Current Topics on Models of Care in the Management of Inflammatory Arthritis

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ABSTRACT. While there is strong evidence supporting a multidisciplinary team approach in arthritis management, access and use are hindered by limited human and financial resources. To safeguard the provision of comprehensive care throughout the disease trajectory, alternative care models are being developed. Three promising arthritis care models include the use of information technology and telemedicine, patient initiated care, and extended roles of health professionals. Future research projects should focus on: (1) the cost-effectiveness of information technology for exchange of patient-based data and education and management support; (2) the characteristics and needs of patients who can versus those who cannot self-manage; (3) strategies to improve access to care for patients with early arthritis, such as extending roles of health professionals to include triage; and (4) further structuring and standardizing rheumatology training of nursing and allied health professionals. (J Rheumatol 2006;33:1900–3)

Key Indexing Terms:
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INTRODUCTION

Traditionally, the management of inflammatory joint diseases has been provided mainly by rheumatologists, whereas for complex problems additional physicians and health professionals from various disciplines are called in to deliver services. Ideally, all physicians and health professionals involved are systematically coordinating their activities, for example, by means of team meetings, in order to maximize the continuity and cohesiveness of care[1]. In reality, however, North American and European countries face looming challenges in the delivery of arthritis care, particularly due to the growing shortage of health human resources and the growing burden of arthritis in the population[2-4].

It is becoming less practical and sometimes impossible to assemble a local multidisciplinary team. In some regions, access to arthritis care is insufficient and coordination of services is haphazard[5,6]. This is an undesirable situation, since arthritis is a chronic condition, necessitating a range of health services to meet varying problems and needs at different stages of the disease.

To enhance service delivery and ensure timely access to healthcare services, alternative strategies for management of arthritis are being developed and provided on a large scale. Any approach to or method of delivering services to individuals with arthritis may be designated as a "model of care"[5]. In the literature, arthritis care models are predominantly described according to the physicians or health professionals involved or by the nature and dosage of the interventions provided. Care models may, however, also be characterized by other dimensions, such as their approach (e.g., client-centered or problem-oriented); structure and organization of communication and collaboration among physicians and/or health professionals; access, timing, and continuity; modes of delivery; or funding. Many evolving care models include a mix of new developments within multiple dimensions. The aim of this article is to describe 3 timely topics on arthritis care models that were discussed at the 2005 CARE III Conference held in Toronto, Canada, in May 2005:

- The use of information technology and telemedicine
- Patient initiated care
- Health professionals in extended roles

INFORMATION TECHNOLOGY AND TELEMEDICINE

Information technology may be used in various ways to enhance communication in healthcare. With respect to the communication between patients and rheumatologists, information technology could be used for the collection of patient-

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based data. Such instruments including patient assessment of pain, patient global assessment of disease activity, and the Health Assessment Questionnaire have been found to be informative for planning treatment and are recommended for use in daily rheumatological practice[7,8]. Patients could be taught how to enter data either from home or in clinic waiting rooms using touch-screens, kiosks, or tablets, and the resulting summary reports immediately printed out.

Apart from the exchange of routine data, information technology of the World Wide Web or E-mail could be used for individual counselling and guidance. This type of "telemedicine" has proven to be successful in a randomized controlled trial on effectiveness of an Internet-based program to enhance physical activity in patients with rheumatoid arthritis (RA)[9]. It should be noted that although patient education is generally acknowledged as an important component of arthritis care[10,11], the use of information technology as an education tool for patients is still in its early stages.

Regarding communication among health professionals, according to patients with RA, satisfaction with multidisciplinary care was found to improve using a shared electronic record[12] comprising structured information on patient health status based on the International Classification of Functioning, Disability and Health. In addition, videoconferencing can be used to enhance collaboration among healthcare providers working at various locations.

There are important barriers to use of Internet technology, including attitudes, preferences, computer illiteracy among health professionals and patients, the quality of the service, fears about breaching privacy and security, bureaucracy, and expenses for organizations and individual health professionals and patients[13]. Further research about the cost-effectiveness of various information technologies in arthritis care will be needed to guide the decision of how to implement them widely in clinical practice.

PATIENT INITIATED CARE

An innovative approach to restructuring followup of patients with RA is patient initiated care: Patients are given no routine followup appointments but have direct access to rapid clinical review on request[14-16]. This arthritis management strategy facilitates client-centeredness as well as the better timing of and access to care. Patients or their general practitioners can arrange appointments with a rheumatologist or allied health professional through a nurse-led telephone helpline when necessary. The helpline is answered by a clinical nurse specialist who triages patients to the most appropriate services. A randomized controlled trial comparing patient-initiated care with routine medical review reported no significant difference in patients' clinical and psychological status and satisfaction with their care up to and including 6 years of followup[14-16]. Moreover, patients who initiated their care attended the hospital less frequently and resource use was significantly reduced.

