

#### Editorial Board

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# WHO Family of International Classifications (FIC)

# EWSLETTE

# Revision of WHO-FIC Newsletter: Action Is Required!

This present issue of the WHO-FIC newsletter will be the last paper issue; forthcoming issues will only appear digitally. This will mean that the newsletter will no longer be in your physical mailbox, but in your e-mail inbox instead.

Sadly, for a large part of our readership we have no e-mail addresses on record. To that end, we call out to all readers of the WHO-FIC Newsletter to register for receiving forthcoming issues electronically by sending an empty e-mail with "WHO-FIC Newsletter" in the subject line to: who-fic.newsletter@rivm.nl. During the Brasilia WHO-FIC annual meeting an empty poster will be available to write down your e-mail address. Just to be clear: if you don't do anything, we can not e-mail you any forthcoming issues of the newsletter, so action is required! Finally, we call out to all WHO-FIC collaborating centres around the world, centres under designtion, WHO regional offices, and WHO headquarters to post this message on their websites.

Obviously, the newsletter will remain in a lay-out that permits printing on the usual paper sizes. Another matter that will not be changed is that the WHO-FIC Newsletter continues to depend on your contributions! As with maintaining WHO classifications in a joint international context, we see producing the WHO-FIC Newsletter as a joint international pleasure! So please share your thoughts and experiences on using WHO classifications with us, and send us your contributions!

# For receiving forthcoming issues of the WHO-FIC newsletter via e-mail:

Please send an empty e-mail with "WHO-FIC Newsletter" in the subject line to: who-fic.newsletter@rivm.nl



# **Editorial**

This newsletter contains a lot of information relating to the ICF: the latest news concerning the ICF user guide (and we hope the next step will be the formal publication of it!), a draft ICF toolbox (please send your comments and recommendations!), report about an ICF training course, the use of the ICF in studying multimorbidity, the work of the Washington Group (city group of the UN) and an Italian survey. We see the interest and the relevance of the classification growing in several areas of application all over the world. We too see the need for update and revision, so please go to the update platform if you think an update is necessary [https://extranet.who.int/icfrevision].

We regret for not having any news about the ICD and the ICD-11 development. In the next issue we hope to be able to offer information regarding functioning properties in the ICD, which means a strong relationship between the ICD and the ICF, both reference classifications of the WHO Family of International Classifications.

Regarding other family members we offer information on ICPC, ISO9999, and ICNP. A meeting of the Family Development Committee regarding the ICHI (International Classification of Health Interventions) was held in Bejing and we expect to be able to offer more news about this new reference classification of the WHO-FIC in the next issue.

The annual meeting of the WHO-FIC network October 2012 in Brasilia will raise a lot of new items regarding the family and we will be happy to report on them for you in the next issue of this newsletter. Apart from that: we are really interested in your experience and opinion regarding members of the WHO-FIC. So please send us your information, experiences, comments and suggestions. Only by exchange of information we will be able to create the right set of classifications applicable for several aims and areas of application.

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# International Organizations

# **Washington Group on Disability Statistics**

# Summary of the 11th Annual Meeting (Bermuda) and Objectives for the 12th (Bangkok)

The main purpose of the Washington Group on Disability Statistics (WG) is the promotion and co-ordination of international co-operation in health statistics focusing on disability measures suitable for censuses and national

surveys. The WG has developed a short set of disability measures, suitable for use in censuses, sample-based national surveys, or other statistical formats, for the primary purpose of informing policy on equalization of opportunities. The WG is also developing extended sets of survey items to be used as components of population surveys or as supplements to specialty surveys. The World Health Organization (WHO) International Classification of Functioning, Disability, and Health (ICF) has been used as the basic framework for the development of the sets. All disability measures recommended by the group are accompanied by descriptions of their technical properties and guidance on implementation is provided. The WG disseminates its work products globally through the world-wide web and scientific publications.

Below is an overview of key issues covered during the 11<sup>th</sup> meeting of the WG, 14-16 November 2011 in Southampton, Bermuda.

#### Use of the WG Short Set

The WG is monitoring the use of the short set in the 2010 round of Censuses. Information on questions used in recent censuses and surveys, together with prevalence estimates, was requested from WG member countries. Preliminary analyses of the country results were presented. Of particular interest was the impact of modifications made to the question set and/or the response categories. Discussion focused on how these findings could be used to better inform countries about the collection of disability information and the potential impact of question wording.

### **WG Extended Set on Functioning**

The extended set of disability questions on functioning were added to the 2010 US National Health Interview Survey (NHIS). Preliminary findings were presented and discussion focused on how the data could be used to better understand the question set and to provide analytic guidance. The US National Center for Health Statistics, along with interested WG members, will continue analysis of data from the US NHIS.

# Update on the expansion of cognitive and field testing in the Middle East region

- A training workshop for question evaluation and cognitive interview methodologies was held in Muscat, Oman in October 2010. The workshop was hosted by the Ministry of National Economy and was attended by 15 representatives from NSOs of 9 Arab countries.
- In December 2010, the Arab Institute for Training and Research in Statistics (AITRS) sponsored a disability seminar in Damascus, Syria to transfer knowledge on disability definition and measurement among representatives from NSOs from Arab countries. The seminar was attended by 22 representatives from NSOs of 12 Arab countries.
- In May 2011, AITRS sponsored a second training workshop in Sharjah, United Arab Emirates (UAE) to train

participants in understanding and operationalizing disability measures developed by the WG. The training workshop was attended by 35 representatives from NSOs of 15 Arab countries and the UN Relief and Works Agency (UNRWA).

## **Methodological Issues Concerning Surveys**

Two work groups presented their accomplishments and work plan.

- A work group on child functioning and disability, chaired by the Italian National Institute for Statistics, presented a proposal for the development of a survey module including a conceptual framework and examples of how the framework could be operationalized. A delegate from UNICEF attended the meeting and presented information on the survey items used in the Multiple Indicator Cluster Surveys. The WG and UNICEF entered into a formal collaboration to develop a module on child functioning and disability.
- The work group investigating environmental factors chaired by the US National Center for Health Statistics, presented work on a conceptual framework and related questions sets. A session was held on how to address the intersection of environment and participation.

