

Care management and care provision for older relatives amongst employed informal care-givers

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ABSTRACT

This paper examines care management, or ‘managerial care’, a type of informal care for older adults that has been relatively neglected by researchers. While previous research has acknowledged that care-giving may involve tasks other than direct ‘hands-on’ care, the conceptualisation of managerial care has often been vague and inconsistent. This study is the first explicitly to investigate managerial care amongst a large sample of carers. In our conceptualisation, care management includes care-related discussions with other family members or the care recipient about the arrangements for formal services and financial matters, doing relevant paperwork, and seeking information. The study examines the prevalence of this type of care, the circumstances under which it occurs, its variations by care-giver characteristics, and its impact on the carers. We drew from the Canadian CARNET ‘Work and Family Survey’ a sub-sample of 1,847 full-time employed individuals who were assisting older relatives. The analysis shows that managerial care is common, distinct from other types of care, a meaningful construct, and that most care-givers provide both managerial and direct care. Care management includes both the orchestration of care and financial and bureaucratic management. Providing managerial care generates stress amongst women and interferes with work amongst men, and the aspect that generates the greatest personal and job costs amongst both men and women is the orchestration of care.

KEY WORDS – care-giving, care management, employed care-givers, informal care.

Introduction

It is almost 25 years since Archbold (1983) observed that most of the literature on family care-giving assumed one care-giving role, namely direct,

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'hands-on' care. The care-giving literature has since grown exponentially, but the comment still applies. Although Archbold identified a second role, that of care-manager, very little subsequent research has examined this aspect of family care-giving. From her small, qualitative study, Archbold found that care management was more common amongst employed women than among women not in paid-work; if her finding applied to the national population, the recent increase in labour force participation rates among women implies that care management has become increasingly common. The purpose of this paper is to establish if this is so, and more generally to examine the nature and prevalence of care management as a type of care-giving among both men and women. The availability of a large sample of employed Canadians provided appropriate data for the task.

Managerial care as a component of care-giving

First, however, we review previous research on informal care-giving that has explicitly or implicitly included care management, with particular attention to the evidence about its prevalence, the distinctive characteristics of those who provide direct or managerial care, and whether and in what respects managerial care is associated with negative outcomes for the providers. As already implied, research on informal care of older relatives has, by and large, been operationalised in research as the direct provision of care, that is help with the basic personal and the instrumental 'activities of daily living' (*e.g.* Dwyer and Seccombe 1991; Neal *et al.* 1993; Raschick and Ingersoll-Dayton 2004; Scharlach and Boyd 1989; Stoller, Forster and Duniho 1992). Conceptually, however, the scope of care-giving extends beyond 'hands-on' assistance.

Scholars have long recognised the important role that families play in linking older adults to human service organisations (Shanas and Sussman 1977), and researchers of care-giving have recognised that it may include obtaining or co-ordinating formal services (Brody 2004: 35; Fischer and Eustis 1988; Fredriksen 1996; James 1992; Lawrence *et al.* 2002; Zarit and Pearlin 1993). In an early review of the research on informal care-giving, Horowitz (1985) conceptualised family care as having four categories: direct services, emotional support, mediation with formal organisations and providers, and financial assistance. James (1992) later conceptualised caring as involving three components: physical labour, *i.e.* help with the activities of daily living (ADLs) or the instrumental activities of daily living (IADLs), emotional labour (providing emotional support), and organisational or managerial labour (ensuring that care is provided at the appropriate time and in a way that is acceptable to the care recipient). In her small study of

30 women, Archbold (1983) identified two types of care to older parents: 'The care-provider identifies those services the parent needs and performs them herself. The care-manager identifies the needed services and manages their provision by others' (1983: 41). Brody (2004) referred explicitly to family care-givers as case managers, a role that she conceptualised as the management of formal services:

Mediation with organizations is a service now called 'case management' when it is done by professionals. The real case managers, however, are family members who far outnumber professionals in performing that function. Such mediation or management involves knowing or finding out what entitlements the older person has. ... It involves identifying what services are needed and knowing whether they are available in the community. It involves gaining access to and mobilizing those services. ... It is an ongoing task to monitor and orchestrate the various services (Brody 2004: 35).

