A Key Informant Survey of Programs and Services for Canadians with Osteoarthritis and Osteoporosis

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ABSTRACT

The purpose of this study was to describe the range of programs available in Canada to serve individuals with Osteoarthritis (OA) or Osteoporosis (OP). The management of these chronic conditions through patient education, exercise programs, social support programs and the use of assistive devices can minimize the long-term costs and improve overall quality of life for seniors with these diseases. We conducted a key informant survey using face to face or telephone interviews to provide information on the range of programs available across Canada. Programs were included if they were: specifically designed for people diagnosed with OA or OP; community-based (not in-patient hospital programs); delivered in a consistent format (not individualized to specific participants); and substantially different from previously surveyed programs (duplicate programs were excluded). Services such as home care, meals on wheels and transportation were not included. In total, 101 unique programs were surveyed, 61 of which were designed for those with OA and 40 for those with OP. The main results are as follows:

♦ Finding the programs was a long and arduous process.
♦ Most programs were poorly advertised, relying on word of mouth and doctor’s referral.
♦ Of the 101 programs, only one-quarter were delivered in multiple locations.
♦ Exercise was the main component of both OA and OP programs, with education the next most common component. Very few programs offered an assistive devices, medical therapy/treatment or social support component.
♦ Most programs were accessible to those with disabilities, but few were available in rural communities or in languages other than English.
♦ Most programs used client satisfaction as their major method of program evaluation. Few programs evaluated participants’ functional status or knowledge of their condition.
♦ Funding and leadership for most programs was precarious.
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INTRODUCTION

Osteoarthritis (OA) and osteoporosis (OP) are conditions which effect a large percentage of seniors in Canada. Across all age groups, approximately 1 in 10 individuals have OA (Arthroscopic, 1997), and 1 in 4 women and 1 in 8 men over the age of 50 has OP (Melton, Chrischilles, Lane & Riggs, 1992). In Canada and the United States, as a function of both declining fertility rates and increased longevity, the proportion of the population aged 65 and older is rapidly rising. As a result, it is estimated that the prevalence of arthritis, as diagnosed by a health care professional, will increase 46.7%, and the number of Canadians with arthritis will increase to 6.5 million by the year 2031 (Badley and Wang, 1998). The annual economic cost in Canada for OA is approximately $4 billion (Badley, 1995). For OP, it is estimated that treating those with osteoporotic fractures cost over 1.3 billion dollars in Canada in 1993 (Goeree, O'Brien, Pettitt, Cuddy, Ferraz & Adachi, 1996). These estimates do not include the potential psychological, social and functional impact of OA and OP, such as lowered self-esteem, changes in relations with friends and family, and mobility problems.

Managing these chronic conditions through non-pharmacological treatment methods, such as patient education, exercise programs, social support programs (Wienberger, Hiner, & Tierney, 1986; Schiaffino & Revenson, 1995; Cronan, Groessl, & Kaplan, 1997) and the use of assistive devices (Noaker, 1996; Perrot & Menkes, 1996) may be ways to minimize the long-term costs associated with these diseases and a way to increase the overall quality of life for individuals diagnosed OA and OP. Patient education programs are increasingly being recognized as methods for improving knowledge, physical, psychological, and social functioning, and positively changing health behaviours and beliefs (Hirano, Laurent & Lorig, 1994; Boutaugh & Lorig, 1996; Cronan, Goessl & Kaplan, 1997; Kok, van den Borne, & Mullen, 1997). Kaplan and colleagues (1995) also believe that well-informed patients utilize health care services more appropriately.

Several reviews on exercise programs for individuals with OA have noted improvements in level of pain, disability, and physical activity level, as well as in depression and self-esteem (Minor & Lane, 1996; Puett & Griffin, 1994; and Stenstrom, 1994). Hence, exercise appears not only to improve physical functioning, but may have an impact on the well-being of the individual. Findings of the impact of exercise on individuals with OP tend to be more controversial (Adachi, 1996). Some studies on healthy postmenopausal women have demonstrated that those who participate in exercise programs achieve higher bone mass than controls (Chow, Harrison, & Notarius, 1987; Krall & Dawson-Hughes, 1994). Sarni, Wollan, Scott, and Gelczer (1996) found that increasing back strength was effective in increasing bone mineral density in women with osteoporosis. Lastly, Bravo and colleagues (1996) found that their exercise program stabilised spinal bone density, but did not change femoral bone density. Other considerations for exercise programs for persons with OP include fracture risk factors and fall prevention. However, more randomized, controlled studies on the effects of exercise in individuals with OP need to be conducted to determine the effects of exercise, especially in the long term.
METHODS

The objective of this study was to describe the range of programs available in Canada serving individuals with OA or OP. In order to determine relevant and suitable programs for inclusion in this study the following criteria were established: 1) programs must be designed for individuals with OA/OP; 2) programs should be named and/or advertised as being for people with OA/OP; and, 3) the majority of participants attending the program must be diagnosed with OA/OP. In addition, we included only programs whose main goal was 'the maintenance or improvement of physical and/or psychosocial functioning'. In this way we were able to include prevention programs as well as a sample of general seniors fitness program. Programs were excluded from the study if they were geared towards Fibromyalgia or other types of arthritis, were in-patient hospital programs, had as their primary function, medical treatment, home care, or special transportation, or if the treatment of participants were inconsistent among participants.

Key Informant Survey

A Key Informant Survey (KIS) questionnaire was developed by a multidisciplinary research team. Discussions were conducted with several program co-coordinators to give information on the range of programs available across Canada for those with OA or OP. The questionnaire was divided into five major components consisting of: 1) program development and education/information provided to participants; 2) exercise; 3) assistive devices/adaptations; 4) medical therapy/treatments; and, 5) social support. In addition, there were three general sections which covered demographic and background information on the clients and program, program evaluation, and program organization, promotion, location and, accessibility.

Twelve pilot interviews using the KIS were conducted on programs that varied in their objectives, types of participants and, locations/settings of the programs. These interviews resulted in the clarification and addition of questions and response categories.

Identification of Programs

After questionnaire development, the next step was to identify potential OA and OP programs and the person(s) most closely associated with the program. This person would act as our key informant. We defined the key informant as the person who either developed, supervised and/or instructed the program(s). An initial list of potential programs and key informants was generated for the Metropolitan Toronto area through the research team, consumers, providers and policy makers from our advisory committee, and the Blue Book: Directory of Community Services in Metropolitan Toronto.

Once key informants for the Toronto area were identified, other cities/towns were systematically surveyed by geographic regions consistent with the District Health Council Regions in Ontario. To ensure that we adequately covered programs throughout Ontario, any city/town with a population between 50,000 and 100,000+ was identified. Unique programs within a 60 km radius of those centres were surveyed first. Outlying areas were then surveyed until all major regions of the province were represented. We then identified unique programs in major centres across Canada and included them in the survey. Because of time and cost
considerations, we were unable to survey outlying areas outside of Ontario.