#### Updates on other WG and collaborative activities

The final version of the Budapest Initiative's question set on health state was adopted in November 2010 at the joint WG-BI meeting in Luxembourg and subsequently presented to Eurostat for inclusion in the next round of the European Health Interview Survey.

In February 2011, an expert group meeting was held in Bangkok to review the results of a second round of cognitive testing of the WG/UNESCAP extended question set. Among the objectives were to further train senior statisticians from Asia-Pacific on the skills required to undertake the analysis of cognitive interviews and discuss future areas of work on disability data collection and measurement. In June 2011 the World Report on Disability (WRD) was launched by the WHO and the World Bank. In order to enhance the availability, comparability and quality of data on disability the WRD proposes several recommendations that reflect directly on the work of the WG:

- Improve national disability statistics through the routine collection of disability data incorporated into national statistics programs.
- Develop appropriate tools (quantitative and qualitative methodologies) to improve and expand data collection on disability.
- Collect national population census data according to the recommendations from the WG and the UN Statistical Commission.
- Development and test extended measures of disability for use in population surveys or as the core of a disability survey as initiated by the Washington Group and Budapest Initiative.

• Improve collaboration and coordination between various initiatives to measure disability prevalence at global, regional and national levels (including the Budapest Initiative, European Statistical Commission, UNESCAP, United Nations Statistical Commission, Washington Group, WHO, United States and Canada).

### Objectives for the 12th WG meeting:

- To present additional analyses on use of the WG short set questions and results from data collected during the 2010 round of Censuses:
- To present additional work on extended set on functioning and results from further analysis of data from the US NHIS;
- To present an update on the development of the module on child functioning and disability;
- To present an update on extended sets of questions on environmental factors and participation.

The 12th meeting of the WG is scheduled to take place in Bangkok, Thailand; 23-25 October, 2012.

#### For information:

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# Wonca International Classification Committee (WICC)

# Primary care classification and current work: Summer 2012 update

We last provided an update on the work of WICC for the WHO-FIC newsletter in 2010. At that time, work on ICD-11 was in an earlier stage, and the relationships between WHO, IHTSDO, Wonca, as well as the future development of classification and terminology standards was just being worked out.

#### **Towards ICPC-3**

In 2010, WICC had started work on ICPC-3 by developing a primary care information model to guide its work. That draft model was the focus of our 2010 report to WHO-FIC. We based that model on a shared understanding of the core tasks of primary care clinicians worldwide to:

- 1. understand the full range of clinical problems experienced by patients,
- 2. know the social and personal context in which those problems take place,
- 3. take into account patients' own priorities and goals in providing care,
- 4. carry out preventive services, and
- 5. help patients identify and manage health risks.

### Five key components

We identified 5 key components to organize information about these tasks in our model: Person, Active Problems, Clinical Modifiers. Actions. Time, and Data Exchange. When we looked at existing standard tools like ICPC, ICD, and SNOMED-CT, we realized that each had strengths and limitations when applied to primary health care. We also realized that we could no longer work in isolation from other standardization organizations, as advances in health information technology would require harmonization and integration. So we reorganized our work, putting equal importance on "outside" work with WHO, IHTSDO, and others and "inside" work to improve our classification tools. Here is what we are doing in 2012.

# **Non-Episode-Related Information**

We always start from our shared understanding of how to best capture the everyday work of GPs as built into ICPC. ICPC-2 orders clinical information in primary care by linking three important elements of the health care encounter: RFE (reason for encounter), diagnosis (problems), and process (actions). The episode structure of ICPC adds the key component of time. We realized that we did not have a way to capture and express information related to the person (lifestyle, attitudes, social circumstances) or other factors that influence our clinical decisions (clinical modifiers, including 'risk factors'). The WICC group has discussed this problem several times over the last few years. We realized that this would be a very important addition but did not know how to approach it. We now think of this as Non-Episode-Related Information (NERI) that should be added or linked to other classification and terminology tools, like ICPC. It fits in the 'clinical modifiers' component of our Information model. We believe that a standard approach to recording NERI will be very important for clinical care as well as for interpreting primary care data. We also believe that it should be a primary focus of our work for the next few years.

## **Building on the experiences of others**

So we find ourselves in the process of developing a 'NERI classification' of personal and environmental factors for primary care as an important part of ICPC-3 - but we want to build on the experiences of others who are working in these areas. We have learned a lot by working with WHO-FIC on ICF and now ICD-11, and by mapping ICPC to ICD-10. We now aim to work with WHO-FIC to contribute to a taxonomy or list of personal and environmental factors, and body functions and participation/activities concepts (working from our experience with ICF) to fill this gap. We would like this work to start at the WHO-FIC meeting in Brasilia. We hope to coordinate our work on NERI through the Department of General Practice in Nijmegen under the leadership of Kees van Boven and Huib ten Napel. Interested persons can contact us at the email address listed below.

#### Reference term set

Over the past 2 years we have built strong working relationships with IHTSDO and ACGI. A General Practice/Family Practice Special Interest Group (GP-SIG) has been chartered by IHTSDO, and is working on a funded project to create a primary care reference term set (refset) in SNOMED-CT, than map that refset to ICPC-2. We are working with ACGI to create primary care case-mix tools using ICPC. We believe that these efforts will enhance our ability to analyze primary care data in countries using ICPC and SNOMED, and will build collaboration between our organizations in the longer term.

## Need for knowledge exchange

Our work is moving at a slower pace than in the 1980s, when we created ICPC. But the world is a much different place. Primary care classification and terminology tools must accommodate additional domains such as clinical and genetic risk factors, multi-morbidity, patients' goals and preferences, and functioning status, and link to highly specialized secondary care to enable data exchange and statistical analysis. This will require WICC members to work alongside experts in classification, terminology, and health information technology in ways that we could not have imagined a few years ago.

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# **World Health Organization**

# **Ouality and Implementation of WHO-FIC**

WHO-FIC Network Meeting 2012: 13 - 19 October

The 2012 annual meeting of the WHO Network of Collaborating Centres for the Family of International Classifications will be held in Brasilia, Brazil, at the Convention Centre Ulysses Guimares. Please find contact information, information about Brasilia, accommodations and social events at http://www.who-fic.com.br. The meeting will be hosted by the Brazilian Health Ministry, the Brazilian WHO Collaborating Centre for the Family of International Classifications, and the Pan-American Health Organisation.