While researchers have acknowledged that care-giving involves several roles aside from direct help with ADLs and IADLs, the conceptualisation of managerial care has been vague and inconsistent. In particular, the representational role in relation to formal services has been more readily recognised than other aspects of managerial care, for which the work of Fischer and Eustis (1988) was instructive. In their small, qualitative study of family care-givers of patients during hospitalisation and after discharge, they found that the managerial role involved mediation, supervision and planning. Families mediated between care recipients and health professionals, and advocated on behalf of the patients. Some supervised the formal care delivered in the home and in the hospital, and strived for continuity among the many and diverse formal care providers. Family members were also planners of post-hospital care. As Fischer and Eustis summarised, 'these arrangements usually entail co-ordinating care from both formal service providers ... and informal care-givers, particularly close family members' (1988: 388). They saw that the co-ordination of informal care was part of the managerial role, and that this involved repeated negotiations with the care-recipient and with various care-givers.

Prevalence and distinctiveness of the managerial care role

While previous research has identified the managerial role among family care-givers and has described its main features, many questions have not been addressed, for example about its prevalence, the circumstances under which it occurs, the characteristics of those who provide it, and its impact upon them. In the absence of large studies, it is not known how common it is for family members to perform the managerial role, nor whether it is

typically undertaken exclusive of, or in combination with, hands-on care. There has been, however, some research on each of these issues. Seltzer, Ivry and Litchfield (1987) studied families of older adults who were clients of a social-service agency in the United States, and found that two-thirds performed case-management tasks, which they defined as the tasks involved in obtaining or co-ordinating formal services for an elderly relative.

Co-ordination of the informal support network is another facet of managerial care. The term 'network' implies that two or more people are involved in providing informal support. Fast and colleagues (2001) found that the informal-care networks of older Canadians who received help because of a long-term health problem typically included two or more helpers. Stommel and colleagues (1995) found that between 52 and 67 per cent of a sample of care recipients received help with ADLs from both an informal primary care-giver and other helpers (either formal or informal). Connidis, Rosenthal and McCullin (1996) found that, among employed adults in Canada who provided at least one hour of care per week to an older relative, 61 per cent said that other family members also provided care. In a related Canadian study, Sims-Gould, Martin-Matthews and Rosenthal (in press) constructed profiles of the 'helping units' of employed adults who assisted an older adult with at least one ADL or two IADLs. The modal helping family unit had 2.4 or 2.5 individuals, but in 45 per cent of the cases there were three or four care-givers. While these figures do not necessarily mean that there is co-ordination amongst those who provided assistance, it seems reasonable to infer that it occurs in some networks and is likely to be performed by the primary care-giver.

While care management and direct care provision are different types of care, it is unclear from the literature whether the two are usually mutually exclusive or combined. Archbold (1983) found that they occurred separately, but this may well have been an artifact of the sample, and other work has implied that they occur together (James 1992). Research on the interface between informal and formal care has cast light on the issue, at least on the component of managerial care that orchestrates formal services (*e.g.* Denton 1997; Noelker and Bass 1989). It has been suggested that formal care does not replace informal care, but rather that informal care tends to precede the use of formal services, and that when formal services are sought, families either maintain or increase the amount of informal care (Chappell and Blandford 1991; Lingsom 1997, cited in Daatland and Herlofson 2001; Stoller 1989). This suggests that many care-givers combine the roles of care-provider (which usually precedes seeking formal services) and care-manager (at least the element that obtains and co-ordinates formal services, an additional role once services are needed).

Care-giver characteristics

Gender is a strong predictor of care-giving involvement. Although many men are care-givers, and their involvement increases in the absence of siblings (Campbell and Martin-Matthews 2000), the evidence from several countries is that women predominate and spend more time than men providing care (Chappell 1992: 35; Keating *et al.* 1999: 57; Neal, Ingersoll-Dayton and Starrels 1997; Peace and Holland 2001). There is also evidence of a gendered division of the various care-giving tasks, with daughters being more likely to help with transport, housekeeping, shopping, cooking, care when ill, and personal care, and sons more likely to help with home repairs and yard work, decision-making, and financial advice and support (Finley 1989; Horowitz 1985; Lawrence *et al.* 2002; Martin-Matthews and Campbell 1995; O'Bryant and Morgan 1990; Stoller 1990). Primary care-givers are in the best position to co-ordinate formal and informal assistance by other helpers, and similarly, people who are sole care-givers, that is, whose relative is not being helped by anyone else, are also more likely to co-ordinate formal assistance than secondary care-givers. Furthermore, having no siblings might increase the likelihood of providing managerial care, since such care-givers are more likely than those with siblings to be primary or sole care-givers or both.

