Council for Nurses to find out more about the international Nursing Minimum Data Set - [www.icn.ch/matters\\_i-NMDS.htm](http://www.icn.ch/matters_i-NMDS.htm)

### Developing the Data Set in Ireland

Improving our understanding of how to use nursing resources most effectively can be achieved through the identification of how nurses organise their role in terms of activities and interventions. This can also be achieved by analysing how nursing interventions relate to patient outcomes. The need to explicitly define the nursing role has been recognised in Ireland. This has led to the development of a nursing information system to assess nursing care across both general and mental health settings. Preliminary research relating to descriptions of the Irish general and mental health nursing roles was completed in the years 2003 to 2006 (Scott et al, 2006). This resulted in the development of the Irish Nursing Minimum Data Set (I-NMDS) for general nursing and the I-NMDS for mental health nursing. Several paper-based studies undertaken to date have established the validity and reliability of the I-NMDS tools (e.g. Morris et al, 2009 in press). Furthermore the I-NMDS can discriminate across care specialties and can distinguish between different patient groups such as acute inpatient and community-based mental health client groups, oncology and surgical ward-based groups. The I-NMDS can therefore be used with a good degree of confidence in research regarding descriptions and effectiveness of nursing care.

### Investigating Nursing-Sensitive Patient/Client Outcomes

Research conducted to date indicates that the I-NMDS can be used to study nursing-related patient outcomes (Morris,

2009 unpublished). It also has the potential to be used in repeated measures research on the impact of environmental conditions and the mediating effects of nursing interventions on client outcomes. This kind of research is important in safeguarding the future of nursing and ensuring appropriate resources are made available to provide effective and quality nursing services in Ireland.

International research suggests that a nursing workforce educated to a higher level than previously can reduce the requirement for greater volumes of nursing staff in the pursuit of improved client outcomes (Aiken et al, 2003). The I-NMDS could be used in Irish studies to establish whether better educated nurses operating in smaller teams, comprising appropriate skill mix and better nurse-

to-patient ratios result in more effective patient care. The results of such a study could have serious implications for health service organisation and resource management in the future. Other potential uses of the I-NMDS are shown in Box 1.

The I-NMDS (MH) has the potential to provide valuable information to inform hospital budgeting, nurse staffing and consequently client safety. In Belgium, the San Joaquin patient classification system has been integrated into the Belgian Nursing Minimum Data Set (Sermeus et al, 2007). This provides information on patient needs to inform nurse staffing levels and consequently to ensure patient to nurse ratios are adequate and safe. This system includes a classification of nursing workload according to whether it is 'low intensity' or 'high intensity', using a five-point scale. Integrating a workload measure into the I-NMDS will be important in ensuring its future use to inform staffing resource management and safe nurse to patient ratios.

Nursing-related patient outcomes can also be assessed using the I-NMDS. By recording the severity of the patient problem and the corresponding interventions over a period of time, it is possible to evaluate the effectiveness of the nursing care on, for example, the alleviation of dehydration.

## Where to next?

Work is continuing on the I-NMDS project, with a second phase focusing on judgement and decision-making. Separate but related developments include the Registered Nurse Forecasting (RN4Cast) project which will collect data on the nursing work environment and deployment of the nursing staff from hospital administration and from nurses themselves. The website [www.rn4cast.eu](http://www.rn4cast.eu) has more information about how these data will be used.

### Box 1. Potential Uses of the Irish Nursing Minimum Data Set

#### Data collected using the I-NMDS can:

- be easily analysed and graphed to provide information on nursing trends (e.g. client populations, nursing interventions and nursing practice across service and geographic boundaries)
- illustrate to service providers trends and patterns in nursing and client care
- inform hospital budgeting, nurse staffing levels and consequently patient safety
- inform developments in nursing education
- be used to forecast the supply and demand for nurses and midwives with specific knowledge, skills and competencies
- be integrated into the electronic patient record to facilitate access to nursing information and decision-making.

#### References

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**Further Reading:** *Irish Nursing Minimum Data Set Research Programme Publications* (April 2009) is available as a separate Word document and can be downloaded from the National Council's website. Click on the Nursing/Midwifery Interventions button on the homepage and follow the links to *Resources, Updates and Useful Links/Factsheets*.

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