The theme for WHO-FIC 2012 is 'Improving Quality and Implementation'. This topic highlights the importance of health information quality for effective health services, decision makers, and the ongoing international drive to improve the registration of vital events, morbidity and disability information. The meeting also addresses the relevance of discussing and sharing the best practices of FIC implementation in national health information systems.



A provisional timetable and meeting agenda will be available at <a href="http://www.who.int/classifications/network/meeting2012/en/index.html">http://www.who.int/classifications/network/meeting2012/en/index.html</a>. Other meeting documents, such as papers, posters, and meeting reports will become available on this website as well. During the first five days of the meeting the Committee & Reference Groups convene. On Thursday October 18th the meeting will be opened officially.

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# International Classification of Functioning, Disability and Health

### How to use the ICF?

A guide for the application of the ICF

If agreed on, the WHO-FIC Functioning and Disability Reference Group (FDRG) aims to present the 2012 version of the User Guide to the WHO-FIC Network Meeting in Brasilia for general dissemination and inclusion on the Education and Implementation Committee (EIC) website, as a public site where it will be visible, freely available and can be referenced.

# From coding guidelines to user guide

The FDRG has worked for some years on this Guide. The document was first envisaged as 'coding guidelines' to supplement the advice in the ICF, including its Annexes. However, the first group working on the task successfully advocated to FDRG that, because of the range of uses and users, the document should be a 'user guide' with broader advice on use as well as coding.

### Finalizing the work

Over the years a number of drafts have carefully been prepared and commented on. Since the 2011 annual

meeting, a core writing group has been working on the new format and contents, advised and assisted by those who volunteered (either at the 2010 or 2011 meetings) to be involved. Working meetings have been held during 2012, most recently in June 2012 in Udine, Italy, when 17 sets of useful (and generally positive) comments from this wider group were intensively workshopped and have since been incorporated into the final draft. A final round of comments from FDRG and EIC was processed before the annual meeting.

Thanks are due to all those who have made many useful inputs over the years of this work.

Ros Madden and Judith Hollenweger, on behalf of the ICF User Guide core writing group

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## **International Council of Nurses**

## Harmonising nursing terminology internationally

Collaboration between the International Council of Nurses and SabaCare

The International Council of Nurses (ICN) is excited to announce a new collaboration to advance nursing and eHealth. ICN and SabaCare, Inc. have partnered to harmonize the International Classification for Nursing Practice (ICNP®) and the Clinical Care Classification (CCC) System. This effort will result in ICN providing additional resources and tools to nurses to meet communication and information needs for health care. "This partnership is an exciting addition to the ongoing advancement of nursing's involvement in eHealth," noted David Benton, Chief Executive Officer of ICN. "This type of collaboration among the developers of nursing terminologies will promote the harmonization of nursing content within multidisciplinary health care terminologies and across national and international databases and registries of health."

Virginia K. Saba, CEO and President of SabaCare Inc. is enthusiastic about the partnership with ICN and assures nurses that it will advance the electronic documentation of nursing practice around the world. "The CCC System has been demonstrated to support the electronic capture of discrete patient care data for documenting and coding the 'essence of care' and measuring the relationship of nursing care to patient outcomes. Working with ICN can only help advance resources and tools for nurses worldwide."

As electronic health records become central to care in many countries, it is essential that nursing and health care

terminologies are aligned to promote seamless exchange of health data and information. The harmonization of ICNP and CCC will enhance the use of both classification systems and will go a long way to assure that the important contribution of nurses is represented in national and international health information infrastructures, as well as providing valuable contributions to the further development of other health care terminologies, such as SNOMED-CT and the International Classification of Diseases (ICD). Indeed, in an era of technological advancement, the collaboration of nurses across settings and countries will be enhanced by this exciting development as will the possibilities for greater use of eHealth technologies, such as the electronic health record.

ICNP® is part of the ICN eHealth Programme, whose vision is to transform nursing through the application of information and communication technology. More information on ICNP® can be found at www.icn.ch/pillarsprograms/international-classification-fornursing-practice-icnpr/.

More information on the CCC System © can be found at: www.sabacare.com or http:// clinicalcareclassification.com

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# FIC around the World

## Italy

# A Population Survey in Italy Based on the ICF Classification: Recognizing Persons with Severe Disability

This project was aimed to develop and test a disability evaluation protocol based on the ICF. Aim of the paper was to show the possibility of representing functional features of subjects that can be defined as "severely disabled" in terms of both impairments in body functions and limitations in executing task or activities.

#### **Instruments**

The project involved disability evaluation committees of eight Italian regions. People presenting a request to get a disability certification or periodical revision during 2009 were asked to enter in the study on a voluntary basis. The core of the protocol is composed of a section to collect information on body functions and body structures (BF and BS), and a section to collect information on activities and participation (A&P) in association with environmental factors (EF). The entire list of second-level BF and BS codes derived from the ICF-CY classification was used. With regard to A&P, 70 categories, mapped to the UN

Convention on the Rights of Persons with Disabilities, were included. Two different performance qualifiers were used. The first indicates the standard performance as defined by the ICF: the ability of a subject to execute an activity in his current environment, therefore including all available EF. The second qualifier the ability of the subject to execute an activity without personal support (WPS), but including assistive products, drugs, physical environment factors, and policies' effects.

#### **Methods**

The standardised five-point ICF qualifiers scale was modified, and only four qualifiers were available: Q0-no problem (rating percentage 0–4%); Q1-mild problem (rating percentage 5–24%); Q2-moderate/severe problem (rating percentage 25–74%); Q3-complete/very severe problem (rating percentage 75–100%). A count-based method was used and for BF and A&P domains two indexes were computed: "extension" and "severity". Extension is the count of categories in which Q1–Q3 were applied, whereas severity is the count of categories in which Q3 (describing only the range of very severe to complete problems) were applied. The two indexes underwent a linear transformation on a 0-100 scale.

To select the profiles representing "severe disability", two steps were taken. First, BF and A&P categories used in less than 5% of cases were eliminated. Second, a selection threshold was set: persons were eligible to the definition of "severe disability" if their severity index (for BF and/or A&P) was superior to the observed mean, plus one standard deviation. Therefore, subjects could be considered as "severely disabled" either because they had a high number of impairments in BF, or because they had a high number of limitations in A&P, or both.