The findings of the various studies are, however, inconsistent. Lawrence *et al.* (2002) concluded that organising services tended to be by sons, yet Keating *et al.* (1999: 41) found that, amongst men and women who provided care to an older person with a long-term health problem or disability, similar proportions of men and women helped with financial matters (banking and bill-paying) and transport. Some research has suggested that being in paid employment dampens the gender effect in task provision (Martin-Matthews and Campbell 1995; Neal, Ingersoll-Dayton and Starrels 1997). While there has been little attention to managerial care in general, there are indications that the likelihood of providing this type of care does not vary by gender (Finley 1989; Neal, Ingersoll-Dayton and Starrels 1997), although one study found evidence of an association (Lawrence *et al.* 2002). More research on gender differentials in providing managerial care among employed adults is required, with attention to its various components.

The most detailed examination to date of managerial care was again by Archbold (1983), who found that socio-economic status influenced whether a woman was a care-provider or care-manager, and that income was the major determinant of whether and how many services were purchased. Higher income gave a care-giver more options and flexibility in obtaining services to meet a parent's needs. Archbold also found that

being employed full-time in a high prestige occupation associated with being a care-manager, and noted that ‘career commitment provides a salient competing role to care-giving’. When the importance of the occupational role is clear, it ‘enables managers to delegate parent-caring activities with little internal conflict’ (Archbold 1983: 41). Only a few of the care-providers that she studied were in paid work, and those who were had little career orientation. Moreover, their comparatively low earnings did not permit them to purchase services (one aspect of managerial care).¹

Adverse outcomes

In the extensive research on direct care provision, several adverse outcomes for the care-giver have been identified including: reduced time for leisure and rest; job costs such as reduced hours of work; conflict between work and family roles; and stress, burden and negative impacts on physical and mental health (*e.g.* Aneshensel *et al.* 1995; Bookwala, Yee and Schulz 2000; Martin-Matthews and Rosenthal 1993; Zarit and Pearlin 1993). Research that has explicitly examined the association between managerial care and these outcomes has, however, been rare and fragmentary. The care-managers studied by Archbold (1983) reported the major costs as time limitations, career interruptions, financial problems and guilt. They had too little time to pursue ‘career development’ opportunities, and the intrusion or ‘spill-over’ of care-management activities into work-time was especially difficult for women in non-professional, bureaucratic positions. They also reported incurring heavy financial costs. Most care-managers could not afford to purchase services for extended periods and almost all felt a ‘financial pinch’.

Care-managers also find it challenging to familiarise themselves with the available services and say that accessing them is time-consuming and difficult. Several studies have suggested that locating and co-ordinating formal service support increases the stress on family care-givers (Neal *et al.* 1993: 134; Stoller and Pugliesi 1989). Co-ordinating care among family members can also be stressful. Archbold’s (1983) respondents reported conflict with siblings over perceived inequities in the distribution of parent-caring activities. From a study of the primary care-givers of hospitalised older relatives, Rosenthal, Sulman and Marshall (1992) found that 21 per cent reported problems in getting other family members to co-operate in the care. Gottlieb, Kelloway and Fraboni (1994) found that managerial activities were associated with increased stress, work-family conflicts and job costs, but their analysis did not distinguish the

different components of managerial care or which contributed most to negative outcomes.

Among employed care-givers, conflicts between family and work are common (Neal *et al.* 1993: 126–8). In the absence of specific studies of managerial care, the extent to which it is associated with conflict between family and work responsibilities is unknown. The spill-over of care management activities into work-time was one problem reported by Archbold's (1983) respondents. Gottlieb, Kelloway and Fraboni (1994) found that managerial care gave some care-givers the feeling that their family responsibilities interfered with work, and speculated that this arose partly because service agencies must be contacted during normal daytime work-hours. Combining care provision and paid employment often has job-related costs, including absenteeism, altered or reduced work-hours, and having to turn down opportunities for training, promotions or new positions (Martin-Matthews and Rosenthal 1993; Neal *et al.* 1993: 127 and 131; Pavalko and Artis 1997; Scharlach and Boyd 1989). The extent to which managerial care generates job costs is not however known.

