Significant Variation Exists in Home Care Services Following Total Joint Arthroplasty

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ABSTRACT. ***Objective.*** To determine a preliminary profile of the variation in rehabilitation and home care services for patients with total joint arthroplasty (TJA) in Ontario in 2001.

Methods. A cross-sectional survey was conducted of directors at the 43 regional community care access centers (CCAC).

Results. One-third (36%) of CCAC had existing care pathways, 54% had defined discharge criteria, and 32% had predetermined the length of home care services. The intensity and frequency of services provided were variable.

Conclusion. There is a need to standardize rehabilitation protocols to maintain quality of care and contain costs. (J Rheumatol 2004;31:973–5)

Key Indexing Terms:
ARTHROPLASTY TOTAL JOINT ARTHROPLASTY CARE PATHWAY HOME CARE

There has been an increasing trend to discharge patients who have undergone total joint arthroplasty (TJA) directly to home with home-based rehabilitation[1-3]. It is therefore imperative to ensure that appropriate home care rehabilitation strategies for TJA exist in order to contain costs and maintain quality care.

Key areas in a quality continuum of care are the development of critical care pathways, discharge planning, rehabilitation, and patient education[4]. Critical care pathways aim to streamline and standardize management through a systematic approach and are effective in improving patient outcomes and decreasing length of stay[5,6]. We evaluated in a preliminary way the spectrum, intensity, and variation of services provided by home care agencies in Ontario.

MATERIALS AND METHODS

This cross-sectional study consisted of a 12-question survey of the 43 regional Community Care Access Centers (CCAC) in Ontario regarding their services to TJA clients. The directors were mailed a survey in 2001 with repeat mailings 4 weeks apart. The survey investigated the critical care pathways, rehabilitation protocols, discharge criteria, and patient education programs, and the use of standardized assessment scores. Details of the statistical analysis for the results can be provided upon request from the authors.

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Submitted March 10, 2003; revision accepted November 13, 2003.

RESULTS

The overall response rate for the survey was 86%, with 37 of the 43 CCAC participating.

Of all respondents, one-third (36%) had critical care pathways in place, and a large minority (42%) serviced more than 200 TJA clients. Of the group handling more than 200 TJA cases, 46% had critical care pathways. Of the remaining CCAC that serviced fewer than 200 TJA clients, 39% had existing protocols.

About half (54%) of responding CCAC possessed defined discharge criteria. A third (32%) of CCAC stated that length of home care services (LOS) was predetermined. However, the variation in the expected LOS was evident, with 29% of CCAC having an LOS of 0–3 weeks, 29% with 4–6 weeks, and 42% with greater than 6 weeks.

Table 1 gives the type and extent of physiotherapy (PT), occupational therapy (OT), and homemaking services provided. For all measures of interest, PT and OT services were similar. Homemaking services, however, were more often contracted out to private agencies and required an increased number of visits.

General outcome assessment. A large majority of centers employed each of the general physical and functional measures listed in the survey regarding household management (79% of CCAC), transfers (94%), influence of pain on function (91%), balance (91%), mobility (97%), gait (97%), range of motion (ROM; 100%), pain (94%), strength (97%), and weight bearing status (85%).

Specific outcome scores. Relatively few CCAC used any patient-centered measures to evaluate outcomes (Figure 1). The majority of the CCAC preferred healthcare provider-centered measures such as the Timed Up and Go test (88%) and the Berg balance scale (88%).

Table 1. Type and extent of physiotherapy, occupational therapy, and homemaking services.

Service	Provider			No. of Visits			Length, min		
Physiotherapy	CCAC*	Private**	None	4–6	6–10	> 10	30–45	45–60	> 60
	25%	72%	3%	61%	22%	17%	47%	40%	13%
Occupational	CCAC*	Private**	Both	0–3	4–6	> 6	30–45	45–60	> 60
therapy	27%	65%	8%	66%	19%	15%	8%	61%	31%
Homemaking	CCAC*	Private**	None	< 10	> 10			NA	
	8%	78%	14%	25%	75%				

* Service provided directly by CCAC, ** service subcontracted to private sector by CCAC. NA: not applicable.