### **Results**

1051 subjects (51.3% males) were enrolled: 41% aged 0–17, 28.9% aged 18–64, and 30.1% 65+. With regard to BF, mean severity score was 3.14 (sd 6.9): therefore, the selection threshold was 10.04. With regard to A&P-capacity, mean severity score was 20.13 (sd 21.57): therefore, the selection threshold was 41.7. Two-hundred persons (19% of the total) were included in the subsample of subject with severe disability, 58.5% were male, 47% were aged 0–17, 22% were aged 18–64, and 31% were 65 or older: 107 subjects were selected based on BF and 172 based on A&P and 79 based on both BF and A&P scores. Accounting for comorbidities, the most prevalent diseases were mental disorders (53%), neurological diseases (43%) and cardiovascular diseases (41%).

Both for extension and severity indexes, the difference was wider between performance and performance-WPS than between performance-WPS and capacity, thus showing the relevant impact of personal support for persons with severe disability. This is also confirmed by the prevalence of environmental factors, where factors connected to persona

support constitute 53% of all environmental factors: the most frequently reported are those referred to the support from family members, which is particularly relevant for activities connected to domestic life, self-care, major and social life areas.

#### Discussion

Our results show that most of the facilitating effect of the environment is due to the presence of persons actively providing support to the individual, and that the support from family members was the most relevant and widespread facilitator across all A&P domains. The analysis of the distribution of EF in connection to the differences observed between A&P indexes provides interesting cues for further analysis: in fact it enables to highlight the relationships between presence of a strong facilitating effect and the specific facilitators that have an impact over that improvement. This is very relevant to produce element of an "evidence-informed policymaking": if we take into account demographic features of the sample of subjects with severe disability, we can assume that majority of caregivers are elderly people or young parents that will be in need to care for their sons for a prolonged period of time. In both these two situations, some factual support should be provided to family members to prevent possible health problems as well as to enable the continuation of a remunerative employment.

Matilde Leonardi, Andrea Martinuzzi, Paolo Meucci, Marina Sala, Emanuela Russo, Mara Buffoni, Alberto Raggi. TheScientificWorldJOURNAL 2012;2012:189097, http://www.tswj.com/2012/189097/

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# The Netherlands

## **Draft ICF-Toolbox**

A lot of information concerning the ICF and related documents is available spread over different sources all over the world. In order to assist the users in finding them, we started to develop a draft ICF toolbox. See figure 1 on the right for our first effort. Several sources are still missing; we will work on the extension of the toolbox. For example as soon as the ICF User Guide and the ICF e-learning training tool are formally approved we shall include them in the toolbox and make the toolbox available through our website (http://www.rivm.nl/who-fic). In the meantime, we are very much interested to receive comments, corrections and additional sources of information from our readers.

## For information:

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What are you looking for?	Where can it be found?	What can you find there exactly?	
Print or E- versions of ICF/ICF-CY (or orderforms)	Go to http://apps.who.int/bookorders/anglais/home1. jsp and then search for ICF	ICF print version - Chinese, 2001 - English (full size book), 2001 - English (pocket sized book), 2001 - English Large Print Format for visually impaired, 2008 - Russian, 2001 ICF CD-ROM - Arabic, 2005 - Arabic, Chinese, English, Spanish, French, Russian, 2001 ICF-CY print and e-version - English E-book, PDF format, 2007 - English, 2007	
	http://rivm.nl/who- fic/icf.htm	- Dutch ICF/ICF-CY versions	
	http://www.dimdi.de/dy namic/de/klassi/downlo adcenter/icf/endfassun g/	- German ICF version	
ICF/ICF-CY online versions	Go to  http://www.who.int/clas sifications/network/en/ and then search for 'ICF'and 'ICF and ICF- CY online – multiple languages	- ICF Chinese - ICF English - ICF French - ICF Russian - ICF Spanish - ICF-CY English	
	http://class.who-fic.nl/	- Dutch ICF/ICF-CY versions	
	http://www.dimdi.de/sta tic/de/klassi/icf/kodesu che/index.htm	- German ICF version	
	http://www.who.int/clas sifications/network/en/	- See the websites of the WHO- FIC Collaborating Centers for other language versions	
ICF/ICF-CY related information	http://www.cdc.gov/nch s/icd/nacc_education_c ommittee.htm	- Checklist for Implementation of WHO-FIC Members at Country Level - Curriculum Modules for ICF - ICF info sheet	
	www.cdc.gov/nchs/icd/i cf.htm	- ICF Clearinghouse newsletter 2002 - 2011	
	www.who.int/classifications/icf/en/	<ul><li>ICF application areas</li><li>Application and Training tools</li></ul>	
	www.who.int/classifications/icf/icfapptraining/en/	- ICF checklist - WHO Disability Assessment Schedule 2.0 (WHODAS 2.0) - ICF Training Beginners Guide, 2002	
	https://extranet.who.int/icfrevision/	- ICF update platform - ICF Update Platform User Guide, Draft February 2010	
	http://www.rivm.nl/who-	- ICF literature database	

Figure 1: Draft version of the ICF-Toolbox

# ICF training for senior nurses and nurse instructors in a Dutch General Hospital

From March to July 2012 a four month training took place for senior nurses and nurse instructors of Tergooi Hospitals in Hilversum by trainers from the Dutch WHO-FIC Collaborating Centre.

- WHO-FIC Newsletters

### **Background**

records necessitated a reflection on the nursing process and the use of a classification system. After a thorough literature study, a practical research and a consultation of experts, a project team of mainly nurses made the choice for ICF. This choice was approved by the board of the hospital as it would facilitate the communication and exchange of data with other disciplines, and contribute to quality of care. The project team developed a new nursing assessment form, using the ICF framework. At the same time a group of senior nurses and nurse instructors were offered a course to master the ICF way of thinking. In this way, integration of practical experience (by testing) and evolving knowledge, would lead to qualitative good contribution to a further level

The merger of two hospitals with different nursing care

#### Aim

The aim of the training was to develop expertise in the ICF that would deliver useful ICF based products for further development and implementation of the ICF in the nursing process within the hospital.

of the ICF in the nursing process.