The following sources were contacted by phone for relevant OA/OP program(s) in the cities/towns across Canada: The Arthritis Society (Canada); Consultation and Rehabilitation Services (formerly - Consultation and Therapy) - The Arthritis Society (Ontario); The Osteoporosis Society; YMCA/YWCA; local hospitals; community information/parks and recreation; senior centres/community centres; and, research and lay contacts in the community.

Interview Process
A telephone screener was conducted with potential key informants to determine if the program they represented was (1) community-based, (2) designed specifically for those with OA or OP, and (3) substantially different from previously identified programs (i.e., a program that was conducted in more than one city/town was only surveyed once). If the program was eligible, interviews were conducted face-to-face or on the telephone. If the key informant felt that another individual was more qualified to answer a particular component of the questionnaire (e.g., the exercise component), a copy of the appropriate section(s) was either faxed or mailed to the individual(s) with instructions on filling out the questionnaire and a self-addressed envelope.

Interviews ranged in length from 30 to 120 minutes, with the average interview taking between 45 to 60 minutes.

RESULTS
In total, 101 unique programs were identified, 61 programs were designed for those with OA and 40 for those with OP.

CHARACTERISTICS OF OA AND OP PROGRAMS

Section A: General Information on Programs

Tenure and Location of Programs
Most of the programs were well established, and approximately one-quarter of the programs were provided in multiple locations. OA and OP programs had been in existence an average of 7 and 3 years, respectively. Fifty-six OA and 35 OP programs were in urban/suburban vicinities, 4 OA and 4 OP programs were in rural communities, and 1 OA program reported being in a mixed urban/rural district. OA and OP programs also took place in a variety of locales/centres (see Figure 1).

Figure 1. Locations Where Programs Take Place

Primary and Secondary Functions of Programs
Several primary and secondary functions were reported by most programs. The most
frequently noted primary functions of OA programs were therapeutic, followed by social, recreational, and educational. Secondary functions of OA programs were educational, followed by social, recreational and therapeutic. In addition to basic clinical goals, other purposes of the OA programs included fund raising, the development/maintenance of self-esteem, advocacy, and self-help. For OP programs, the primary roles differed in order from the OA programs. They were educational, followed by therapeutic, social, and recreational. Secondary roles for OP programs were social, followed by recreational, therapeutic and educational. Advocacy and prevention were other goals which the key informants reported for OP programs. OA and OP programs varied in the number and type of components offered as part of their program. A general breakdown of

![Figure 2. Program Components](image)

the OA and OP program components are presented in Figure 2, and a detailed division of the OA and OP program components are presented in Table 1.

<table>
<thead>
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<th>Table 1. Breakdown of Programs by Components</th>
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<td>Component</td>
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<tr>
<td>Exercise Only</td>
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<tr>
<td>Exercise &amp; Education</td>
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<td>Exercise, Education &amp; Assistive Devices</td>
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<tr>
<td>Exercise, Education, &amp; Medical Treatment</td>
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<td>Exercise &amp; Assistive Devices</td>
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<td>Exercise, Education &amp; Social Support</td>
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<td>Exercise &amp; Social Support</td>
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<tr>
<td>Education Only</td>
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<tr>
<td>Education &amp; Social Support</td>
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<td>Education &amp; Assistive Devices</td>
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<tr>
<td>Education &amp; Medical Treatment</td>
</tr>
<tr>
<td>Social Support Only</td>
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<tr>
<td>Social Support &amp; Other</td>
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<tr>
<td>All Components</td>
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<tr>
<td>All Components &amp; Other</td>
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<td>TOTAL</td>
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Criteria for Participation in Programs
At least one criterion to join the programs was reported by 35 (57%) OA and 27 (68%) OP programs. Most often this was a doctor’s referral or permission and/or diagnosis with a health condition/or at risk. In addition, since most programs were offered only in English, this too, became a criterion.

Although the majority of the OA and OP programs were aimed at participants with OA and OP, both programs did accept participants with a variety of other health conditions which included Fibromyalgia and other pain conditions, depression, joint replacements, back problems, other physical disabilities and mobility problems, heart conditions, stroke, Multiple Sclerosis, Parkinson’s disease, and Alzheimer’s disease.

Length of Programs
Approximately two-thirds of the OA and OP programs were described as ongoing drop-in programs, and one-third of the OA and OP programs were of a fixed time period. The characteristics of these programs are presented in Tables 2 and 3. The majority of the OA and OP programs only offered their programs during the day. However, 1 OA and 2 OP programs offered classes during the day, evening, and weekend. Twenty-four (39%) OA and 15 (38%) OP programs currently, or sometimes, had a wait list.

The Participants
The majority of participants were female (89% in OA programs and 97% in OP programs). Other demographic information on participants was usually unavailable in OA programs as less than 50% of the program collected demographic information on their participants. Demographic information on participants was usually available in OP programs with more than 60% of the program’s collecting demographic information on their participants. Age, gender, and place of residence were the most common types of demographic information collected in both programs.

Accessibility
The majority of programs were accessible by wheelchair (more than 80% of OA programs and 100% of OP programs), most had handicap parking (more than 90% of both OA and OP programs), and most were accessible by public transit. Two OP programs offered transportation to their program. Most of the OA (56) and OP (more than 30) programs were able to accommodate clients with vision, hearing and mobility difficulties, and 36 OA and 15 OP programs accommodate those with behavioural and/or cognitive difficulties. The main way in which adaptations for these individuals were achieved was to modify regular teaching methods. However, 2 OA and 1 OP program accommodated clients by providing specialized programs for them.

Table 2. Description of the Characteristics of OA and OP Drop-In Programs

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<th>Characteristic</th>
<th>OA Programs</th>
<th>OP Programs</th>
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<tr>
<td>Average Number of Months Offered</td>
<td>11</td>
<td>11</td>
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<tr>
<td>Average Number of Weeks/Session</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Average Number of Classes Offered/Week</td>
<td>3</td>
<td>2</td>
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<tr>
<td>Average Class Length (hours)</td>
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Table 3. Description of the Characteristics of OA and OP Fixed Length Programs

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<th>Characteristic</th>
<th>OA Programs</th>
<th>OP Programs</th>
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<tr>
<td>Average Number of Weeks</td>
<td>6</td>
<td>4</td>
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<tr>
<td>Average Number of Participant Visits</td>
<td>7</td>
<td>6</td>
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<tr>
<td>Average Class Length (hours)</td>
<td>2</td>
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**Advertising**

Participants found out about these programs in a variety of ways, with the majority of programs using more than one method of advertisement. The most popular types of promotion for OA and OP programs are presented in Figure 3. Doctor's referral and word of mouth were the most common methods.

