Identification of relevant functional issues for the care of patients with acute arthritis by health professionals, using the ICF framework and a multi-disciplinary focus group approach

J. Zochling[1], E. Grill[2], R. Alten[3], J. Ernst[4], G. Stucki[2,5], J. Braun[1]

[1]Rheumazentrum-Ruhrgebiet, St. Josefs-Krankenhaus, Herne; [2]ICF Research Branch of the WHO FIC Collaborating Center (DIMDI), IHRS, Ludwig-Maximilians-University, Munich; [3]Schlosspark-Klinik, Berlin; [4]Rheumazentrum-Oberammergau, Oberammergau; [5]Department of Physical Medicine and Rehabilitation, Ludwig-Maximilians-University, Munich, Germany.

Abstract

Objective

To identify the most relevant problems to be addressed in the multi-disciplinary care of patients with acute arthritis using focus groups of health professionals followed by a Delphi process.

Methods

Focus group and Delphi methodology were applied. The focus groups were conducted at three specialist rheumatology hospital clinics in Germany, each group comprising rheumatologists, nurses, physiotherapists, occupational therapists, psychologists and social workers. The participants were asked to decide which categories of the International Classification of Functioning, Disability and Health (ICF) are relevant to the care of patients with acute inflammatory arthritis. The results from the focus groups were then followed by an anonymous Delphi process.

Results

Twenty-six health professionals participated in the 3 focus groups. 167 of the second-level ICF categories (63% of all second-level categories) were considered as relevant by the rheumatology health professionals. Items from all four components, Body Functions, Body Structures, Activities and Participation and Environmental Factors were represented. Agreement between focus groups and between different health professional groups was substantial for all components with the exception of Environmental Factors (Cohen's kappa 0.23).

Conclusions

The involvement of experts from different health professions is a valuable tool to identify typical patient characteristics, expressed as distinct ICF categories, to aid in patient care in the acute rheumatology setting. Acute patient care cannot and should not be separated from ongoing long-term management.

Key words

Outcome assessment, rheumatoid arthritis, arthritis.

Jane Zochling, MBBS, PhD, Research Fellow; Eva Grill, PhD, Epidemiologist; Rieke Alten, MD, Rheumatologist; Jutta Ernst, MD, Rheumatologist; Gerold Stucki, MD, Professor of Physical and Rehabilitative Medicine; Jürgen Braun, MD, Professor of Rheumatology.

Please address correspondence and reprint requests to: Prof. Dr. med. Jürgen Braun, Rheumazentrum-Ruhrgebiet, St.Josefs-Krankenhaus, 44652 Herne, Germany.
E-mail:
J.Braun@rheumazentrum-ruhrgebiet.de

Received on June 12, 2006; accepted in revised form on December 5, 2006.

Competing interests: none declared.

Introduction

Acute inflammatory arthritides such as rheumatoid arthritis, psoriatic arthritis and crystal-associated disease can be grouped together as predominantly peripheral joint diseases characterized by significant joint pain, joint swelling and stiffness and varying degrees of loss of function. Without adequate treatment, these inflammatory arthritides can progress to joint destruction and permanent disability (1, 2). Optimal patient care encompasses a wide range of multi-disciplinary therapeutic interventions both in the acute setting and for ongoing care.

The goals of multi-disciplinary interventions are to maintain and to restore functioning, to prevent disability and to avoid the need for long-term care (3, 4). Physicians and health professionals caring for patients with acute arthritis should be able to recognize the need for multi-disciplinary interventions as a part of ongoing care (5, 6), appreciate the unique and complementary contribution each professional group can make to patient care and patient satisfaction (7, 8), and communicate patients' needs and functioning status to other health professionals within the same unit or across units and health care services (5). To facilitate this process, a common understanding of functional health and disability is essential.

In May 2001, the 51st World Health Assembly approved the newest member of the World Health Organization's family of classifications, the International Classification of Functioning, Disability and Health (ICF) (9). The ICF was developed to describe how an individual lives with his or her health condition; how it affects him or her with regards to body structures and functions, activities and participation in daily life, and also allows description of specific contextual factors, which may impact the interaction between health condition and individual. It represents a comprehensive database of concepts, a language for functioning and health on which communication between health professionals might be based.

