

## Book review

# Effectiveness and costs of multidisciplinary care in patients with rheumatoid arthritis

*Gerhardus Jacobus Tjhuis*  
*Leiden: 2002, pp 158,*  
*ISBN 90 9016118 X*

The thesis contains 9 chapters of which 7 chapters are research articles.

Over the last decade a shift in management of rheumatoid arthritis (RA) from inpatient to outpatient multidisciplinary care is noticeable. Innovations relating to the nursing practice and care for chronic patients have been implemented to produce new forms of health care such as the clinical nurse specialist.

Chapter 1 is an introduction in which the relevance of the research is described. Rheumatoid Arthritis (RA) is a systemic illness with chronic, symmetric polyarthritis as its most characteristic clinical feature. The care approach of the patient with RA is diverse, complex, and varies within and between patients depending on disease activity and functional status. Beside intensive treatment by a rheumatologist and other medical specialists, optimal longitudinal treatment requires coordinated care and the expertise of a number of health professionals. Multidisciplinary care can be provided in various ways. A multidisciplinary team for patients with RA usually consists of a rheumatologist, a nurse, physical therapist, occupational therapist and social worker. Multidisciplinary team care programmes can be executed during admission in a hospital or rehabilitation clinic (inpatient care) or on an outpatient basis in the same setting. Because there are limitations regarding the organisation and availability of multidisciplinary team services for large numbers of patients and constraints on health care expenditures, new forms of health care are needed such as the clinical nurse specialist. Clinical nurse specialists provide education, guidance and clinical care, which is added to the regular care provided by the rheumatologists. Although the introduction of nurse specialists becomes more common in the management of RA, the investigation on effectiveness is limited.

The continuing development of new treatment strategies for patients with RA and the increasing scarcity of resources make it necessary to prove that treatment strategies are not only effective, but that they are also cost-effective. One method of economic evaluation is cost-utility analysis of which the standard gamble

(SG), the time trade-off (TTO) and the rating scale (RS) or visual analogue scale (VAS) are the most widely used methods. However, there are no studies in which the feasibility, the reliability, and the validity of the TTO have been described in patients with RA.

Chapter 2 describes the value of the time trade off method measuring utilities in patients with RA. To measure the effect of intervention, several utility measurements can be used such as the standard gamble (SG), the time-trade off (TTO), and the visual analogue scale (RS). In this chapter the feasibility, the reliability, and the validity of the TTO and the VAS in patients with RA are described. The TTO appeared to be good and reliable in a group of patients with RA. The TTO scores were generally higher than the RS scores. TTO was poorly to moderate correlated to measures of Quality of Life (QoL), functional ability, and disease activity suggesting that other factors may play a role. These instruments may therefore not entirely appraise the effect of intervention and further research regarding the usefulness of the instruments in cost effectiveness studies are necessary.

Chapter 3 describes the validity of the Rheumatoid Arthritis Quality of Life (RAQoL) questionnaire. The RAQoL is a disease specific instrument to measure the Quality of Life of patients with RA. The RAQoL was applied in a group of patients with increasing difficulty in performing activities of daily living and in a group of patients with stable RA. Moderate to high correlations were found between the RAQoL and measures of utility and QoL. The RAQoL was found to be valid in different populations of patients with RA and is a valuable instrument in cost effectiveness studies. Furthermore the instrument includes questions regarding physical contact, a dimension not covered by other instruments but an important item for patients with RA.

Chapter 4 reports the short-term results of a randomised comparison of care provided by a clinical nurse specialist, inpatient team care and day patient team care in RA. In a chronic disease such as RA, disease management delivery of coordinated care by a team of health professionals who communicate with each other on a regular basis is generally assumed to be an optimal strategy. Another form of care is the introduction of the clinical nurse specialist. Apart from actually delivering clinical care, education and assistance, nurse specialists can enhance support care delivered

by other health professionals as well. After one year all patients had improved according to functional status, quality of life, health utility and disease activity. Patients who were treated according to the multidisciplinary care were more satisfied than patients who received nurse specialist care. No difference, except for the improvement in functional status, was found between inpatient and outpatient multidisciplinary care. The authors concluded that care provided by the clinical nurse specialist is a useful addition to other existing care. An interesting observation in this study was that with increasing age, the advantage of any type of care over the others switches from clinical nurse specialist and inpatient care to day care patient team.

Chapter 5 reports the long-term effectiveness of the three different types of care as described in Chapter 4. Most of the first year results were sustained for two years. Patients in the clinical nurse specialist group received less home care than inpatients and attended the clinical nurse specialist more frequently, but no other differences in utilisation rates were found during the follow-up period after the intervention.

Chapter 6 describes the costs and effects over two years of the three intervention groups as described in Chapter 5. Costs were calculated from a societal point of view and comprised both direct and indirect costs. The initial intervention costs were significantly different and were €200, €5,000, and €4,100, respectively. Other healthcare costs and non-healthcare costs did not differ significantly over the two years. Also the observed QALY's did not differ over two years. From a health-economic perspective, care provided by the clinical nurse specialist seems to be the most cost effective care.

Chapter 7 describes the validation of a novel satisfaction questionnaire for patients with RA receiving outpatient clinical nurse specialist care, inpatient day care or day patient team care. The satisfaction questionnaire comprises 8 domains: waiting time, autonomy, continuity, efficiency, effectiveness, knowledge, information and empathy. In addition, three domains pertaining to organisational differences among the three types of care were added: co-ordination among health professionals, office environment and non-financial access. This instrument seemed to be a useful instru-

ment for measuring satisfaction with different forms of multidisciplinary care in patients with RA. Patients were more satisfied with care provided by an inpatient or a day care patient multidisciplinary team than with care by a clinical nurse specialist especially due to the objective organisational differences between the three forms of care.

In Chapter 8, the utility and the effectiveness of the Futuro wrist orthosis is compared with the synthetic orthosis of ThermoLyn.

The last chapter in this thesis addresses the implications and recommendations for further research. Because health care budgets are becoming more limited in the Netherlands, the author concludes that, from a health economic perspective, care provided by the clinical nurse specialist is the preferred form of treatment although the results regarding satisfaction have to be improved. Thus, the introduction of a clinical nurse specialist could be a very promising form of care for all outpatient clinics of rheumatology and could also be applied as care for other chronic diseases. Although the type of care provided by the clinical nurse specialist differs, this care has also been introduced in other countries. However, the multidisciplinary team care facilities are still needed for patients with severe disease activity or in whom care by the clinical nurse specialist has failed. The choice of care is dependent on factors such as availability of care, the patient's and physician's preferences for specific care, and health care budgets.

Overall, this is an interesting thesis with respect to effects and costs of multidisciplinary care and nurse specialist care in RA. The observed results are a first step towards further research for application and comparison of different forms of care in other settings and among groups of patients with a variety of disease severity. Furthermore, the thesis highlights the problems concerning the use of outcome measures such as the TTO and the RAQoL to measure effectiveness of treatments in economic analyses. This is an important issue because development of new treatment strategies for patients with RA makes it necessary to prove that they are both effective and cost effective.

S.M.M. Verstappen  
*Department of Rheumatology & Clin. Imm. F02.127,  
University Medical Center Utrecht, The Netherlands*