![Figure 3. Methods of Advertisement](image)

**Highlight and Shortcoming of OA and OP Programs**

Social benefits were reported as the main highlight for both OA and OP programs. Specifically, bringing individuals together with similar conditions to learn about their condition and having them share their experiences were considered important for individuals and something that may have an impact on their overall physical, psychological and social well-being (Cronan, Groessl, & Kaplan, 1997). Offering a balanced program that was geared towards helping people with health conditions, and was something participants would enjoy, were also highlights mentioned by key informants.

The main shortcomings for OA programs were the lack of appropriate facilities available. Specifically, most OA programs desired access to swimming pools that could provide an environment for warm water exercises. For OP programs, the main dilemma was the need for more resources.
Other concerns for both programs revolved around: 1) the need for instructor consistency; 2) the lack of funding and the costs of programs which prevent those with financial restraints from participating; and 3) that outcomes, like changes in functioning, were not measured and that there was no follow-up with participants.

Section B: Education

Nineteen (31%) of the 61 OA programs and 24 (60%) of 40 OP programs identified formal education as part of their program.

Staffing

Fourteen of the OA and 15 of the OP programs had one or more persons conducting the educational sessions. Typically, program staff were the primary educators for both OA and OP programs. However, both types of programs also used guest presenters and lay persons. The primary educators for OA and OP educational components were physical therapists, although kinesiologists, occupational therapists, lay persons, nurses, physicians, social workers and exercise instructors also provided education. The majority of educators were paid, not volunteer.

Development of Education Programs

Most OA and OP educational programs were developed using several methods. The principal inputs came from program staff and participants, although a few programs were standardized. Three-quarters of the OA and OP programs utilized several teaching formats. The most common mode of teaching was the group and lecture format, followed by tailoring the program to the individual’s needs, a one to one format, and self-directed methods of learning. Two OA and no OP programs formally included family members, although, the majority of programs welcome family members.

Topics and Modes of Presentation

The specific educational topics covered in the OA and OP programs are presented in Figure 4. As expected, there were differences in the topics presented between programs. Several modalities of presentation were also used by the OA and OP educators, with all programs using more than one mode of presentation. The most common format of presentation was audio visual, followed by written materials, slides and video. Other methods of presentation included demonstrations, models, posters and flip charts.

![Figure 4. Topics Covered in Education Sessions](image)

Evaluation of Client Knowledge

Programs rarely assessed changes in clients’ knowledge about their condition, as a means of gauging the success of educational information. Only 2 (11%) OA and 5 (21%) OP programs assessed client knowledge.
Both OA programs assessed knowledge during, and at the end of the program, and one assessed knowledge at the onset of the program. With respect to the OP programs, 3 programs assessed at the onset and end of the program, 1 assessed knowledge only at the end of the program, and 1 program assessed at the onset and 6 months after the program had completed. Assessment methods included evaluating knowledge via a questionnaire and instructor rating. Only 1 OA program had an overall evaluation of the educational/instructional component of their program.

Section C: Therapy/Treatment: Exercises

The majority of the programs (50, or 82%, of OA programs, and 35, or 88%, of OP programs) offered an exercise component.

Health Conditions of Participants
While most OA and OP programs with an exercise component were specifically designed for people with OA and OP, some programs were also geared toward individuals with other general health conditions (see Figure 5).

Eighty-eight percent of OA exercise programs focused on individuals with arthritis in the knee, hip, back, hands, and upper limbs. One OP program focused only on arthritis in the knee and hip. The severity levels of OP experienced by participants in the OP exercise programs were evidence of reduced bone mineral density, evidence of fractures/spinal deformity, and prevention programs where individuals had no signs/symptoms of OP. Two OP exercise programs did focus on individuals with arthritis in the knee, hip, back, hand, and upper limbs.

Exercise/Health Evaluations
Thirty OA exercise programs and 27 OP exercise programs had participants fill out an exercise/health screener prior to beginning the exercise program. Nine OA and 10 OP programs used the Physical Activity Readiness Questionnaire (PAR-Q), 1 OA and 2 OP programs used the PAR-Q and General Health Survey, 2 OA and 3 OP programs used the General Health Survey. 1 OA program used the PAR-Q and other methods, and 17 OA and 12 OP programs used other assessments. Other exercise/health screeners used in OA programs included the Health Activity Questionnaire (HAQ), a stress test, fitness appraisal, joint assessments, testing range of motion (ROM), a review of disease status, physical limitation and medications, verbal feedback to an instructor, a contact sheet with a list of health problems, and a doctor referral form. Other screeners used in OP programs included a standard physical therapy assessment, a physician screener/forms, a stress test, a medical assessment, and a specific program designed assessment.
Physical Assessments

Ten (20%) OA and 16 (46%) OP programs performed physical assessments on their participants. Most assessments took place before the OA and OP programs began. However, a few programs performed multiple assessments at the beginning, at different stages in the programs, and at the end of the program. The assessments done in the OA and OP exercise programs are presented in Figure 6.

Figure 6. Physical Assessments Done In Exercise Programs

![Bar chart showing physical assessments done in OA and OP exercise programs](chart)

Of the 34 OA and 27 OP exercise programs that had an aerobic component in their program, more than 70% of both programs taught their participants how to monitor aerobic intensity. The main methods of monitoring aerobic intensity for the programs were using the Borg scale (talk test) and the exercise heart rate based on age.

Staffing

More than 80% of both programs had 1 instructor per class. Less than half of the programs had more than 1 instructor trained to lead the exercise program. Thus, if the primary instructor became ill or unavailable, most programs did not have a replacement available. Exercise instructors were the main leaders for the OA exercise programs, yet, for the OP programs, the primary instructors were physical therapists. Other instructors for the exercise programs included kinesiologists, occupational therapists, recreational therapists, nurses, and lay persons. Qualifications of the instructors varied, but the most noted qualifications of the instructors were CPR, CFA, swimming certifications, and first aid training. Ninety-five percent of OA and approximately 83% of OP instructors were paid.

Goals and Elements of Exercise Programs

All programs had more than one goal for their exercise component. The main goals of the program's exercise components are presented in Figure 7. Eighteen (36%) OA and 21 (60%) OP programs included all 9 areas as goals in their programs. The elements of the exercise programs are presented in Figure 8.

Twenty-three (46%) OA and 24 (69%) OP programs were designed so that the intensity or duration increased gradually throughout the program. The areas in which gradual intensity increased for OA programs included flexibility, range of motion, posture, back extensions, and cardiovascular/aerobic exercises. No OA program increased the intensity of strength and weight bearing exercises. The areas in which gradual intensity increased for OP programs included flexibility, range of motion, posture, back extension, cardiovascular/aerobic, balance, strength, and weight bearing exercises.
Instructional Methods

The majority of programs used a variety of instructional approaches. The most common instructional methods for OA programs were the use of demonstrations, written materials, and verbal instruction. The most common instructional methods used for OP programs were verbal, demonstrations, and written materials.