It is important to identify the spectrum or range of functioning and health concepts relevant to a specific situation, in this case relevant to patients with acute arthritis. Issues which patients with acute arthritis feel are important to their functioning and health have already been identified by way of a cross-sectional study (10). In addition to the patient viewpoint, focus groups (10) and Delphi techniques (11) can be used to elicit the viewpoint of the health professionals, perhaps one of the most important perspectives when considering the implementation and outcome of multi-disciplinary care and communication between health professional groups collaborating on patient care. Information generated by focus groups can be superior to data from other research methods, because focus group information results not only from the personal experience of the group members but also from group interaction (10).

The objective of this study was to identify the most relevant functioning problems encountered by patients with acute inflammatory arthritis from the point of view of the health professional, using the ICF and three focus groups followed by a Delphi process.

Methods

Focus groups

To allow the collection of large amounts of information in a short time with peer validation of opinions, a focus group approach was used (12). The groups were conducted at three rheumatology hospital clinics across Germany (Berlin, Herne and Oberammergau) in April and May 2005.

Each focus group was made up of health professionals involved in the care of patients with acute arthritis at their participating hospital, including doctors, nurses, physiotherapists, occupational therapists and psychologists. The process explicitly aimed to incorporate interaction between members of the different professional groups. The size of each focus group was set at approximately 10 persons to accommodate the different professions but to allow for easy interaction.

All participants received a copy of the second level ICF components and information about the focus group process one week prior to the focus group

meeting. Copies of the complete ICF manual (9) were made available during the sessions. Participants were asked to make themselves familiar with the major features of the classification and the process prior to the sessions. At the beginning of each focus group the participants were educated about the content and scope of the project and were introduced to the coding system of the ICF. Participants were instructed to consider the typical problems of patients with acute peripheral joint inflammation, such as new onset of rheumatoid arthritis or an acute disease flare.

The participants were then asked to decide which ICF categories are relevant to these patients, and encouraged to discuss the contents of the ICF categories. When necessary, the comments and examples given by the ICF classification manual (9) were read aloud. Participants were asked to make statements regarding the relevance or irrelevance of each category and then to vote by raising hands. The moderator was not allowed to vote. The vote did not have to be unanimous. Results were recorded immediately.

A group assistant observed the focus process and the data recording to avoid number preference bias and manipulation. Votes were counted by two persons. The moderator and group assistant (EG, JZ) were health professionals with expertise in the ICF and in conducting group processes.

Delphi exercise

Pressure from dominant individuals may influence the voting decisions of other participants in the focus group setting. A recent Health Technology Assessment of consensus methods recommends that such group interactions caused by the status of participants should be minimized (13). In order to minimise these effects and maximise the retrieval of individual expert opinion, the focus groups were followed by an anonymous Delphi round. After the focus groups had been conducted, the results from the three hospitals were combined and returned to each individual participant. All participants in the focus groups were asked to revote for or against each category, taking into account the results of the focus group votes, without further discussion between participants. Second votes were identified only by site and professional group. A category was reported if at least 50% of the health professionals considered the category to be relevant in the Delphi round. This voting round can be interpreted as the second step of an iterative Delphi process as described in the Delphi literature (13, 14).

Data analysis

Data were analysed using descriptive

Table I. International Classification of Functioning, Disability and Health (ICF) categories of the component Body Functions considered relevant for patients with acute inflammatory arthritis (by > 50% of participants).

ICF Code	ICF category title	Number votes	% vote
Chapter 1: *Mental functions*			
b126	Temperament and personality functions	16	62
b130	Energy and drive functions	26	100
b134	Sleep functions	26	100
b140	Attention functions	20	77
b144	Memory functions	15	58
b152	Emotional functions	24	92
Chapter 2: *Sensory functions and pain*			
b210	Seeing functions	24	92
b215	Function of structures adjoining the eye	25	96
b220	Sensations associated with the eye and adjoining structures	25	96
b240	Sensations associated with hearing and vestibular function	14	54
b265	Touch function	23	88
b270	Sensory functions related to temperature and other stimuli	15	58
b280	Sensation of pain	26	100
Chapter 4: *Functions of the cardiovascular, haematological, immunological and respiratory systems*			
b410	Heart functions	19	73
b415	Blood vessel functions	26	100
b420	Blood pressure functions	25	96
b430	Haematological system functions	25	96
b435	Immunological system functions	26	100
b440	Respiration functions	25	96
b445	Respiratory muscle functions	22	85
b455	Exercise tolerance functions	26	100
b460	Sensations associated with cardiovascular and respiratory functions	16	62
Chapter 5: *Functions of the digestive, metabolic and endocrine systems*			
b510	Ingestion functions	21	81
b530	Weight maintenance functions	21	81
b535	Sensations associated with the digestive system	24	92
Chapter 6: *Genitourinary and reproductive functions*			
b640	Sexual functions	22	85
b660	Procreation functions	18	69
Chapter 7: *Neuromusculoskeletal and movement-related functions*			
b710	Mobility of joint functions	26	100
b715	Stability of joint functions	26	100
b720	Mobility of bone functions	26	100
b730	Muscle power functions	26	100
b735	Muscle tone functions	26	100
b740	Muscle endurance functions	26	100
b770	Gait pattern functions	26	100
b780	Sensations related to muscles and movement functions	26	100
Chapter 8: Functions of the skin and related structures			
b810	Protective functions of the skin	26	100
b820	Repair functions of the skin	26	100
b840	Sensation related to the skin	24	92
b850	Functions of hair	25	96
b860	Functions of nails	16	62