Patient-initiated care may not be suitable in situations where systematic followup assessments are essential, as is the case in early inflammatory arthritis, where intensive symptom control and additional support is needed. However, in many patients who have had RA for 3 to 4 years, and in whom the symptoms are stabilized, intensive monitoring and support could be put into self-management programs such as patient-initiated care.

The institution of patient-initiated care requires well-trained arthritis health professionals, which might not be feasible in some regions. It is also important that the healthcare system be flexible enough to allow routine assessments for patients who are not able to acquire self-management skills. Moreover, it should be noted that improved patient perception of control over and management of their condition does not necessarily mean improved outcome. To address this issue, more research in arthritis care is needed, including experiences with self-management enhancing strategies in other chronic diseases, which could serve as examples.

HEALTH PROFESSIONALS IN EXTENDED ROLES

To augment the capacity of arthritis care, care models comprising services of multiskilled professionals have evolved over the past 2 decades. First are models of care with rheumatology nurse practitioners and clinical nurse specialists, who have extended their roles to incorporate various skills of the rheumatologist; a growing part of their caseload comprises monitoring of drugs, including biological therapies. The safety, effectiveness, and acceptability of nurse practitioner clinics in comparison with arthritis care provided by physicians have been established in the United Kingdom[17-19]. Moreover, care provided by a clinical nurse specialist in cooperation with the rheumatologist was shown to be equally effective and less costly than multidisciplinary team care in patients with RA[20-22].

Second, in Canada, extended clinical roles for physical therapists and occupational therapists have emerged in rheumatology. The physical therapy and occupational therapy practitioner model of sharing responsibilities among health professionals, which was developed at the Hospital for Sick Children, Toronto, Canada[23,24], resulted in a level of patient satisfaction among the pediatric population that was similar to the level of satisfaction with rheumatologist care. The primary therapist model pertains to physical therapists and occupational therapists who, after a structured training program, provide cross-disciplinary care[25]. Rheumatology-trained primary therapist care was associated with better patient outcomes and was potentially cost-effective versus traditional physical and occupational therapy care for RA management[26,27]. Other studies of the effectiveness of extended roles for physiotherapists in assessment and management of care in orthopedic clinics may shed light on the potential for these roles to facilitate assessment and triage of patients with musculoskeletal conditions.

Apart from saving the rheumatologist's and other health professionals' time, care by multiskilled professionals is like-

ly to reduce duplication of services for assessment and treatment; the patient is also spared the confusion of dealing with multiple healthcare providers. However, patients, rheumatologists, and other health professionals need to know what nurses and other health professionals in extended roles can offer. In the formal training of health professionals, education about the roles of other health professionals is limited. Overall, the education of allied health professionals working in extended roles is highly variable. There is a need to standardize education and core competencies for practice in extended roles. To achieve more standardization within and among professions, a distinction needs to be drawn between formal education and informal education gained through experience, as well as between accredited education and nonaccredited education. If professional roles are to further expand, structural support from regulatory bodies concerned with professional, educational, and legislative issues is needed.

RECOMMENDATIONS FOR RESEARCH ON ARTHRITIS CARE MODELS

Research in the area of models of care in arthritis is growing, and alternative models of care continue to be developed and will need to be evaluated. In the meantime, specific areas demanding more intensive study can be identified:

- Comprehensive arthritis management in early disease stages. An example is extending the roles of health professionals to include triage of patients with musculoskeletal complaints and facilitating referrals and access to appropriate care for patients with early arthritis. This is an area of urgent priority
- Cost-effectiveness of information technology for the exchange of patient-based data, as well as education and management support
- Barriers and facilitators to implement patient-initiated care models in various healthcare organizations, and the characteristics and needs of patients who can versus those who cannot self-manage
- Streamlined rheumatology training for allied health professionals, including the education for health professionals in extended roles.

In consideration of the above, it should be noted that variation within and among healthcare systems and differing local needs make it unlikely that specific models of care will be feasible for all environments. Moreover, the care models discussed in this and many other articles do not fully represent the patient's point of view, given that the majority of patients with arthritis choose to make use of alternative or complementary medicine. This observation, together with the recognition that the individual patient plays the key role in any care model, underscores the need for the involvement of patients in any stage of future research regarding the development and evaluation of arthritis care models.

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