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## MEETING OF WHO COLLABORATING CENTRES FOR THE FAMILY OF INTERNATIONAL CLASSIFICATIONS

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**Title:** Using the International Classification of Functioning Disability and Health (ICF) in nursing practice

**Authors:** T van Achterberg (Theo), PhD RN, University Medical Centre Nijmegen (UMCN) and H.A. Stallinga (Gonda), RN, Groningen University Hospital (AZG)

**Purpose:** for information and discussion

**Recommendations:**

### Abstract:

This paper describes a project that explored the use of the International Classification of Functioning, Disability and Health (ICF, previously known as ICIDH or ICIDH-2) in nursing practice. The project consisted of a series of ten studies at three University Medical Centres in the Netherlands. Nurses and nurse researchers at these centres joined forces with the Dutch Centre for Nursing and Care in an attempt to investigate the fit between the ICF and the nursing domain. The project explored the potential usefulness of the ICF in various applications for nursing practice.

The study took place during the ICIDH/ICF revision process. Since results for this study were transformed to fit the latest version of the classification, 'ICF' will be used throughout this text.

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## **ICF and nursing**

As with other care providers, not all nurses feel the need to use classifications or standardized terminologies. Many patient records around the world are filled with straight forward everyday language. Although easy to use, its variety and unclear definitions often contribute to confusion. Nurses who are aware of this problem often use mono-disciplinary nursing classifications are unaware of the ICF. Whereas these classifications can contribute to a better understanding among nurses, they were not developed to promote clear communication between disciplines. For this reason a Dutch project 'ICF in nursing' was undertaken.

## **AIM**

The project aimed at exploring the usefulness of the ICF to nurse provide patient care. Several practice tools were developed and the use of the ICF in these tools was explored. Furthermore, we looked at features of the ICF that hinder use of the classification by nurses.

## **METHODS**

A multi-centre study was constructed in three Dutch University Medical Centres provided the insight needed to evaluate the use of the ICF in relation to nurses' patient care. A total of 10 subprojects were carried out within the three collaborating centres.

A variety of clinical specialities and a variety of applications within the nursing process were addressed. All projects were hospital based, although some projects addressed applications in care across institutions. A total of 50 wards, units or outpatient clinics participated in the 10 projects. In total, information from 557 patients, 368 nurses and 158 others (physicians, allied health professionals, ICF experts) were used in the development of applications for nursing practice and the evaluation of the use of these applications in patient care.

These applications (n=24) were assessment forms, standardised nursing care plans, patient files, critical pathways, and discharge or care transfer forms. Nine of the projects all started at the development of ICF-based tools for clinical practice. The development was always performed in interaction with those who were the future users of each of the tools. In most of the projects patient cases were analysed using patient files or patient – care provider encounters, or patients were consulted directly to provide a frame of reference for instrument development in clinical practice. All tools that were developed were pilot tested and evaluated. One project did not aim at instrument development. This project focused on the possibilities of translating elements of nursing diagnoses, originally written in non-ICF language, to equivalents in ICF terminology.

## **Data collection and analysis**

Data on the actual use of elements of the ICF were collected in an analysis of the nursing practice tools developed in projects. Since all these projects aimed at a systematic development of specific practice tools, the actual tools can be seen as their final result. By

studying the ICF elements that were selected for these tools (content analysis), an overview of the use of the ICF in hospital based nursing applications could be obtained. The overview was completed with the results of the project on nursing diagnoses. For this project, all ICF elements that were used to transcribe nursing diagnoses to ICF compatible nursing diagnoses were registered. In collecting the data with regard to the actual use of the ICF and its components, we chose to differentiate between activities and participation.

Information on factors that could hinder the use of the ICF in nursing was collected by registering (1) topics that were needed in nursing practice tools and nursing diagnoses and that could not be derived from, or linked to, the ICF; (2) ICF elements that were used, but to some extent altered or adjusted in the subprojects and (3) comments from nurses and others who used the ICF or the ICF based tools in the subprojects.

## **RESULTS**

### **Actual use of the ICF**

Large sections of the ICF were used in the 10 projects. All components were addressed in the patient care tools. Furthermore, all domains within the components were used. The relative numbers of three digit codes that were selected in the studies were substantial, revealing a predominant focus on body functions (53% of all three digit codes and corresponding terms used). Codes within the component of activities and participation were most often used from the perspective of activities (38%), although one fifth of the codes (19%) were also addressed from the participation perspective. Furthermore, more than one third of the three digit codes describing environmental factors were selected to capture circumstances relevant to patients' functioning. Finally, about one third of the three digit codes in body structures was used, mainly to describe the aetiology of functional problems in nursing diagnoses. Body structures was the only component where a substantial number of four digit codes was used (75%). For all other components of the classification, less than 15% of these more specific codes were used.

A predominant focus on body functions and activities becomes clear from the selected codes and terms. Furthermore, the selection illustrates that elements of body functions were not only used to refer to physical functioning. Several mental functions, such as attention and memory, were also often addressed.