statistics. The Kappa statistic was reported as measure of agreement between hospitals and between professions (15) with its 95% confidence interval. The Kappa statistic ranges from –1.0 to 1.0. Positive values indicate levels of agreement higher than expected by chance. Negative values indicate levels of agreement lower than expected by chance. Kappa statistics of 0.61 to 0.80 have been considered 'substantial' agreement and Kappa statistics above 0.81 have been considered 'almost perfect' (16).

Results

Twenty-six health professionals participated in the study, contributing to both the 3 focus groups and the Delphi round vote. There were 9 rheumatologists, 9 nursing professionals, 4 physiotherapists, 3 occupational therapists and 1 psychologist, evenly distributed across the groups.

167 (63%) of the 265 specific second level ICF categories were considered to be relevant by the health professionals, receiving a majority (> 50%) of the vote. 144 (54%) received a majority vote from all three professional groups; 125 (47%) received over two thirds of the vote from all three professional groups. The final results of the Delphi round vote are shown in Tables 1-4. Forty-three of the 79 items (54%) from the component Body Functions were included, 19/40 (48%) from Body Structures, 47/82 (57%) from Activities and Participation and 58/64 (91%) from Environmental Factors, comprising 26%, 11%, 28% and 35% of all items receiving a majority vote respectively.

Table V shows the agreement between the different sites and between the different health professions after the initial group votes and also after the individual Delphi round vote. Agreement between professions was very good, and substantially better than the moderate agreement seen between different hospital focus groups. When agreement between groups was measured for each of the four ICF components (Body Functions, Body Structures, Activities and Participation, and Environmental Factors), agreement was near perfect for Body Structures between professional groups (Cohen's kappa 0.85 to 0.95) and substantial for Body Functions and Activities and Participation (kappa 0.65 to 0.88). Agreement was poor for the component Environmental Factors, both between professional groups (kappa 0.32 to 0.41) and between hospital focus groups (kappa less than 0.23).

Table II. International Classification of Functioning, Disability and Health (ICF) – categories of the component Body structures considered as relevant for patients with acute arthritis (by >50% of participants).

ICF Code	ICF category title	Number votes	% vote
Chapter 2: *The eye, ear and related structures*			
s230	Structures around eye	23	88
Chapter 3: *Structures involved in voice and speech*			
s320	Structure of mouth	23	88
Chapter 4: *Structures of the cardiovascular, immunological and respiratory systems*			
s410	Structure of cardiovascular system	25	96
s420	Structure of immune system	25	96
s430	Structure of respiratory system	25	96
Chapter 5: *Structures related to the digestive, metabolic and endocrine systems*			
s510	Structure of salivary glands	22	85
s530	Structure of stomach	22	85
s540	Structure of intestine	24	92
s560	Structure of liver	16	62
Chapter 7: *Structures related to movement*			
s710	Structure of head and neck region	26	100
s720	Structure of shoulder region	26	100
s730	Structure of upper extremity	26	100
s740	Structure of pelvic region	26	100
s750	Structure of lower extremity	26	100
s760	Structure of trunk	26	100
s770	Additional musculoskeletal structures related to movement	26	100
Chapter 8: *Skin and related structures*			
s810	Structure of areas of skin	26	100
s830	Structure of nails	24	92

Discussion

Using focus group and Delphi techniques it was possible to identify the most relevant problems facing patients with acute inflammatory arthritis, from a multi-disciplinary health care team perspective. These are the issues health professionals deal with every day in their care of the patient with acute arthritis, in the acute setting, in early planning of the course of therapy and initiation of early rehabilitation. Of particular interest was the groups' inability to separate acute patient care and long-term management. From the very first presentation to a doctor, the care of the patient with acute arthritis is a combination of immediate symptom control using pharmacologic and/or physical interventions, and initiation of long term multi-disciplinary strategies to improve physical function, prevent joint destruction and preserve quality of life.