#### Method

The ICF Trainers course was undertaken in a period of four months, during which 12 students worked on mastering the principles and content of the ICF. The proof of the pudding was the completion of the final assignment: to create an ICF application.

The training is guided by means of a structured time-table in which 8 tasks had to be performed with 3 group meetings for reflection, and individual counseling by e-mail contact with the trainers.

The training used the so called principle of meaning and application oriented learning. This means that the student learns primarily by undertaking tasks in which the ICF itself is discovered and learned. The tasks are alternately focused on knowledge, comprehension, application, analysis, synthesis and evaluation.

The methods that are used during the course are e.g.:

- Individual assignments, such as reading texts, developing case study, presentation, etc.,
- 20 to 30 minutes lectures aimed at knowledge and understanding or explaining ICF,
- Discussion on the assignments,
- Group assignments with two or more persons aimed at identifying main points and mutual relationships, analyze, reflect, and draw conclusions for each own application in practice.

Of course, the ICF or ICF-CY book (Dutch version) is used, and several published international articles on the use and application of the ICF in different areas are used and integrated in the course on which a number of assignments are focused. The time to be invested during the training course is on average 2 to 3 hours per week. The final assignment is presented at the closure of the course. A

certificate from the Dutch WHO FIC CC is received when a student has participated fully in the discussions and assignments and has completed the final assignment.

#### Results

During the group meetings it became apparent that most of the students had limited notion of the underlying wishes from the board of the hospital. They were also confronted with the complex content and assignments of the ICF Trainers course. However, this was not a barrier to participate in the course. In the beginning, some with a little reservation, but as time went on, and the final assignments became clearer, the enthusiasm for the ICF has grown. All kinds of cross links and mutual benefits were discovered and reflected in further details of the implementation of the final assignments. As final assignment the following applications of ICF are made:

- a training plan for ICF, and manual for trainers
- an e-learning module
- a form for a nursing plan
- a form for multidisciplinary consultation
- forms for reporting of paramedical disciplines
- expansion of the nursing assessment form and addition of ICF codes
- a design for evaluating the nursing assessment form based on the ICF

All students have succeeded in completing the final assignment. At the last day of the course all products were presented in the presence of a member of the senior management. Further plans for dissemination and coordination of the above implementations and professional training of (nursing) hospital staff is presently under development and will be presented to and discussed with the hospital board.

### Conclusion

For the students of the Tergooi Hospitals the ICF Training course has proven to provide a sound basis for gaining knowledge on ICF and skills for implementing ICF principles and content in tailored solutions for daily use within the hospital. Overall the working methods of the ICF Training course makes students more aware of each others wishes, needs and requirements and therefore facilitates cooperation within the complex setting a hospital is. It is also shown that even if the incentive for the ICF course comes from above, at the end the people on the work floor will take over the initiative when common goals are discovered and ownership of solutions is shared.

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### Impact of multimorbidity on functioning

Evaluating the ICF core set approach

Chronic conditions can lead to considerable deterioration in functioning. Several condition-specific Core Sets, selections of categories from the International Classification of Functioning, Disability and Health (ICF), have been developed to facilitate the rehabilitation process. Considering the increase in patients with more than one specific condition, we evaluated the impact of multimorbidity on functioning and the implications for the Core Set approach.

		Group 1	Group 2	
		RD		
		N=127	N=707	
ICF d codes	IMPACT-S Items	% se	% serious	
	limitations/ restrictions		restrictions	
	Learning and app	lying knowledg	ge	
110-129	1 Purposeful	5	14*	
	sensory			
	experiences			
160-199	3 Applying	4	15*	
	knowledge			
	General tasks and	demands		
240-2409	5 Task execution	17	34*	
	in stressful			
	circumstances			
	Mobility			
450-469	14 Walking and	34	47*	
	moving			
	Interpersonal interactions and relationships			
770-7709	26 Intimate	15	26*	
	relationships			
	Community. social and civic life			
910-9109	29 Community	13	26*	
	life			
920-9209	30 Recreational	33	45*	
	and leisure			
940-999	32 Citizenship	9	22*	

Table 1 Proportion of respondents (%) in both groups who report serious limitations/restrictions ('considerable limitations / restrictions' or 'I can't do this at all') on the individual items of IMPACT-S; Group 1: respondents with rheumatic disease only (RD); Group 2: respondents with RD and multimorbidity (RD+MM). The ICF d codes represent the corresponding ICF categories. Only those items are shown with significant differences between groups.

#### Methods

Data were collected by means of an internet survey held among people with a chronic illness and/or disability in the Netherlands in 2010 as part of a study on not insured costs for people with chronic disease and/or disability. A total of 127 people with a rheumatic disease and 707 people with rheumatic disease and multimorbidity were included. The

respondents provided self-report information on chronic conditions and perceived functioning using the IMPACT-S (ICF Measure of Participitation and Activities Screener) questionnaire, measuring the ICF component activities and participation (32 items).

#### Results

The mean number of reported serious limitations / restrictions was 5.6 (standard deviation (SD) 5.7) for respondents with rheumatic disease and 6.7 (SD 6.8) for respondents with rheumatic disease and multimorbidity (p < 0.05). Seventeen items were relevant (more than 20% of the respondents reported serious limitations/restrictions) for individuals with rheumatic disease and multimorbidity, and 12 items were relevant for individuals with rheumatic disease only. For almost all IMPACT-S items, more respondents with RD and multimorbidity reported serious limitations/restrictions than did respondents with RD without multimorbidity; significant differences were found for eight of these items; shown in Table 1.

#### **Discussion**

Multimorbidity seriously aggravates the already existing functioning problems of people with rheumatic disease. We recommend that the focus of the current ICF core set approach should shift from individual diseases to individual patients in order to accommodate the increasing proportion of the population with multimorbidity. In this respect, an empirical approach is advocated which allows systematic analysis of the impact of patterns of multimorbidity on ICF functional profiles. For the empirical approach we advocate, we suggest to create an empirical database which includes patterns of (co)morbidity and associated patterns of limitations/restrictions for patients with RD. Based on this empirical dataset, the reported (co)morbidity of a client will result in a pattern of relevant limitations/ restrictions, but likewise also the abilities to be addressed in the evaluation process of this specific client.