Expanding the conceptualisation of care management

In this paper, informal care management is conceptualised and defined as a type of care-giving that includes but is by no means limited to the management of formal services. The definition is consistent with James's (1992) term, 'organisational or managerial labour', which we suggest includes all aspects of care that do not involve direct, hands-on services or emotional support. The co-ordination of care includes care-related discussions and negotiations with other family members and with the care recipient, dealing with financial matters, doing relevant paperwork, and seeking information. The definition differs, however, from Seltzer and colleagues' (1992) concept of 'case management', which they defined as limited to engagements with formal services and providing links between an older person's formal and informal supporters. Our conceptualisation goes beyond interactions with services and includes links within the informal support network.

In this paper, Archbold's (1983) terminology is accordingly adopted. The term 'care-giving' denotes providing help to an older relative, without specifying the type of help provided; 'care-provider' refers to a care-giver who provides help with ADLs/IADLs; and 'care-manager' refers to a care-giver who provides help that is not hands-on or direct care. Although care management may be an aspect of care-giving regardless of the care-giver's employment status, this study focuses on a sample of employed

carer because those who are employed are more likely than others to use formal services (Stoller 1989), and because arranging for and co-ordinating formal services is an aspect of care management.

Research questions

Given the cited evidence and current understanding, this study addressed the following research questions:

1. Is care management empirically verifiable as a distinct component of care provision, and therefore a valid construct?
2. How common is it for employed adults to perform managerial care activities for older relatives, and is the role patterned by gender?
3. Are people either care-managers or care-providers, or do they typically combine the roles?
4. How do men and women who provide only managerial care differ from those who provide other types of care, with particular reference to: income, occupation, geographical proximity to older relatives, amount of care provided, sibling availability, being the primary care-giver, and being the sole care-giver?
5. What is the relationship between managerial care and adverse outcomes (stress, family interference with work, personal and job costs), and does the relationship vary by gender?

Methods

Design

The data were drawn from the *Work and Family Survey* conducted by the Work and Eldercare Research Group of the *Canadian Aging Research Network* (CARNET).² The survey, carried out in 1992, was conducted in nine Canadian organisations representing five employment sectors (government agencies, financial services, manufacturing, health-care providers, and educational institutions). Four of the organisations were public sector, the others in the private sector. They were selected to yield a sample of individuals who worked in various jobs and employment sectors. The sample is not, however, representative of the Canadian population and, further, comprises mainly white-collar workers. The sampling ratios ranged from 15 to 95 per cent of the individual organisation's workforce, as negotiated and agreed with each employer. In seven of the nine organisations, the sample was restricted to employees over the age of 35 years. We chose

TABLE 1. *The socio-demographic characteristics of care-givers and non-caregivers among those employed full-time, Canada 1992*

	Care-givers			Non-caregivers			<i>t</i>
	Mean	S.D.	N	Mean	S.D.	N	
Mean age (years)	43.6	7.4	1,815	42.8	8.2	2,873	3.6***
Education ¹	7.4	3.0	1,839	7.1	2.9	2,910	3.7***
Household income ²	7.8	2.9	1,794	7.5	2.9	2,820	3.7***
	Percentage		N	Percentage		N	χ^2
Women	57		1052	58		1689	0.4
Men	43		788	42		1219	
Professional	41		752	40		1153	5.8
Semi-professional	26		477	24		691	
Other occupations	33		593	36		1029	
Sample sizes			1,847			2,921	

Notes: 1. Level of education was coded as: 1 = some elementary schooling; 2 = complete elementary; 3 = some high school; 4 = complete high school; 5 = some vocational; 6 = complete vocational; 7 = some specialised training; 8 = completed specialised training; 9 = some university; 10 = completed undergraduate course; 11 = some post-graduate training; 12 = completed post-graduate course. 2. Tens of thousands of Canadian dollars in the previous year, with '1' indicating below \$10,000, '2' indicating \$10,000–19,999 and, for example, '7' indicating \$60,000–69,999.

Significance level: *** $p < 0.001$.

to over-sample this age group to raise the likelihood of identifying employees who were helping older relatives. In two organisations there were no age restrictions, primarily because of constraints in the method of distribution of the survey. Several methods were used to distribute and collect the survey, depending on the constraints and preferences of the participating organisations.³ Of the 10,219 questionnaires distributed, 5,496 usable schedules were returned, yielding an overall response rate of 54 per cent, which compares favourably with the response rates of other large surveys of employed care-givers (Neal *et al.* 1993: 37; Scharlach, Sobel and Roberts 1991).