Consistent with this, the range of items related to functioning, disability and health identified as important in the care of patients with acute arthritis was extremely broad. All body functions and body structures related to movement were unanimously selected, as were all activities and participations in the chapter 'mobility' (with the exception of d480, riding animals for transportation), supporting the face validity of the results. In addition to the musculoskeletal system, most of the other body systems were also represented, indicating the important association of acute arthritis with disease in other organ systems. Participants were not willing to separate these effects of the disease from the effects of joint inflam-

Table III. International Classification of Functioning, Disability and Health (ICF) – categories of the component Activities and Participation considered as relevant for patients with acute arthritis (by >50% of participants).

ICF Code	ICF category title	Number votes	% vote
Chapter 2: *General tasks and demands*			
d240	Handling stress and other psychological demands	26	100
Chapter 3: *Communication*			
d360	Using communication devices and techniques	16	62
Chapter 4: *Mobility*			
d410	Changing basic body position	26	100
d415	Maintaining a body position	26	100
d420	Transferring oneself	26	100
d430	Lifting and carrying objects	26	100
d435	Moving objects with lower extremities	26	100
d440	Fine hand use (picking up, grasping)	26	100
d445	Hand and arm use	26	100
d450	Walking	26	100
d455	Moving around	26	100
d460	Moving around in different locations	26	100
d465	Moving around using equipment	26	100
d470	Using transportation	26	100
d475	Driving	26	100
Chapter 5: *Self-care*			
d510	Washing oneself	25	96
d520	Caring for body parts	25	96
d530	Toileting	25	96
d540	Dressing	25	96
d550	Eating	25	96
d560	Drinking	25	96
d570	Looking after one's health	25	96
Chapter 6: *Domestic life*			
d610	Acquiring a place to live	18	69
d620	Acquisition of goods and services	26	100
d630	Preparing meals	26	100
d640	Doing housework	26	100
d650	Caring for household objects	26	100
d660	Assisting others	26	100
Chapter 7: *Interpersonal interactions and relationships*			
d710	Basic interpersonal interactions	17	65
d720	Complex interpersonal interactions	19	73
d750	Informal social relationships	18	69
d760	Family relationships	25	96
d770	Intimate relationships	26	100
Chapter 8: *Major life areas*			
d810	Informal education	21	81
d820	School education	23	88
d825	Vocational training	24	92
d830	Higher education	25	96
d840	Apprenticeship (work preparation)	26	100
d845	Acquiring, keeping and terminating a job	26	100
d850	Remunerative employment	26	100
d855	Non-remunerative employment	25	96
d870	Economic self-sufficiency	21	81
Chapter 9: *Community, social and civic life*			
d910	Community life	23	88
d920	Recreation and leisure	26	100
d930	Religion and spirituality	17	65
d940	Human rights	16	62

mation. Other areas receiving high levels of support from the health professionals were items relating to self-care, domestic and working life, reflecting the overwhelming influence arthritis has on all aspects of a patient's functioning within his or her environment.

The effect of the environment on the patient and his/her disease was also highly represented, with over 90% of the available items selected. Environmental factors are classified as contextual factors in the ICF, and although it may not be possible to alter the environmental context in which a patient is required to function, it is important to be aware of the potential supportive or detrimental influences under which the arthritis patient lives. A somewhat higher proportion of environmental factors were selected by the health professionals than items from body functions, body structures or activities and participation, and in general did not stimulate a great deal of discussion within each group, in contrast to similar exercises with different medical specialties in the acute hospital (17). This again is likely to be a result of the overwhelming influence that the inflammatory arthritides have on both physical and social functioning as an individual and on a societal level.

Overall, the agreement among the focus groups and hence between the three sites across Germany was moderate to substantial (16), and agreement among the different health professions after the second Delphi vote was substantial to almost perfect. This suggests that participants were not guided by their profession but integrated the results of the first vote into a patient-centred view.