Environment and Setting Where Exercise Programs Occur

The environments where the exercise programs were conducted are presented in Figure 9. Not surprisingly, OA and OP programs dramatically differed in the environment where the exercises took place, with most of the OA programs being water based, and most of the OP programs land based.
Forty-nine OA programs and all OP programs with an exercise component were delivered in a group setting. One OA program was self-directed in the home. Forty-one OA programs and 32 OP programs noted that they do attempt to modify or tailor their exercise programs to their client’s needs.

**Section C2: Exercise Components for Ontario Based Programs**

In-depth analyses of components of exercise programs for OA and OP were conducted for the Ontario-based programs in order to: 1) compare programs with each other; and, 2) compare the individual exercise components of various programs with evidence from the research literature as to the most efficacious types of exercise. The following questions were addressed: 1) What are the components of exercise programs for OA and OP? 2) How do these compare to the evidence re: exercise and OA or OP?

Each program was compared and contrasted with respect to: assessment of participants, specific exercise components, education about exercise, progression of components, screening and assessment, and social interaction. Programs were grouped according to location (Hospitals, clinic/rehabilitation centres, community/seniors centres, YMCA/YWCA, research programs and ‘other’ programs). Key similarities and differences were identified within and between groups in order to describe the range of available exercise programs offered.

**OP**

The types of exercise offered were similar for all the OP programs (see Table 4). The majority focused on strengthening, weight-bearing aerobic activity and, to a somewhat lesser extent, back extension exercises. Many included cues about posture throughout the program and some included specific activities related to balance. There was no specific pattern with respect to progression of exercises, with most reporting progression of at least half the exercises, but with some reporting either little or no progression (Table 5). Differences existed between the programs with respect to screening and assessment (Table 5). Although most programs did have their clients complete a screen, detailed assessments were usually only performed in hospital and clinic/rehabilitation centres. Finally, education about exercise was most strongly emphasized in hospital and clinic/rehabilitation centres (Figure 10). In contrast, social interaction was more strongly emphasized in YMCA/YWCA and community/seniors centres.

**Figure 10. Range of Components emphasized in osteoporosis programs organized according to location. From: Lisa McGilvray, 1998**

<table>
<thead>
<tr>
<th>hospital</th>
<th>clinic/rehab centre</th>
<th>YMCA/YWCA</th>
<th>community/senior’s centres</th>
</tr>
</thead>
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<tr>
<td>SOCIAL INTERACTION</td>
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<td>EDUCATION</td>
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<tr>
<td>ASSESSMENT</td>
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<td></td>
<td></td>
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<tr>
<td>PROGRESSION</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXERCISE</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**OA**

The main emphasis in the OA programs was on range of motion and flexibility/stretching components (see Table 6). All of the programs surveyed included these components. Relaxation training was included in some programs in the community such as the YMCA and health clubs. Most programs reminded clients about posture throughout the class rather than having a separate component dedicated to posture. In addition, most programs had a balance component that included activities such as standing on one’s
Table 4. Summary of exercise components according to the type of exercise for osteoporosis programs in Ontario. From: Lisa McGilvray, 1998

<table>
<thead>
<tr>
<th>Type of Exercise</th>
<th>hospital (n=5)</th>
<th>clinics / rehabilitation centres (n=4)</th>
<th>YMCA/YWCA (n=4)</th>
<th>community/ senior’s centre (n=7)</th>
<th>research centres (n=2)</th>
<th>other</th>
</tr>
</thead>
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<tr>
<td>ID#</td>
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<td></td>
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</tr>
<tr>
<td>3</td>
<td>12</td>
<td>13</td>
<td>19</td>
<td>20</td>
<td>60</td>
<td>61 22</td>
</tr>
<tr>
<td>aerobic</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>weight-bearing</td>
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<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>strengthening</td>
<td>♦</td>
<td>*</td>
<td>♦</td>
<td>*</td>
<td>♦</td>
<td>♦</td>
</tr>
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<td>relaxation</td>
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<td>♦</td>
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</tr>
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</tr>
<tr>
<td>back extensions</td>
<td>♦</td>
<td>♦</td>
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<td></td>
<td>♦</td>
<td>♦</td>
</tr>
<tr>
<td>balance</td>
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<td>♦</td>
<td>♦</td>
<td></td>
<td>♦</td>
<td>♦</td>
</tr>
<tr>
<td>ROM/flexibility</td>
<td>♦</td>
<td>♦</td>
<td>♦</td>
<td></td>
<td>♦</td>
<td>♦</td>
</tr>
</tbody>
</table>

* - strong emphasis  
♦ - specific time set aside within each class for this component  
☐ - exercise component included throughout or incorporated with another component [no specific amount of time]  
no entry means that the component was not included in the program
Table 5. Summary of osteoporosis program components (screeners, progression of exercises and assessments) by program location. From: Lisa McGilvray, 1998

<table>
<thead>
<tr>
<th>Component</th>
<th>hospitals (n=5)</th>
<th>clinics / rehab centres (n=4)</th>
<th>YMCA/YWCA (n=4)</th>
<th>community/ senior’s centre (n=7)</th>
<th>research centres (n=2)</th>
<th>other</th>
</tr>
</thead>
<tbody>
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<td>55</td>
<td>67</td>
<td>32</td>
<td>33</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>✓</td>
</tr>
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<td>&gt;</td>
<td>&lt;</td>
<td>&gt;</td>
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<td>&gt;</td>
</tr>
<tr>
<td>Assessments</td>
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<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>throughout</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>end</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

✓ - component included
>
- greater than half of the exercise components were progressed
<
- less than half of the exercise components were progressed
Table 6. Summary of exercise components according to the type of exercise for osteoarthritis programs in Ontario.

<table>
<thead>
<tr>
<th>Type of Exercise</th>
<th>hospital (n=4)</th>
<th>C/R*</th>
<th>TAS office (n=6)</th>
<th>YMCA/YWCA (n=5)</th>
<th>community/ senior's centre (n=6)</th>
<th>health club (n=3)</th>
<th>R*</th>
<th>other (n=3)</th>
</tr>
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<td>ID#</td>
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<td>21</td>
<td>36 41 44 46 53 62</td>
<td>11 30 40 56 66</td>
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<td>14 15 43</td>
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</tr>
<tr>
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<td>♦</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>flexibility/stretching</td>
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<td>♦</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROM</td>
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</tr>
<tr>
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<td></td>
</tr>
</tbody>
</table>

* research centres (n=1)
** clinic/rehabilitation centres (n=1)
* - strong emphasis
* - specific time set aside within each class for this component
□ - exercise component included throughout or incorporated with another component [no specific amount of time]
no entry means that the component was not included in the program
Table 7. Summary of osteoarthritis program components (screeners, progression of exercises and assessments) by program location.