### **Topics that could not be derived from the ICF**

A number of items could not be selected from or linked to codes in the ICF. Some of these items appear to be rather accidentally missing from the classification (e.g. groin, neglect, homesickness). In other cases however, the 'missing items' seem to indicate a somewhat more substantial flaw of the classification. Whereas nurses often assess the condition of mucous tissues, information resulting from this assessment could not be linked to the ICF. Furthermore, specific nursing observations such as 'paleness' or 'hawking' could not be linked to the classification.

## **ICF elements that were altered or adjusted**

The ICF qualifiers, intended as tools to describe altered functioning, were often adjusted in the nursing practice applications. These adjustments included both rephrasing the meaning of each of the five points of the scale, as well as choosing a scale with a smaller range. The same pattern was found for the qualifiers in activities and participation (qualifiers adjusted in 15 of the 24 applications) whereas qualifiers for body structures and environmental factors were not used in most of the applications. For these components, the general choice was to work with dichotomous categories (yes/no, absent, present, normal, abnormal). Finally, a general comment regarding the ICF qualifiers was that potential problems could not be indicated. Whereas many nurses are used to signalling and reporting potential problems (e.g. risk of malnutrition, risk of pressure sores, risk of falling) the ICF qualifiers can only be used to indicate the presence or extent of a functional problem.

Apart from the alterations that were made in qualifiers, only a few examples of adjustments in terms were registered. These adjustments were mainly related to level of detail.

## **Comments made by application developers and users**

Nurses involved in the development of applications for nursing practice (n=101) and nurses who used and evaluated these applications (n=367) were invited to make all comments they considered relevant to the use of the ICF in nursing practice. The comments were collected using minutes from group meetings, remarks written in logbooks on the project units and free text questions on project evaluation forms.

Positive remarks made by nurses referred to the scope of the ICF. Nurses commented that the classification encouraged the assessment of not only functional impairments, but also of consequences for the patient's activities and participation. Nurses who used the ICF based applications reported a reduction in the variety of terms used in patient care and thought favourably of the use in interdisciplinary communication.

More critical remarks were made with regard to the coherence between terms within the classification. Nurses who were familiar with classifications such as NANDA commented that they missed the combination of related problems, signs and symptoms in coherent diagnoses. Furthermore, the use of neutral terms in the ICF was appreciated on the one hand but critiqued on the other hand. It was stated that neutral terms offers the possibility to classify and describe positive aspects of functioning, whereas classifications of 'problems' do not. On the other hand, the neutral terms were sometimes thought of as somewhat artificial, for instance in the use of 'structure of areas of skin' (s610) rather than 'wounds' or 'eczema'.

## **DISCUSSION**

The usefulness of the International Classification of Functioning Disability and Health was the central focus in our project. To facilitate meaningful results and conclusions, we generated a large variety of applications, experiences, opinions and evaluations. This implies that although objectivity can never be obtained, the project succeeded in approaching objective data by ensuring high levels of inter subjectivity.

The project used a multiple case study design, studying several applications of the ICF in nursing practice. Both strengths and limitations arise from this design. A first limitation is related to the settings; all projects were hospital based. This implies that our results might not

be valid in other care settings such as home care, nursing home care or care for the handicapped.

The ten subprojects varied in size and operational design. This sometimes hindered the comparison of results across projects. Since results from the projects largely corresponded, we believe that the variation across subprojects does not invalidate our conclusions.

## **CONCLUSION**

The International Classification of Functioning, Disability and Health can be a useful tool in classifying and communicating aspects of patient functioning. Our project showed that large sections of the classification apply to hospital based nursing and can be used with little difficulty. Furthermore, nurses commented that the ICF was rich in topics relevant to nursing and stimulated an assessment beyond body functions and structures. Nurses sometimes missed the pre-structured and comprehensive diagnoses as provided in other, mono-disciplinary classifications. However, the provision of such diagnoses is beyond the ICF purpose, which is to provide a classification of terms relevant to human functioning.

The three digit level of the classification seems appropriate for most nursing purposes, although more detail provided in four digit codes and corresponding terms regarding body structures can be needed to describe the exact aetiology of health related functioning.

Although our project predominantly illustrates the potential value of the ICF, some features of the classification can be improved from a nurse's perspective. These features relate to the ICF qualifiers that were often adjusted out of dissatisfaction with the scales provided and the level of detail in a limited number of items from the classification. Furthermore, some missing aspects of human functioning were identified in our study. These specific aspects of human functioning can serve as nursing input in future revisions of the classification.

Finally, the use of the ICF in nursing should be encouraged due to its relevance to nursing care and its promise of multidisciplinary use in health care and health care research. Parts of the classification can still be improved and would benefit from nurses' involvement in future revisions. In the meantime, exploring the use of the classification in all domains of nursing care and introducing the ICF in nursing curricula should go without further delay.