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### **Dutch translation of ISO 9999 – version 2011**

In July 2011 the new version of the international standard ISO 9999 *Assistive products for persons with disability - Classification and terminology* was published. In ISO 9999

assistive products are classified according to their function. ISO 9999 is a related member of the WHO Family of International Classifications (WHO-FIC).

# Start of decision process

As soon as the ISO 9999 was published, a discussion started in the Dutch mirror committee whether it was necessary to make a Dutch translation of the new version, comparable to the translations of all the earlier versions of ISO 9999. Although it is always difficult to find funding for such a task, it was considered important to make such a translation to promote the use of the ISO 9999 in Dutch health care.

### **Necessity of uniformity of language**

On a yearly base, about 2,5 million Dutch people with disability apply for the provision of assistive products. By using the proper assistive products impairments can be supported or compensated as well as limitations in activities. Assistive products help people to participate in society and live a full life. It is a challenge to provide people with disability with the most adequate assistive products. To promote the proper use of assistive products and harmonize the provision process, uniformity of language is necessary. Without uniformity of language communication about assistive products is impossible and exchange of data between the different parties involved – health professionals, producers, financing parties, and the users themselves – is not possible.

### ISO 9999 provides basic information

As the ISO 9999 is the basis of all kinds of derived products, such as search systems for clients and professionals and declaration systems, very soon after the publication of ISO 9999 it was decided to translate the ISO 9999 in Dutch. The translation can be purchased at the Dutch Normalization Institute (NEN) (http://www.nen.nl/web/Normshop/Norm/NENENISO-99992011-nl.htm).

# Terminology explorer ISO 9999

Funding was received from Nictiz, the National IT Institute for Healthcare in the Netherlands. Nictiz provided the translators with a very useful tool facilitating the translation process. On the website of Nictiz a Terminology Explorer ISO 9999 is available (http://terminologie.nictiz.nl/iso-9999) and there is an App for both Android and IOS (made by Verkaik) for easy access to and browsing through the (Dutch translation) of ISO 9999.

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# ICF References

- **3204 Abdullah MF, Mohd Nor N, Mohd Ali SZ et al.** Validation of the comprehensive icf core sets for diabetes mellitus: A Malaysian perspective. Annals of the Academy of Medicine Singapore, 2011 40(4) 168-178
- **3187 Badley EM.** More than facilitators and barriers: fitting the full range of environmental and personal contextual factors into the ICF model.. Proceedings of the 12th annual North American Collaborating Centre Conference on ICF, 2006
- **3139 Bahn Ak.** A multi-disciplinary psychosocial classification scheme. Amer J Orthopsychiat, 1971 41(5) 830-848
- **3170** Bakker RH, Bronsema J, Brouwer S, Dijkstra GJ et al. Disability insurance: can underwriting criteria for the self-employed be based on predictors used for disability amongst employees?. J Insur Med, 2006 38 259-270
- **3163 Barker DJ, Reid D, Coti C.** The experience of senior stroke survivors: factors in community participation among wheelchair users. Can OJ Occup Ther, 2006 73 18-25
- **3153 Baylor CR, Yorkston KM, Eadie TL.** The consequences of spasmodic dysphonia on communication-related quality of life: a qualitative study of the insider's experieces. J Common Disord, 2005 38 395-419
- **3137 Biggeri M, Bellanca N, Bonfanti S, Tanzj L.** Rethinking policies for persons with disabilities through the capability approach: the case of the Tuscany Region. Alter, 2011 5(3) 177-191
- **3141 Blashfield RK, Draguns JG.** Evaluatieve criteria for psychiactric classification. Journal of Abnormal Psychology, 1976 85(2) 140-150
- **3140 Bussmann H, Berg-Emons R van den, Stam H.**Beweeggedrag van patienten met chronische fysieke condities.
  Nederlands Tijdschrift voor Revalidatiegeneeskunde, 2011 1 5-12
- **3205 Castro S, Pinto AI, Maia M.** Linking the carolina curriculum for preschoolers with special needs to the ICF-CY. British Journal of Developmental Disabilities, 2011 57(2) 133-146
- **3181 Conti-Becker A, Doralp S, Fayed N, Kean C et al.** A comparison of the International Classification of Functioning, Disability, and Health to te disability tax credit. Can J Occup Ther, 2007 74 spec.no 281-287
- **3142** Coster W, Law M, Bedell G, Khetasni M, Cousins M, Teplicky R. Development for the participation and environment measure for children and youth:conceptual basis. Disability and Rehabilitation, 2011 online 1-9
- **3158** Cruice M, Worrall L, Hickson L, Murison R. Finding a focus for quality of life with aphasia: social and emotional health, and psychological well-being. Aphasiology, 2003 17 333-353
- **3149 Dagfinrud H, Kjeken I, Mowinckel P, Hagen KB, Kvien TK.** Impact of functional impairment on ankylosing spondylitis: impairment, activity limitation, and participation restrictions. J Rheumatol, 2005 32 516-523
- **3203 Duncan RP, Earhart GM.** Measuring participation in individuals with Parkinson disease: realationships with disease severity, quality of life and mobility. Disability and Rehabilitation, 2011 33(15-16) 1440
- **3159 Eadie TL.** Application of the ICF I communication after total laryngectomy. Semin Speech Lang, 2007 28 291-300