<table>
<thead>
<tr>
<th>Type of Exercise</th>
<th>hospital (n=4)</th>
<th>C/R*</th>
<th>TAS office (n=6)</th>
<th>YMCA/YWCA (n=5)</th>
<th>community/ senior's centre (n=6)</th>
<th>health club (n=3)</th>
<th>R*</th>
<th>other (n=3)</th>
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</thead>
<tbody>
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<td>36   41  44  46</td>
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<td>2  37  58</td>
<td>34  14  15  43</td>
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<td>✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔</td>
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<tr>
<td>Progression</td>
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<td>&lt; &gt; &lt;</td>
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<td>&lt;  &gt; &gt; &lt;</td>
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<tr>
<td>Assessments</td>
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<td>✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔</td>
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<td>✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔</td>
<td>✔  ✔  ✔  ✔  ✔  ✔  ✔  ✔  ✔  ✔  ✔  ✔  ✔  ✔</td>
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</tr>
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<td>✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔</td>
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</tr>
<tr>
<td>throughout</td>
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<td>✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔</td>
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</tr>
<tr>
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<td>✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔ ✔ ✔ ✔ ✔</td>
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<td></td>
</tr>
</tbody>
</table>

* research centres (n=1)
** clinics/rehabilitation centres (n=1)
✓ - component included
> - greater than half of the exercise components were progressed
< - less than half of the exercise components were progressed
toes or on one's leg. Most, but not all, of the programs had an aerobic and strength training component. Similar to OP programs, detailed assessments were mainly conducted in hospital settings and not in community based programs. Programs held in the community also used a screen rare less often than hospital programs (see Table 7). Many programs did not increase the intensity of exercise as the program progresses (see Table 7).

The majority of OA programs in all locations included exercise and education, however, only a few included progression of exercises and emphasized social interaction (see Figure 11). Assessments were primarily done in the hospital, research, and clinical rehabilitation centres.

Figure 11. Range of Components emphasized in osteoarthritis programs organized according to location.

<table>
<thead>
<tr>
<th>program</th>
<th>hospital</th>
<th>research centre</th>
<th>TASC office</th>
<th>YMCA/YWCA</th>
<th>community/ seniors centres</th>
<th>health club</th>
<th>other</th>
</tr>
</thead>
<tbody>
<tr>
<td>exercise</td>
<td>SOCIAL INTERACTION</td>
<td>EDUCATION</td>
<td>ASSESSMENT</td>
<td>PROGRESSION</td>
<td>EXERCISE</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- indicates majority of programs included the specified component
- indicates only some of programs included the specified component and the location of the program did not determine whether the component was part of the program

**Section D: Assistive Devices**

Few OA (8 or 13%) and OP (4 or 10%) programs offered an assistive devices component. Physical therapists and occupational therapists typically acted as paid providers of this component of the program. The need for devices was assessed for OA programs using client self-reports, interviews, and observations. The main ways in which assessments for assistive devices in OP programs were done was through

observations, client self-reports, questionnaires, and discussions.

Five OA and 3 OP programs assessed clients at the program location for such devices, 2 OA programs assessed clients at both the program location and in the home, 1 OA programs assessed in a clinic, and 1 OP program assessed in a hospital setting.

Figure 12. Assistive Devices Assessments

The devices which were assessed in the OA and OP assistive devices component are presented in Figure 12. Only 2 OA and no OP programs assessed all areas. All OA and OP programs trained clients on how to use their assistive devices. Although only 50% followed-up with clients to see if the device(s) was being used correctly.

Six OA and 3 OP programs stated that the costs of the assistive devices were covered entirely by the client, 2 OA stated there was
no cost to the client, and 1 OP program stated another source paid for the cost of the devices.

Section E: Medical Assessment/
Therapy/Treatment

The OA programs varied, but some offered some medical assessments, such as taking a medical history, performing a musculoskeletal examination, assessing dairy food intake, and conducting blood tests and radiographs. Referral to an occupational therapist, physical therapist, dietician, or other medical/surgical specialist was not offered, nor was consultation regarding disease management or prescriptions of medications.

All OP programs offered a medical assessment, which involved conducting a medical history, performing blood tests, and a bone densitometry. Three OP programs did a musculoskeletal examination and did other exams, and 2 programs assessed dairy food intake and did radiographs. All OP programs offered disease management consultation, prescriptions, referral to specialists, and referrals to other health professionals. Three programs referred to occupational and physical therapists, and 2 programs referred to dieticians. All OP programs also had the client assessed over time by a physician to document response to treatment, and evaluate client compliance with agreed upon treatments.

Only 2 (3%) OA and 4 (10%) OP programs offered medical therapy/treatment. A podiatrist was the medical provider for 1 OA program and a Rheumatologist and a registered nurse were the providers for the other OA program. For the OP programs, Rheumatologists were the main medical providers, however, a general practitioner also provided this component.

Section F: Social Support

A total of 10 (16%) OA and 5 (13%) OP programs included a social support component, with 9 OA and 4 OP programs having social support as a standard part of their program. Twenty-five (41%) OA and 13 (33%) OP programs provided time for informal contact during their program, and 28 (46%) OA and 12 (30%) OP programs stated there were opportunities for informal contact outside of the program. All 10 OA and only 2 OP programs had instructors for their social support components who were usually social workers, lay persons, or physical therapists. The majority of social support leaders were volunteers.

Three OA and all 4 OP programs offered only one type of social support. The most common form of social support for OA programs was referral, followed by one-on-one counselling, support groups and group counselling. The most common form of social support for OP programs was a support group. Six OA programs also offered group discussions with or without a trained facilitator, informal get togethers to socialize, and participation in social and recreational activities as a means of social support.

Section G: Evaluation

Half of the OA and 70% of the OP programs had had some type of evaluation of their program.

Evaluation of Client Function/Status

Eleven (18%) OA and 12 (30%) OP programs assessed client function/status. The most common type of client function/status evaluation for OA and OP programs was by a client completed questionnaire, followed by instructors rating. The most common questionnaires used to measure client function
for the OA programs were the WOMAC, HAQ, and the AIMS, although some programs used self-evaluation methods, and tested ROM, balance, and other physical functions. For OP programs, the most frequently noted type of assessment of client function was done by fitness appraisal, physical measures (e.g., grip strength and walking speed), and measures of bone density.