The analysis sample

The analysis reported in this paper is of the 1,847 individuals in the CARNET survey who were employed full-time and who, during the previous six months, had provided help to a relative aged 65 years or older with at least one ADL or two IADLs, or provided two managerial care activities.⁴ Table 1 compares the socio-demographic characteristics of the care-givers and non-caregivers among the full-time employed individuals in the sample. The gender ratio of the two sub-samples was not significantly different, but there were differences in age, education and income (as

indicated by *t*-tests). The sub-sample was older, with a mean age of 44 years, compared to 43 years in the remainder of the sample, and had more education and higher income.

Measures

Two *types of care-givers* were distinguished, direct ‘care-providers’ and ‘care-managers’, based on the type of care that they provided. The survey asked employees to rate the frequency with which they provided assistance to a relative aged 65 or more years using a six-category Likert semantic differential scale that ranged from ‘never’ to ‘daily’. They were specifically asked, ‘how often have you done each of the following for your older relative(s) during the past six months, because of their age or health?’ Twelve items referred to direct care provision, and of these, five inquired about help with ADLs (dressing, personal hygiene, toileting, eating, medication use), and seven about IADLs (laundry, transportation, home maintenance, meal preparation, shopping, household chores, and mobility inside and outside the home). The checklist also included three types of care-management activities: assisting with money management, completing forms, and providing financial assistance. The respondents were then asked how many hours per week, on average, they had spent helping their older relative during the last six months, and whether during that period, in order ‘to meet or prepare for any of your older relative’s needs for care’, they had: appraised places that provide long-term care; sought information about community services for seniors; put money aside to help meet the needs of an older relative; discussed care arrangements with an older relative; discussed care arrangements with other family members; or arranged for an older relative to receive in-home nursing, meals, home-making or other services. The roles that involved ‘putting money aside’ and ‘providing financial assistance’ were not included in the present analysis, for reasons described later.

To assess *adverse outcomes*, we examined the relationship between the type of care provided and ‘personal opportunity costs’, ‘job opportunity costs’, ‘family interference with work’ and ‘stress’. *Personal opportunity costs* were measured by items that asked respondents whether or not, during the past six months, their family responsibilities had caused them to reduce the amount of time they devoted to: volunteer work; leisure activities; socialising with friends; continuing education classes; and sleeping or resting. Positive replies were summed to create a personal opportunity costs index, with a range from ‘0’ to ‘5’ (Cronbach’s $\alpha = 0.87$; for further information on this measure, see Gottlieb, Kelloway and Fraboni 1994). *Job opportunity costs* were measured by asking respondents whether or not,

during the past six months, their responsibilities outside work had caused them: to miss meetings or training sessions; to decline business travel, not take on extra projects, not seek promotions, or to be unable to attend job-related social events scheduled outside regular work hours. The sum of positive scores formed an index of job opportunity costs with a range from '0' to '5' (Cronbach's $\alpha = 0.62$).

To assess *family interference with work*, following Gutek, Seale and Klepa (1991), a four-item Likert level-of-agreement scale was used to measure *Family Interference with Work* (FIW) (Cronbach's $\alpha = 0.79$). This construct tapped the time restriction, fatigue, mental preoccupation, and compromised work-involvement outcomes produced by family responsibilities. For example, the time restriction item was established by the level of agreement with the statement, 'my family responsibilities take up time that I'd like to spend working on my job'. The sum of the four scores produced the FIW index, with a range from '4' to '16'. *Stress* was measured through Cohen and Williamson's (1988) 'Perceived Stress Scale', a 14-item global measure of perceived stress. Items were rated on a five-point Likert scale and aggregated, yielding a range from '0' to '56'. The scale demonstrated adequate internal consistency (Cronbach's $\alpha = 0.83$).

To establish whether the respondent was the *sole care-giver*, the respondents were asked whether or not other family members regularly helped care for their older relative. To establish if the respondent was the *primary care-giver*, they were asked whether or not they were the person who was most responsible for the care of their older relative. Increasing *geographical distance* from an older relative might make it more difficult to coordinate formal and informal care, and be associated with a decreasing likelihood of being a primary care-giver. On the other hand, distant children who have no siblings might take on the role of care-manager rather than care-provider. The respondents were therefore asked how many minutes it usually took to travel from their home to the older relative's residence. Those sharing a household with the relative were coded '0'.