- **3210 Fradette J, Gagnon I, Kennedy E et al.** Clinical decision making regarding inervention needs of infants with torticollis. Pediatric Physical Therapy, 2011 23(3) 249-256
- **3192 Geyh S, Peter C, Mueller R et al.** The Personal Factors of the International Classification of Functioning, Disability and Health in the literature a systematic review and content analysis. Disability and Rehabilitation, 2011 33(13-14) 1089-1102
- **3175 Glista SO, Pollens RD.** Educating clinicians for meaningful, relevant, and purposeful aphasia group therapy. Top Lang Disord, 2007 27 351-371
- **3138 Godberg D.** Manual of the general health questionnaire., 1978
- **3188 Gutenbrunner C, Ward AB, Chamberlain MA.** White book on physical and rehabilitation medicine in Europe. J Rehabil Med, 2007 39 1-48
- **3202** Hasset LM, Tate RL, Moseley AM, Gillett LE. Injury severity, age and pre-injury exercise history predict adherence to a home-based exercise programma in adults with traumatic brain injury. Brain Injury, 2011 25(7-8) 698-706
- **3143** Heerkens Y, Kuiper C, Engels J, Oostendorp R. Gebruik van de ICF bij het in kaart brengen van arbeidsrelevante factoren. Issue, 2003 1 1-2
- **3144 Hempel, CG.** A logical appraisal of operationism. Philosophy of Science, 1965 123-170
- **3162 Henderson S, Skelton H, Rosenbaum P.** Assistive devices for children with functional impairments: impact on child and caregiver function. Dev Med Child Neurol, 2008 50 89-98
- **3164 Hickson L, Scarinci N.** Older adults with acquired hearing impairment: applying the ICF in rehabilitation. Semin Speech Lang, 2007 28 283-290
- **3176 Hilari K.** Choosing relevant outcomes for aphasia: a commentary on Ross and Wertz, "Advancing appraisal: Aphasia and the WHO". Aphasiology, 2005 19 870-900
- **3145 Hodiamont PPG, Veling SHJ.** Een model voor het bepalen van psychiatrische praevalentie: de relatie GHQ-PSE. Tijdschrift voor psychiatrie, 1984 26(8) 592-608
- **3161 Kagan A, Simmons-Mackie N.** Beginning with th end: outcome-driven assessment and intervention with life participation in mind. Top Lang Disord, 2007 27 309-317
- **3146 Kelders S, Brakel W van, Beise K, Irwanto.** Testing and validating a simplified scale to measure social participation of people with disabilities in Indonesia. Disability and rehabilitation, 2011 online 1-9
- **3201 Kemps RJJK, Siebes RC, Gorter JW et al.** Parental perceptions of participation of preschool children with and without mobility limitations: validity and reliability of the PART. Disability and Rehabilitation, 2011 33(15-16) 1421
- **3211 Kiltz U, Heijde D van der, Cieza A, Boonen A et al.** Developing andvalidating an index for measuring health in patients with ankylosing spondylitis. Rheumatology, 2011 50(5) 894-898
- **3198 Kim TY, Coenen A.** Towards harmonising WHO International Classifications: unursing perspective. Informatics for Health and Social Care, 2011 36(1) 35-49
- **3150 Kjeken I, Dagfinrud H, Slatkowsky-Christensen B et al.** Activity limitations and prticipation restrictions in women with hand osteoarthritis: patients' descriptions and associations between

- dimensions of functioning. Ann Rheum Dis, 2005 64 1633-1638
- **3208 Kostansjek N, Rubinell1 S, Escorpizo et al.** Assessing the impact of health conditions using the ICF. Disabillity and Rehabilitation, 2011 33(15-16) 1475-1482
- 3155 Kuijer W, Brouwer S, Preuper HR et al. Work status and chronic low back pain:exploring the International Classification of Functioning, Disability and Health. Disabil Rehabil, 2006 28 379-388
- **3178** Law M, Finkelman S, Hurley P et al. Participation of children with physical disabilities: relationships with diagnosis, physical function, and demographic variables. Scand J Occup Ther, 2004 11 156-162
- **3182 Lehman CA.** Idiopathic intracranial hypertension within the ICF model: a review of the litarature. J Neurosci Nurs, 2003 35 263-272
- **3209 Lobet S, Hermans C, Pasta G, Detrembleur C.** Body structure versus body function in haemophilia: The case of haemophilic ankle arthropathy. Haemophilia, 2011 17(3) 508-515
- **3168 Lund SK, Light J.** Long-term outcomes for individuals who use augmentative and alternative communication: part 2 communicative interaction. Augment Altern Commun, 2007 23 1-15
- **3169 Ma EP, Yiu EM, Abbott KV.** Application of the ICF in voice disorders. Semin Speech Lang, 2007 28 343-350
- **3156 MacDonald-Wilson KL, Nemec PB.** The International Classification of Functioning, Disability and Health (ICF) in psychiatric rehabilitation. Rehabil Educ, 2005 19 159-176
- **3179 Mackenzie AE, Lee DT, Ross FM.** The context, measures and outcomes of psychsocial care interventions in longterm health care for older people. Int J Nurs Pract, 2004 10 39-44
- **3207** Manabe S, Miuara Y, Takemura T et al. Development of ICF code selection tools for mental health care. Methods of information in medicine, 2011 50(2) 150-157
- **3165 McDonald R, Surtees R, Wirz S.** The International Classification of Functioning, Disability and Health provides a model for adaptive seating interventions for children with cerebral palsy. Br j Occup Ther, 2004 67 293-302
- **3148** McLeod S, McCormack J. Application of the ICF and ICF-children and youth in children with speech impairment. Semin Speech Lang, 2007 28 254-264
- **3174 McLeod S.** An holistic view of a child with unintelligible speech: insights from the ICF and ICF-CY. Adv Speech Lang Pathol, 2006 8 293-315
- **3151 Mitra S.** The capability appraoch and disability. J Disabil Policy Stud, 2006 16 236-247
- **3167 Möller K, Danermark B.** Social recognition, participation, and the dynamic between the environment and personal factors of students with deafblindness. Am Ann Deaf, 2007 152 42-55
- **3213 Nyberg VE, Novo M, Sjölund BH.** Do Multidimensional Pain Inventory Scale score changes indicate risk of receiving sick leave benefits 1 year after a pain rehabilitation programme?. Disability and Rehabilitation, 2011 33(17-18) 1548-1556
- **3197 O'Donovan MA, Doyle A.** Measuring Activity and Participation of people with disabilities An overview. HRB, 2006 1 1-20
- 3189 Okawa Y, Ueda S. Implementation of the International