**Client Satisfaction**
Twenty-eight OA (46%) and 25 OP (63%) programs evaluated client satisfaction. The most frequent evaluation of client satisfaction was done via a client completed questionnaire for both OA and OP programs. However, 1 OA and 4 OP programs used focus groups, 3 OA and 1 OP programs used other methods, and 1 OP program used instructor methods. Unfortunately, the specific methods of measurement were not noted by most OA and OP programs. Methods that were noted to evaluate client satisfaction were the use of comment cards, verbal feedback, mail-out questionnaires, telephone questionnaires, and a general client satisfaction questionnaire.

**Quality Assurance**
Forty-six (75%) of the 61 OA programs and 23 (58%) of the 40 OP programs had taken steps to ensure quality assurance. The main methods for OA programs were the evaluation of instructors' performance and training of staff, client feedback of instructors who attended the program, fellow staff or coordinator monitoring of the program, and the use of a standardized manual. The main methods of ensuring quality assurance for OP programs were informal feedback from clients, evaluation of instructors on a regular basis, and monthly staff meetings.

**Client Follow-Up**
Eight (13%) OA and 7 (18%) OP programs followed-up with their clients once they had completed the program. The primary methods of follow-up for the OA programs were having the client return to the program, telephone follow-up, mail, home visit, and follow-up by telephone to assess if the client needed to return to the program. The most common methods of follow-up for the OP programs were to have the client return to the program, followed by telephone follow-up, and mail follow-up.

**SUMMARY OF RESULTS**

- Programs took place in a variety of locales and one-quarter were offered in more than one location.

- The objectives of the OA programs tended to focus on the physical aspects of their programs.

- The objectives of OP programs tended to focus on education (teaching prevention), and education on the benefits of exercise and how to do exercises appropriately.

- Exercise was the main component of both OA and OP programs (over 80% of both programs offered an exercise component).

- Less than 20% of OA and OP programs provided an assistive devices, medical therapy/treatment or social support component.

- Over 50% of OA and 60% of OP programs had criteria to join.

- Most programs were only offered during the day.

- Most programs were not restricted to only those with OA and OP, but also involved people with other health conditions.
Most programs could modify their programs for individuals with vision, hearing and cognitive disabilities.

Most participants found out about the programs via their health care professionals.

Most programs had fees for participants as their main source of funding.

Program staff and client input were the main ways the educational components were developed.

OA programs tended to educate their participants on more topics, such as general health, coping, and assistive devices.

OP programs focused on OP education and exercise.

Few OA and OP programs evaluated client knowledge.

OA exercise programs focused on all main joints (i.e., knee, hip, back, hand, and upper limb).

OP exercise programs focused on people with and with evidence of reduced bone density and fracture/spinal deformity.

Over half of OA and OP exercise programs had their participants fill out an exercise/health screener; however, only 20% of OA and 46% of OP programs physically assessed their participants.

OA and OP exercise programs included more than one goal and had several elements in their program (i.e., range of motion, flexibility, postural training, etc.).

OA exercise programs were mainly water based and OP exercise programs were mainly land based.

Few OA and OP programs evaluated client function/status.

Client satisfaction was evaluated by the over 60% of OP programs, but just under 50% of OA programs evaluated this area.

More OA programs attempted to ensure quality assurance than OP programs.

Less than 20% of OA and OP programs followed-up with their clients.

**DISCUSSION**

The purpose of this study was to describe the range of programs available in Canada to serve individuals with OA or OP. Probably the most striking finding of the study related more to the process of actually finding appropriate programs than to the data we collected. The process of finding programs was long and arduous even for our trained research associates, raising the issue as to accessibility for many seniors. Further, in another study in this program of research, we found that most seniors are not aware of research on the benefits of exercise for OA and OP (Gignac et al., 1998). As a result they may not even try to find programs, and if they are aware of the potential benefit to be gained from these programs, they might give up looking because these programs are too hard to find. This difficulty finding programs is probably related to the way that they were (or were not) advertised. Referral and word of mouth were the primary methods of advertisement for most of the programs, with written and audio advertisements used less frequently. Because over 50% of OA and 60% of OP programs had a doctor's referral or
diagnosis as a criterion to join it is imperative that health professionals (and in particular physicians) are aware of the types of programs available in their communities in order to inform (and refer) their clients appropriately. However, it is not enough to hope that physicians will read the research and be aware of the benefits of these programs, or to rely on word of mouth as the main source of advertisement. We need to go even further than this to give these programs greater priority and ensure that seniors are aware of their existence and their benefits. If programs wait for word of mouth or occasional physician visits, many people in need will not be reached. In an attempt to address this need, as part of our program of research, we have developed a series of booklets for seniors and health professionals called:

- For People with Osteoarthritis: Education, Exercise and Self-Help Activities. What’s out there and how to find it in your community (see Appendix 1).

- For People with Osteoporosis: Education, Exercise and Self-Help Activities. What’s out there and how to find it in your community (see Appendix 2).

- For Health Professionals: Education, Exercise and Self-Help Programs for People with Osteoarthritis and Osteoporosis. What’s available and how to help your clients find them in their communities (see Appendix 3).

We found just over 100 “unique” programs across Canada, of which only a quarter were offered in more than one location. Further, few of these programs were available in rural areas, indicating a gap in services. A strength of the programs is their accessibility to people with a variety of disabilities. However, a shortcoming related to accessibility was language. The lack of availability of many of these programs in a language other than English is potentially an issue, particularly in multi-cultural communities where older immigrants may not have a good enough grasp of the English language to participate. Concerted efforts are needed to improve the availability of these programs and ensure national coverage to both urban and rural, and multicultural residents.

Both OA and OP programs had a majority of female participants, despite the occurrence of both conditions in males. This leaves a number of unanswered questions with respect to potential gaps in service with respect to gender. Why are so few males participating in these programs? Do they not need these programs? Is the group nature of the programs a deterrent for men? Further research is necessary to understand how to best meet the program needs of men with OA or OP.

The majority of the programs had an exercise component, reflecting the importance of exercise to the management of both conditions. From the literature, important components to be included in an OP exercise program include strengthening (Kerr et al., 1996; Lanyon and Rubin, 1984, 1985; Beverly et al., 1989; Drinkwater et al., 1995; Taunton et al., 1997), weight-bearing/aerobic activity (Krall and Dawson-Hughes, 1994; Swezey, 1996) and back extension exercises (Sinaki et al., 1986; Sinaki et al., 1996). Most of the OP programs included these components. However, the prevention, identification and management of risk factors and social interaction are also important considerations for programs (Canadian Medical Association, 1996). Certainly whereas detailed assessment and education about exercise are important components of a program, particularly when the client is learning to manage their
condition, social interaction has been identified as an important factor in maintaining exercise participation.