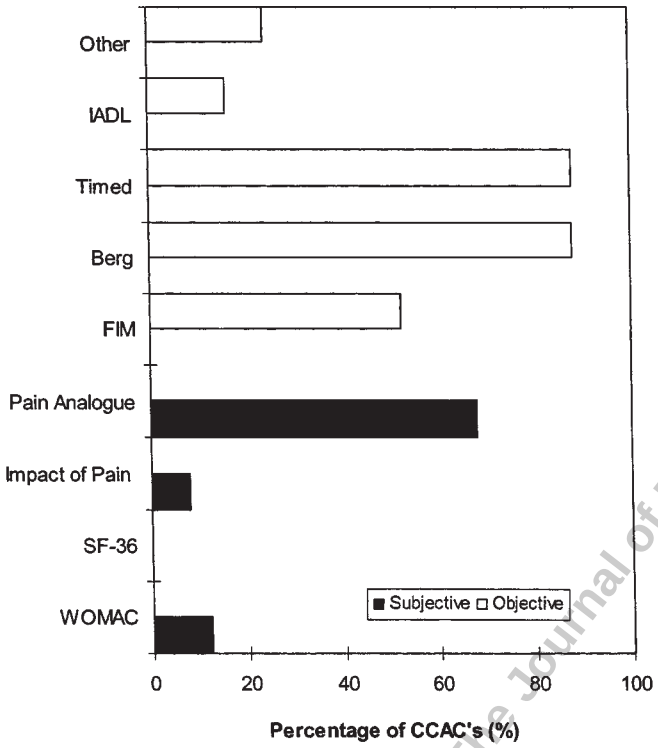

Figure 1. Outcome measures. Use of patient-centered versus clinician-centered outcome scores for TJA clients in 2001. IADL: Index of Independence in Activities of Daily Living, Timed: Timed Up and Go test, Berg: Berg Balance Scale, FIM: Functional Independence Measure, WOMAC: Western Ontario and McMaster University Osteoarthritis Index, SF-36: Medical Outcome Study Short Form 36.

Patient knowledge and education. A majority (68%) of centers evaluated client knowledge level regarding the episode of care in a formal manner.

Patient followup. Of the centers that actually followed up with patients after discharge (34%), the followup approach included telephone calls only (20%), visits only (40%), or both (40%).

DISCUSSION

There is a need to formulate critical care pathways for TJA rehabilitation services provided by CCAC in Ontario. Only a third (36%) of the CCAC surveyed had existing critical care pathways. Of the CCAC serving more than 200 clients, almost half (46%) had pathways in place. Almost half (46%) the centers did not possess defined discharge criteria. Thus, it may be necessary to develop common criteria to enhance the efficiency of home care services, especially since the majority of centers lack a care pathway. Other potential factors useful in developing discharge criteria include safe and independent ambulation with or without aid, a ROM of 90 degrees, knowledge of the exercise program, maximum independence with activities of daily living, full weight-bearing ambulation, zero or minimal pain, and independent transfers[7].

Achievement of client outcomes within the designated time frame of length of service is a driving force of case management[8]. However, the variation in LOS highlights the need for standardization of the discharge process in the centers that already possess defined criteria. Only about a third of the CCAC (32%) predetermine the length of home care services. The frequency and intensity of the PT and OT services provided by centers were variable between CCAC. This may indicate a greater variability in the general physical health and psychological status of patients prior to surgery. This is consistent with the feedback from CCAC, which suggests that homemaking services are adapted according to specific personal needs.

The overall limitations of this study are 3-fold. First, although 37 of the 43 centers in the province responded to the questionnaire, a significantly smaller proportion of the directors were able to provide detailed data on a number of issues. Second, because funding structures may vary greatly from year to year for CCAC, it is not certain that the current 2001 results are representative of the situation in subsequent years. Third, the study was meant to be a preliminary information-gathering and hypothesis-forming tool. A more comprehensive study of CCAC should be performed in the future.

Our preliminary study suggests that large variation exists in rehabilitation strategies across the community care access centers in the province of Ontario. There is a need to standardize protocols to maintain the quality of care for patients who have undergone TJA and to contain costs. It is also necessary to develop appropriate discharge criteria for rehabilitation services and to standardize these measures across the province.

ACKNOWLEDGMENT

The authors recognize the contributions of medical students Malcolm Chang and Rene Allard.

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