The major strengths of this study lie in the range of different health professionals involved in the focus group process, the quality of the discussions within the groups and the willingness of all participants to contribute to the process, and the use of the ICF as a comprehensive set of functioning, disability and health concepts on which patient-oriented discussions could be based. Conclusions are not solely based on the opinions of physicians, but incorporate an equal voice from nursing staff and allied health professionals who are involved in the daily care of patients with acute arthritis and thus give us a more complete picture of the issues relevant to patient care. Using the ICF as the basis for the discussions minimized the

Table IV. International Classification of Functioning, Disability and Health (ICF) – categories of the component Environmental Factors considered as relevant for patients with acute arthritis.

ICF Code	ICF category title	Number of votes	% vote
Chapter 1: *Products and technology*			
e110	Products or substances for personal consumption	26	100
e115	Products and technology for personal use in daily living	26	100
e120	Products and technology for personal indoor and outdoor mobility and transportation	26	100
e125	Products and technology for communication	26	100
e130	Products and technology for education	25	96
e135	Products and technology for employment	26	100
e140	Products and technology for culture, recreation and sport	23	88
e145	Products and technology for the practice of religion or spirituality	14	54
e150	Design, construction and building products and technology of buildings for public use	25	96
e155	Design, construction and building products and technology of buildings for private use	26	100
e160	Products and technology of land development	26	100
e165	Assets	18	69
Chapter 2: *Natural environment and human-made changes to environment*			
e210	Physical geography	14	54
e215	Population	16	62
e220	Flora and fauna	14	54
e225	Climate	26	100
e230	Natural events	18	69
e235	Human-caused events	17	65
e240	Light	22	85
e245	Time-related changes	17	65
e250	Sound	14	54
e255	Vibration	14	54
e260	Air quality	14	54
Chapter 3: *Support and relationships*			
e310	Immediate family	26	100
e315	Extended family	26	100
e320	Friends	26	100
e325	Acquaintances, peers, colleagues, neighbours and community members	26	100
e330	People in position of authority	23	88
e340	Personal care providers and personal assistants	26	100
e350	Domesticated animals	19	73
e355	Health professionals	26	100
e360	Other professionals	26	100
Chapter 4: *Attitudes*			
e410	Individual attitudes of immediate family members	26	100
e415	Individual attitudes of extended family members	26	100
e420	Individual attitudes of friends	26	100
e425	Individual attitudes of acquaintances, peers, colleagues, neighbours and community members	26	100
e430	Individual attitudes of people in positions of authority	26	100
e440	Individual attitudes of personal care providers and personal assistants	20	77
e445	Individual attitudes of strangers	15	58
e450	Individual attitudes of health professionals	25	96
e455	Individual attitudes of other professionals	22	85
e460	Societal attitudes	26	100
e465	Social norms, practices and ideologies	19	73
Chapter 5: *Services, systems and policies*			
e515	Architecture and construction services, systems and policies	25	96
e520	Open space planning services, systems and policies		69
e525	Housing services, systems and policies	26	100
e530	Utilities services, systems and policies		62
e535	Communication services, systems and policies		69
e540	Transportation services, systems and policies	26	100
e545	Civil protection services, systems and policies		54
e555	Association and organizational services, systems and policies		65
e560	Media services, systems and policies		65
e570	Social security, services, systems and policies	26	100
e575	General social support services, systems and policies	26	100
e580	Health services, systems and policies	26	100
e590	Labour and employment services, systems and policies	26	100

risk of omitting important issues and standardized the focus group process between hospital sites.

Limitations of the study lie in the inherent dynamics of any focus group process. The presence of one or two overpowering or professionally 'superior' individuals within a group can influence the within-group voting from more impressionable participants and dominate the direction of the discussions (10). The use of an anonymous Delphi round after the focus groups had been completed was used to counteract this effect, giving each individual a second vote without influence from other group members. It is possible that the patient base differs between the three focus group sites and thus reducing the validity of combining results. Each group was introduced to a 'standard' acute arthritis patient before the discussions began and encouraged to discuss the case with respect to their own experiences before voting; there were no significant differences between the three groups with regards to the patients discussed in this phase. All three groups had difficulty separating 'acute' from longer-term patient care, and all groups concluded that management of the patient with acute arthritis must include the planning of future medical therapy and rehabilitation; chronic care begins in the acute phase.