The benefits of regular exercise for OA are well established and exercise has been shown to be effective in preventing and helping to manage many diseases and conditions. A recent critical appraisal of the literature investigating the efficacy of exercise as a rehabilitation modality of OA was recently completed by one of the co-investigators (Bell et al., 1998). The results of the appraisal show that exercise can improve function, and reduce pain and stiffness. All of the OA programs seem to include the minimum exercise requirements, but many did not include aerobic training or progression of strengthening exercises. Although there is support in the literature for aerobic and strength training for individuals with OA, perhaps people are still reluctant to encourage participants to do this sort of activity. Also, the message about aerobic exercise and strength training may not have filtered down to exercise leaders. In an affiliated project, we are developing a health communication strategy about exercise and arthritis that targets not only persons with OA, but as well, health care providers.

The second most frequently occurring component was education, again reflecting the importance of self-management in these conditions. Health professionals were the most common educators (e.g., PT’s, OT’s) and most often had developed the programs. This suggests that the medical content is well-developed. However, having lay persons as educators, such as occurs in the Arthritis Self-Management Program, and using participants to develop programs may help programs to cover topics important to participants, but typically outside of the medical realm (Boutaugh & Lorig, 1996).

Very few of the programs offered assessment for assistive devices or medical therapy or treatment. It is not clear whether these services are readily available though other sources, however, if not, this represents a gap in service delivery. In other research, we have found that the use of assistive devices is important for independence (Gignac et al., 1998). However, almost one third of respondents agreed that it was difficult to find information about assistive devices.

Lack of funding was a major problem for many of the programs in that the sources of funding were very precarious. User fees for clients as the primary source of funding may limit the participation of clients as the costs may be too great for individuals on limited incomes. With appropriate funding, some of the shortcomings of the programs could be dealt with (e.g., more money to develop facilities with “warm pools”, etc.).

The lack of evaluation of the programs is another issue. Few of the programs (even if they had education as a goal) assessed the knowledge gained by their participants and many did not assess participants’ functional status. Most OA and OP exercise programs did have some knowledge of their clients’ exercise and health status as they used screeners such as the PAR-Q, General Health Survey, and AIMS. However, few of those exercise programs that did assess or screen clients did post-program assessments. This lack of evaluation limits the ability to demonstrate the benefits and outcomes of programs, which in turn are important for enhancing credibility and profile, and potentially gaining funding from other sources.

There are some limitations to this study that need to be addressed. First, because we chose to survey unique programs only, the sample is
not representative of the actual number of programs available. One quarter of the programs surveyed were offered in multiple locations, but were only included once. Second, because of the difficulties we experienced actually finding programs, we may well have missed some unique programs. Third, we chose to use a standardized interview which may not have allowed us to do full justice to the variability and unique character of the programs we surveyed. Finally, the lack of observational data means that our findings are based solely on the key informants’ reports, which may lead to an unduly optimistic picture of some aspects of the programs. Anecdotal reports from our interviewers indicate that many times what they observed was not reflected in the information provided by the key informants. Further research should incorporate a participant observation component, particularly for the exercise programs.

In conclusion, programs geared to OA and OP that include education, exercise, support, and use of assistive devices have the potential to promote independence by decreasing physical disability and enhancing self-management. They need to be given greater priority to ensure that seniors and health professionals are aware of their existence and benefits and efforts need to be made to ensure that they are more accessible and available to all Canadian seniors.
REFERENCES


**APPENDIX 1**

**Getting Started**

This is a starting point to discovering what's in your community. Below is space for you to list 3 places you will call to find out more about the programs that interest you. Talking to others is also a great way to find out about what is available in your area.

I will call:

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**Arthritis Bell Connection Line**

1-800-321-1433

**About Osteoarthritis**

Osteoarthritis is the most common type of arthritis. It affects nearly 2.9 million Canadians, or 1 out of every 10. Osteoarthritis often develops later in life and results from the wearing out of cartilage that covers the ends of your bones. This "wear and tear" mostly occurs in the knees, hips and hands and can cause a lot of discomfort and pain.

Although there is no cure, there are many activities for people with osteoarthritis. Staying active is a good way to manage the pain and distortion of osteoarthritis. Most activities cost very little and are in places near public transit.

**About Exercise**

Most people with arthritis can safely exercise even if it hurts a little. In fact, research has shown that people with osteoarthritis who exercise have less pain and stiffness. Also, people with arthritis say that keeping active makes them feel better.

The goals of exercise programs are:
- to improve pain management
- to increase mobility
- to improve cardiovascular fitness

Classes are usually offered in groups but some program leaders will help you design a workout that you can do on your own at home.

Many of the programs for people with arthritis are in the water. Exercising in water takes the pressure off your joints, but there are also lots of land based activities that you can do too.

Places you can call for exercise classes specifically for people with arthritis or general fitness programs that are appropriate for people with arthritis are:
- YMCAs
- seniors' centres
- community centres
- The Arthritis Society

Also, the Rehabilitation or Physiotherapy Department of your local hospital may offer a short-term exercise program for people with osteoarthritis. This is a good way to get started.

**About Education**

Education programs give you up-to-date information about arthritis. They are usually offered in groups. Instructors may be health professionals, such as physiotherapists or nurses, or trained people who have arthritis themselves.

Topics often covered in sessions are:
- Pain management
- Coping strategies
- The importance of exercise

Some education programs are as short as one evening, others offer a more in-depth overview of the disease and may continue for a period of several weeks. Sometimes there is a small fee for handouts.

Call the Arthritis Society or your local hospital's Rehabilitation or Physiotherapy Department to find out more about education programs.

**About Self-Help & Community Support Groups**

These programs offer support to help you to manage your arthritis. Self-help and community support groups provide you with information and a chance to share and learn about the experiences of living with arthritis on a day to day basis.

Call the Arthritis Society for more information about community support groups. The Arthritis Society offers a self-help group called the "Bluebird Club" and also runs small support groups. Support groups are usually free.

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The Arthritis Society

**For People with Osteoarthritis:**

**Education, Exercise & Self-Help Activities**

What's out there and how to find it in your community

The Arthritis Society Research & Evaluation Unit
The Arthritis & Musculoskeletal Discomfort Research Centre
The Toronto Hospital
The University of Toronto

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The Arthritis Society

**Arthritis Community Research & Evaluation Unit**

610 University Ave., 16th Floor, Suite 706
Toronto, ON M5G 2V9
Phone: (416) 946-2502
Fax: (416) 946-2251

This research was supported by Health Canada's National Health Research & Development Program's Arthritis Independence Research Program.
**APPENDIX 2**

**TAKING ACTION**

Call these places in your community to see if programs that can help you:

- **Self-help**
  - The Osteoporosis Society Canada 1-800-463-4845

- **Education**
  - Perioperative Department of your local hospital
  - The Osteoporosis Society, Canada

- **Exercise**
  - YMCA
  - Community Centres
  - Seniors Centres
  - Public and Recreation departments
  - Perioperative Department of your local hospital

**FIND OUT**

Here are some questions to ask the program coordinator or instructor:

1. What are the goals of the program? How can it be helpful for someone with osteoporosis?
2. Do I need a doctor’s referral or my doctor’s permission to participate in the program?
3. Where is the program offered? What is the time commitment?
4. Are there any costs?
5. What do I need to bring with me to the program?