For *occupation*, the respondents were asked to describe the kind of work they did. Answers were coded into occupational categories and socio-economic status in three categories: managerial/professional; semi-professional; and clerical, sales, service, crafts and trades occupations (Pineo 1985). *Education* was coded into ordinal categories from '1' (some elementary schooling) to '12' (completed postgraduate course). *Household income* was categorised from '1' (less than Can.\$10,000) to '13' (\$120,000 and over). *Full-time employment status* was ascertained by asking respondents how many hours they worked each week, with 35 or more hours denoting full-time.

TABLE 2. *Factor loadings of the managerial activities provided by care-givers who were employed full-time*

Variable	Factor				
	1	2	3	4	5
Help with dressing	0.79	0.15	0.03	0.08	-0.01
Help with bathing-washing	0.78	0.07	0.10	0.06	0.02
Help using toilet	0.78	0.09	-0.04	0.04	0.01
Help with eating-feeding	0.73	0.16	0.05	-0.06	0.01
Help with medication	0.57	0.16	0.23	0.20	0.13
Discussed care arrangements with older relative	0.13	0.76	0.01	0.02	-0.01
Looked into places with long-term care	0.06	0.74	-0.02	0.05	0.12
Discussed care arrangements with family members	0.17	0.72	-0.03	0.06	-0.07
Sought information about community services	0.03	0.70	0.16	0.04	0.18
Arranged in-home services for elder	0.19	0.55	0.06	0.09	0.08
Help with household chores	0.05	0.08	0.80	0.19	-0.03
Help with home maintenance	-0.12	-0.04	0.70	-0.04	0.02
Help with preparing meals	0.31	0.07	0.64	0.13	-0.01
Help with laundry	0.42	0.08	0.49	0.17	0.11
Help with transportation	0.03	0.06	0.04	0.85	0.02
Help with shopping	0.07	0.04	0.29	0.74	0.07
Help getting around home	0.39	0.24	0.02	0.47	-0.04
Help completing forms	0.02	0.08	0.06	0.03	0.85
Help managing money	0.07	0.13	-0.07	0.02	0.82
Eigenvalue	3.24	2.63	2.0	1.65	1.49
Explained variance (percentage)	17.1	13.8	10.3	8.7	7.8

Note: Principal components analysis with Varimax rotation. The five factors in aggregate accounted for 57.7 per cent of the total variance.

Results

Are care management and care provision distinct constructs?

To investigate whether care management is a distinct construct in care provision, a factor analysis was conducted of the attributes and care tasks performed by the sample of full-time employed care-givers. After principal components extraction, an orthogonal Varimax rotation was performed. Six factors resulted from the analysis and were readily labelled: one denoted help with ADLs, two help with IADLs, and three help with care management. The sixth factor, on which financial assistance tasks (including putting money aside to help an older relative) loaded most strongly, was dropped since the correlation between the two items was weak, and because these forms of support are conceptually and instrumentally different from both managerial and direct ADL or IADL care. The financial assistance variables were therefore excluded from a re-run factor analysis, which yielded five factors that accounted for 58 per cent of the variance (Table 2).

TABLE 3. *Managerial care activities performed in past six months by employed care-givers*

Managerial-care activities	Men	Women
	<i>Percentages</i>	
Number performed:		
None	16	16
1	18	20
2 or more	66	64
Type performed:		
Managing money	50	41
Completing forms	66	63
Looked into facilities	16	15
Sought information	26	29
Discussed care with relative	34	35
Discussed care with family	43	49
Arranged services	12	14
Sample sizes	788	1,052

Note: Full-time employed persons who during previous six months provided assistance with at least one ADL or two IADLs or two managerial tasks.

Factor 1, *Helping with ADLs*, accounted for 17.1 per cent of the total variance and five variables that described different types of help loaded strongly. Factor 2, *Orchestrating Care*, accounted for 13.8 per cent of the variance and had five strongly loading variables (looking into places that provide long-term care, seeking information about services, discussing care arrangements with the older relative and with other family members, and arranging for a relative to receive services). Factor 3, *Helping with IADLs*, accounted for 10.3 per cent of the variance and had four strongly loaded variables that described domestic tasks (doing chores, laundry, home maintenance and yard work, and preparing meals). Factor 4, *Helping with Mobility-related IADLs* accounted for 8.7 per cent of the variance and had three strongly loaded variables (providing transport, shopping, and helping the person get around inside or outside the home). Factor 5, *Financial and Bureaucratic Management*, accounted for 7.8 per cent of the variance and had just two strongly-loaded items (completing forms and managing money). The factor structure indicates that care management is a distinct construct in care provision, and that it has two dimensions: orchestrating care, and financial and bureaucratic management.