Finally, the ICF categories can be complicated and often open to different interpretations. Each focus group was given approximately 1 hour of training in the ICF prior to the item discussions; however interpretation of each item was not influenced by the moderator or the assistant, so that different interpretations between groups may have led to different results. Altogether, even though most of the participants have not been expert in the application of the ICF beforehand, the groups accustomed themselves quickly to the ICF model, structure and language.

This study accentuates the wide range of patient functioning and health problems which rheumatology health professionals are confronted with in their daily care of patients with acute inflammatory arthritis. It is important to recognize the common goals of multi-

Table V. Agreement between the focus groups and between health professions on relevant categories of the International Classification of Functioning, Disability and Health (ICF).

	Group 1	Group 2	Cohen's kappa (95% CI) Group vote	Delphi vote
Focus group	Berlin	Herne	0.59 (0.49, 0.69)	0.60 (0.50, 0.70)
	Herne	Oberammergau	0.60 (0.50, 0.70)	0.63 (0.54, 0.72)
	Oberammergau	Berlin	0.49 (0.39, 0.59)	0.49 (0.39, 0.59)
Health profession	Physicians	Nurses	0.91 (0.86, 0.96)	0.80 (0.73, 0.87)
	Nurses	Therapists	0.87 (0.81, 0.93)	0.77 (0.65, 0.81)
	Therapists	Physicians	0.79 (0.72, 0.86)	0.73 (0.66, 0.80)

disciplinary therapy, and the use of an ICF-based language may well improve communication between health professionals as they work towards these goals. The large number of issues identified by participants in this study reflects the complexity of patient care; the next step will be the definition of a core set of ICF categories which are essential for the daily care of acute arthritis to improve the accessibility of the ICF for clinical care purposes (18), as has been done for other conditions and settings (19-27). The opinions of the multi-disciplinary health professionals described in this study will be combined with the patient viewpoint (28) and the researchers' viewpoint (29) to define an ICF core set for acute arthritis, a selection of categories out of the complete classification which can serve as minimal standards for the assessment, communication and reporting of functioning and health for clinical studies, clinical encounters and multi-professional comprehensive assessment and management.

Acknowledgements

We thank the following members of the focus groups for their valuable contributions during the focus groups and the subsequent Delphi process: Dr. Heldmann, Dr. Fendler, Dr. Sarabasi, Hr. Willing, Fr. Kleine-Onnebrink, Fr. Tengelmann, Hr. Becker, Hr. Hansson, Fr. Bärbel, Dr. Bienecke, Hr. Marten, Dr. Schacher, Hr. Koberstaedt, Fr. Schott, Dr. Pohl, Fr. Bader, Fr. Hartig, Dr. Kaufmann, Dr. Hollatz, Fr. Spangenberg, Fr. Spicher, Fr. Böse, Hr. Reinicke.