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**GETTING STARTED**

This is a starting point to discovering what's in your community. Below is space for you to list 5 places you will call to find out more about the programs that interest you. Talking to others is also a great way to find out about what is available in your area.

I will call:

1.
2.
3.
4.
5.

![The Osteoporosis Society of Canada's TOLL-FREE HELP LINE](image)

For more information or to request additional copies of this and other brochures contact:

The Arthritis Community Research & Education Unit
610 University Ave., 6th Floor, Suite 700
Toronto, ON M5G 2K8
phone: (416) 546-2907
fax: (416) 546-2229

The research was funded by Health Canada’s National Health Research & Development Program’s Senior’s Independent Research Program.

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**ABOUT OSTEOPOROSIS**

Osteoporosis is a disease that affects nearly one million Canadians over the age of 50. Osteoporosis causes bones to become fragile, or "brittle" because of a loss of bone mass. A result of having osteoporosis is an increased risk of fractures and broken bones, often in the hip, spine, or wrist.

Although there is no cure for osteoporosis, there are many activities for people with osteoporosis, even if there has been a fracture. Most of these activities cost very little. There are new exercise programs and other activities near public transit.

**ABOUT THIS BROCHURE**

Do you want to learn more about osteoporosis? Do you want to join an exercise program? Would you like to meet others with the same condition? This brochure can help you find out what's in your community for people with osteoporosis.

This brochure tells you about:

- the different types of programs available for people with osteoporosis
- where you can find these programs in your community
- things to ask the instructor when calling about a program

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**ABOUT EXERCISE**

Being active is very important. It helps prevent further loss of bone mass. When you do the right kind of activity, you reduce your risk of falls and fractures. Also, people with osteoporosis say that keeping active makes them feel better.

Exercise programs for people with osteoporosis focus on building strength and on weight-bearing aerobic activities, such as walking. Classes are usually offered in groups. But, some programs will help you design a workout that you can do on your own at home.

Exercise programs designed for people with osteoporosis are suitable for people with reduced bone mineral density even if you've had a fracture in the past. Your qualified fitness instructor will be able to modify the exercises to meet your needs.

Places you can call for activities specifically for people with osteoporosis or general fitness programs that are appropriate for people with osteoporosis are:

- YMCA
- seniors centres
- community centres
- Osteoporosis Society of Canada

Also, the Rehabilitation or Physiotherapy Department of your local hospital may offer a short-term education and exercise program for people with osteoporosis. This is a good way to get started.

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**ABOUT EDUCATION**

Education programs give you up-to-date information about osteoporosis. They are usually offered in groups. Instructors may be health professionals, such as physiotherapists or nurses, or trained people who have osteoporosis themselves.

Topics often covered in sessions are:

- coping strategies
- preventing falls
- self-management e.g. lifestyle changes
- the importance of exercise in osteoporosis

Some education programs are as short as one evening; others offer a more in-depth overview of the disease and may continue for a period of several weeks. Sometimes there is a small fee for handouts. Call the Osteoporosis Society of Canada or your local hospitals' Rehabilitation or Physiotherapy Department to find out more.

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**ABOUT SELF-HELP & COMMUNITY SUPPORT GROUPS**

These programs offer support to help you to manage your osteoporosis. Self-help and community support groups can provide you with information and a chance to share and learn about the experiences of living with osteoporosis on a day-to-day basis. Call the Osteoporosis Society of Canada for more information about community support groups.
Osteoarthritis (OA) affects over 2.6 million Canadians and more than 1.4 million Canadians have osteoarthritis (OA). As our population ages, the prevalence of these two conditions will increase. As a result, an increasing number of people with OA and OP will require your help. Although there are no cures, in addition to conventional treatment, there are many things you can encourage your clients to do to help them manage their conditions.

Exercise, education and social support interventions can decrease the symptoms of OA and OP and improve quality of life. Although the clinical outcomes and medico-social management for OA and OP differ, the types of community-based programs available for each of these conditions are similar. A nation-wide survey of programs available for people with OA and OP was conducted to determine what's available for people with these conditions in their communities.

This brochure summarizes these findings. It provides:

- an overview of exercise, education and community support programs available for people with OA and OP
- a summary chart to use as a quick reference of where to refer your clients for each specific type of program
- a list of references for further reading

We also have available similar pamphlets designed for people with OA and OP to help them find programs to meet their needs in their communities. To request copies contact us at the Arthritis Community Resources & Evaluation Unit. Our address and telephone number is on the back part of this booklet.

ABOUT EXERCISE...

Most people with OA and OP can safely exercise. Current research suggests that exercise is effective in reducing pain and stiffness of OA as well as decreasing the need for medication. For people with OP, weight-bearing and strengthening activities help prevent further loss of bone mass and reduce the risk of falls. OP exercise programs are designed for people with reduced bone mineral density and are also usually suitable for those who have fractures.

A good OA exercise class will include:

- progressive strengthening
- balance exercises
- aerobic conditioning

A good OP exercise class will include:

- muscle strengthening
- balance exercises
- weight-bearing activities (i.e., walking)

YMCA. Seniors' centres and community centres often offer group exercise programs designed specifically for people with OA and OP or some that are appropriate for people with these conditions, such as Tai Chi or seniors' fitness classes. Some programs will also help individuals design a workout they can do on their own. Qualified fitness instructors are able to modify the exercises to meet the specific needs of participants.

Hospital Rehabilitation Departments often offer short-term education & exercise programs specifically for people with OA and OP. This is a good way to introduce someone to the benefits of exercise and to help them learn more about their condition.

ABOUT EDUCATION...

Education programs provide people with up to date information about OA & OP. Research has shown that patient education is beneficial for people with these conditions and when combined with standard care, patient education programs further improve their symptoms. Instructors are usually health professionals, such as physiotherapists, nurses or people who have OA or OP themselves.

An education program for OA may include:

- pain management strategies
- coping strategies
- the importance of exercise

An education program for OP may include:

- self-management techniques i.e. lifestyle changes
- risk factors for fall prevention
- the role of exercise in management of OP

Refer your clients to the Rehabilitation Department of your local hospital, The Arthritis Society and The Osteoporosis Society of Canada for more information.

ABOUT SELF-HELP & COMMUNITY SUPPORT GROUPS...

By providing opportunities to learn and share information, self-help and community support groups can help people manage the day to day living with OA or OP. People with OA & OP who receive more social support seem to cope more effectively with their illness.

The Arthritis Society and The Osteoporosis Society of Canada are good places to call for more information about community support groups.