- Classification of Functioning, Disability and Health in national legislation and policy in Japan. Int J Rehabil Res, 2008 31 73-77
- **3147 Oztuna D, Yanik B, Kutlay S, Aytur YK et al.** Psychometric properties of the ICF core set for low back pain and its clinical use. Turkish Journal of Rheumatology, 2011 26(1) 44-52
- **3171 Pajalic Z, Karlsson S, Westergren A.** Functioning and subjective health among stroke survivors after discharge from hospital. J Adv Nurs, 2006 54 457-466
- **3184 Palisano RJ.** A collaborative model of service delivery for children with movement disorders: a framework for evidence-based decision making. Phys Ther, 2006 86 1295-1305
- **3166 Penney J, MacKay- Lyons MJ, MacDonald A.** Evidence-based stroke rehabilitation: case analysis using the international classification of funtioning, disability and health framework. Phys Ther Can, 2007 59 22-38
- **3196 Pisoni C, Giardini A, Majani G, Maini M.** International Classification of Functioning, Disability and Health (ICF) Core Set for osteoarthritis. A useful tool in the follow-up of patients after jopint arthroplasy. Eur J Phys Rehabuil, 2008 44(4) 377-385
- **3199 Pistarini C, Aiachini B, Coenen M, Pisoni C.** Functioning and disability in traumatic brain inury: the Italian patient perspective in developing ICF Core Sets. Disability and Rehabilitation, 2011 online 1-13
- **3195 Port IGL van de, Berdenis van Berlekom S, Baines RJ et al.** Meten = Weten: evaluatie van vier meetinstrumenten voor uitkomsten van revalidatie. Revalidata, 2007 29(139) 3-7
- **3185 Post MW, Witte LP de, Schrijvers AJ.** Quality of life and the ICIDH: towards an integrated conceptual model for rehabilitation outcomes research. Clin Rehabil, 1999 13 5-15
- **3206** Prodinger B, Salzberger T, Stucki G, Stamm T, Cieza A. Measuring Functioning in People with Fibromyalgia (FM) Based on the International Classification of Functioning, Disability and Health (ICF) A Psychometric Analysis. Pain Practice, 2011 article in press
- **3172 Pryor J, Forbes R, Hall-Pullin L.** Is there evidence of the International Classification of Functioning, Disability and Health in undergrate nursing students' patient assessments?. Int J Nurs Pract, 2004 10 134-141
- **3173 Ross KB, Wertz RT.** Advancing appraisal: aphasia and the WHO. Aphasiology, 2005 19 860-900
- **3191 Seger W, Cibis W, Hagen T, Harai G et al.** Aspects of expertise which are jointly valid for German sociomedicine and statutory health care. Gesundheidswesen, 2004 66 43-50
- **3190 Shakespeare T, Iezzoni LI, Groce NE.** Disability and the training of health professionals. Lancet, 2009 374 1815-1816
- **3180 Sjogren-Ronka T, Ojanen MT, Leskinen EK et al.** Phytical and psychosocial prerequisites of functioning in relation to work ability and general subjective weel-being among office workers. Scand J Work Environ Health, 2002 28 184-190
- **3152 Smiley DF, Threats TM, Mowry RL, Peterson DB.** The International Classification of Functioning, Disability and Health (ICF): implications for deafness rehabilitation education. Rehabil Educ, 2005 19 139-158
- **3157 Soberg HL, Finset A, Bautz-Holter E, Sandvik L, Roise O.** Return to work after severe multiple injuries: a multi-dimensional approach on status 1 and 2 years postinjury. J Trauma, 2007 62 471-481

- **3206 Steel EJ, Witte LP de.** Advances in European assitive Technology service delivery and recommendations for further improvement. Technology and Disability, 2011 23(3) 131-138
- **3160 Stephens D, Gianopoulos I, Kerr P.** Determination and classification of the problems experienced by hearing-impaired elderly people. Audiology, 2001 40 294-300
- **3131 Strong DA, Brown WJ.** Promoting prosocial beliefs and behaviour towards people with disabilities in Nepal, through a children's entertainment-education programme. Disability, CBR and Inclusive Development, 2011 22(2) 22-37
- **3193 Stucki G.** Has the time come for a system-wide dissemination and implementation of the ICF in American PM&R and the American rehabilitation system?. PM and R, 2011 3(4) 400-401
- **3205 Tessier A, Mayo NE, Cieza A.** Content identification of th IWQOL-Lite with the International Classification of Functioning, Disability and Health. Qulity of life research, 2011 20(4) 467-477
- **3136 Trani JF, Bakhshi P, Bellanca N, Biggeri M, Marchetta F.** Disabilities through the Capability Approach Lens: Implications for public policies. Alter, 2011 5(3) 143-157
- **3183 Ustun B.** Using the international classification of functioning, disease and health in attention-deficit/hyperactivity disorder: Seperating the disease from its epiphenomena. Ambul Pediatr, 2007 7 132-139
- **3186** Viol M, Grotkamp S, Treeck B van, Nuchtern E et al. Personal contextual factors, part I. Gesundheidswesen, 2006 68 747-759
- **3133 VNG.** Denken in resultaten; bouwsteen voor een nieuwe modelverordering WMO. VNG, 2009
- **3134 VNG.** Het Gesprek: Deel I: Bouwsteen voor de nieuwe modelverordening WMO. VNG, 2010
- **3135 VNG.** Het Gesprek: Deel II: Praktische handreiking. VNG, 2010
- **3204 Walsh R.** Looking at the ICF and human communication through the lens of classification theory. International Journal of Speech-Language Pathology, 2011 13(4) 348-359
- **3200 Wasiak J, McMahon M, Danilla S et al.** Measuring common outcome measures and their concepts using the International Classification of Functioning, Disability and Health (ICF) in adults with burn injury: A systematic review. Burns, 2011 37(6) 913-924
- **3154 Weigl M, Cieza A, Cantista P, Stucki G.** Physical disability due to musculoskeletal conditions. Best Pract Res Clin Rheumatol, 2007 21 167-190
- **3177 Weigl M, Cieza A, Kostanjsek N, Kirschneck M, Stucki G.** The ICF comprehensively covers the spectyrum of health problems encountered by health professionals in patiensts with musculoskeletelal conditions. Rheumatology, 2006 45 1247-1254
- **3212 Winthrop Rose B, Kasch MC, Aaron DH, Stegink-Jansen CW.** Does hand therapy literature incorporate the holistic view of health and function promoted by the world health organization. Journal of Hand Therappy, 2011 24(2) 84-88
- **3132 World Health Organization, Geneve.** Medical devices: managing the mismatch; an outcome of the Priority Medical Devices project. World Health Organization, Geneva, 2010