References

1. BADLEY EM, TENNANT A: Impact of disablement due to rheumatic disorders in a British population: estimates of severity and prevalence from the Calderdale Rheumatic Disablement Survey. *Ann Rheum Dis* 1993; 52: 6-13.
2. SOKOLL KB, HELLIWELL PS: Comparison of disability and quality of life in rheumatoid and psoriatic arthritis. *J Rheumatol* 2001; 28: 1842-6.
3. STUCKI G, STIER-JARMER M, GRILL E, MELVIN J: Rationale and principles of early rehabilitation care after an acute injury or illness. *Disabil Rehabil* 2005; 27: 353-9.
4. MARTIN L: Rheumatoid arthritis: symptoms, diagnosis, and management. *Nurs Times* 2004; 100: 40-4.
5. VLIET VLIELAND TP: Multidisciplinary team care and outcomes in rheumatoid arthritis. *Curr Opin Rheumatol* 2004; 16: 153-6.
6. VLIET VLIELAND TP, BREEDVELD FC, HAZES JM: The two-year follow-up of a randomized comparison of in-patient multidisciplinary team care and routine out-patient care for active rheumatoid arthritis. *Br J Rheumatol* 1997; 36: 82-5.
7. TIJHUIS GJ, KOOIMAN KG, ZWINDERMAN AH, HAZES JM, BREEDVELD FC, VLIET VLIELAND TP: Validation of a novel satisfaction questionnaire for patients with rheumatoid arthritis receiving outpatient clinical nurse specialist care, inpatient care, or day patient team care. *Arthritis Rheum* 2003; 49: 193-9.
8. SCHOLTEN C, BRODOWICZ T, GRANINGER W *et al*.: Persistent functional and social benefit 5 years after a multidisciplinary arthritis training program. Arch Phys Med Rehabil 1999; 80: 1282-7.
9. WORLD HEALTH ORGANISATION (WHO): INTERNATIONAL CLASSIFICATION OF FUNCTIONING, DISABILITY AND HEALTH: ICF. Geneva, WHO, 2001.
10. KNODEL J: The design and analysis of focus group studies: a practical approach. *In* MORGAN DL, (Ed.). *Successful focus groups: advancing the state of the art*. Newbury Park, Sage, 1993: 35-50.
11. DELBECQ AL, VAN DE VEN AH, GUSTOFON DH: Group Techniques for Program Planning. *A guide to nominal group and Delphi processes*. Glenview, Illinois, Scott, Foresman and Company, 1975.
12. STEWART DW, SHAMDASANI PN: *Focus groups. Theory and practice*. Newbury Park, London, Sage, 1990: 17.
13. MURPHY MK, BLACK NA, LAMPING DL *et al*.: Consensus development methods, and their use in clinical guideline development. *Health Technol Assess* 1998; 2: i-88.
14. LINSTONE HA, TUROFF M: *The Delphi method*. London, Addison-Wesley, 1975.
15. COHEN J: A coefficient of agreement for nominal scales. *Educat Psychol Measurement* 1960; 20: 37-46.
16. LANDIS JR, KOCH GG: The measurement of observer agreement for categorical data. *Biometrics* 1977; 33: 159-74.
17. GRILL E, QUITTAN M, HUBER EO, BOLDT C, STUCKI G: Identification of relevant ICF categories by health professionals in the acute hospital. *Disabil Rehabil* 2005; 27: 437-45.
18. STUCKI G, CIEZA A: The International Classification of Functioning, Disability and Health (ICF) Core Sets for rheumatoid arthritis: a way to specify functioning. *Ann Rheum Dis* 2004; 63 (Suppl. 2): ii40-ii45.
19. CIEZA A, SCHWARZKOPF S, SIGL T *et al*.: ICF Core Sets for osteoporosis. *J Rehabil Med* 2004; 44 (Suppl.): 81-6.
20. DREINHOFER K, STUCKI G, EWERT T *et al*.: ICF Core Sets for osteoarthritis. *J Rehabil Med* 2004; 44 (Suppl.): 75-80.
21. GEYH S, CIEZA A, SCHOUTEN J *et al*.: ICF Core Sets for stroke. *J Rehabil Med* 2004; 44 (Suppl.): 135-41.
22. GRILL E, EWERT T, CHATTERJI S, KOSTANJSEK N, STUCKI G: ICF Core Sets development for the acute hospital and early post-acute rehabilitation facilities. *Disabil Rehabil* 2005; 27: 361-6.
23. RUOF J, CIEZA A, WOLFF B *et al*.: ICF Core Sets for diabetes mellitus. *J Rehabil Med* 2004; 44 (Suppl.): 100-6.
24. SCHEURINGER M, STUCKI G, HUBER EO *et al*.: ICF Core Set for patients with musculoskeletal conditions in early post-acute rehabilitation facilities. *Disabil Rehabil* 2005; 27: 405-10.
25. STOLL T, BRACH M, HUBER EO *et al*.: ICF Core Set for patients with musculoskeletal conditions in the acute hospital. *Disabil Rehabil* 2005; 27: 381-7.
26. STUCKI A, STOLL T, CIEZA A *et al*.: ICF Core Sets for obstructive pulmonary diseases. *J Rehabil Med* 2004; 44 Suppl: 114-20.
27. STUCKI G, CIEZA A, GEYH S *et al*.: ICF Core Sets for rheumatoid arthritis. *J Rehabil Med* 2004; 44 Suppl: 87-93.
28. ZOCHLING J, GRILL E, SCHEURINGER M, LIMAN W, STUCKI G, BRAUN J: Identification of health problems in patients with acute inflammatory arthritis, using the International Classification of Functioning, Disability and Health (ICF). *Clin Exp Rheumatol* 2006; 24: 239-46.
29. ZOCHLING J, BONJEAN M, GRILL E, SCHEURINGER M, STUCKI G, BRAUN J: Systematic review of measures and their concepts used in published studies focusing on the treatment of acute inflammatory arthritis. *Clin Rheumatol* 2006; 25: 807-13.