How common is managerial care and is its provision patterned by gender?

Table 3 shows the frequencies of managerial care activities among the employed care-givers. A large majority (84%) had provided managerial care, and on average they had delivered 2.5 managerial activities, with no

differences between men and women. The most common activity was completing forms; it was undertaken by close to two-thirds of both men and women. Managing money and discussing care arrangements with other family members or with the older relative were also quite common, being reported by one-third or more of the respondents. It is noteworthy that arranging services was reported by only 12 per cent of men and 14 per cent of women, and was the least common managerial activity among both men and women. When conceptualising managerial care, it is therefore important that it is *not* seen as solely arranging formal services.

Are care-providers and care-managers different people?

To examine whether managerial care was typically provided alone or in combination with other types of care, three mutually exclusive groups of the respondents were defined: those who provided: (1) managerial care only; (2) managerial and other (ADL/IADL) care; (3) other care only (Table 4). The majority combined managerial and other care, and relatively few performed either only managerial care or only other (ADL/IADL) care. Table 4 also displays the attributes of the three groups by gender. Among both women and men, the number of hours spent providing care varied significantly by care type (as established by analysis of variance). Not surprisingly, those who provided managerial and other care were engaged more hours in an average week than the other two groups, while those who provided only managerial care were engaged the fewest hours. Those who provided only managerial care were more likely to be primary care-givers than those who provided only other care, but less likely to be primary care-givers than those who provided both managerial and other care. Neither occupation nor having siblings was significantly associated with the type of care provided.

Among women, those who provided only managerial care were more likely to be sole care-givers than those who provided both managerial and other care, but no more likely to be the sole care-givers than those who provided only other care. There was no significant association with either income or distance from relative. Among men, those who provided only managerial care reported higher income than those who provided only other care. Another differentiator among men was that those who provided only managerial care lived significantly further away from the older relative than the other two types of carers. Men who provided only managerial care were less likely to be sole care-givers than men who provided only other care, but just as likely to have this role as those who provided both managerial and other care.

TABLE 4. Characteristics of employed care-givers by gender and type of care

Attribute	Care-giver type	Men		Women	
		%		%	
Care-giver type					
Managerial only	1	11		6	
Other (with ADL or IADL) care	2	16		16	
Managerial and other	3	73		78	
All		100		100	
	Care-giver type	%	χ^2	%	χ^2
Characteristics of the carer type¹					
In professional occupation	1	53	4.5	40	2.0
	2	45		31	
	3	52		34	
Sole care-giver ²	1	37	14.2**	51	17.4***
	2	49		51	
	3	31		36	
Primary care-giver ³	1	22	22.7***	35	35.9***
	2	17		21	
	3	37		45	
Has no siblings	1	11	7.1	3	2.3
	2	3		5	
	3	9		6	
	Care-giver type	Mean ⁴	S.D.	Mean ⁴	S.D.
Household income ⁵	1	8.8**	2.6	7.3	2.9
	2	7.7	2.7	6.9	2.9
	3	8.5	2.8	7.4	2.9
Distance from relative (minutes) ⁶	1	244.1***	527.4	114.2	197.2
	2	69.7	127.1	72.0	273.8
	3	67.7	134.7	58.8	148.8
Hours-of-care per week ⁷	1	1.6***	1.8	3.1***	7.4
	2	2.8	2.2	3.8	5.0
	3	3.9	5.0	6.2	7.9
Sample sizes		788		1,052	

Notes: Chi-squared was used to compare frequencies or percentages (upper panel), and analysis of variance to compare means (lower panel). S.D. standard deviation. (I)ADL: (Instrumental) activities of daily living. 49 % of the Type 1 care-givers were female, 55 % of the Type 2, and 59 % of the Type 3. 1. The chi-squared statistics refer to the 3 × 2 comparisons (carer type by dichotomy), so with two degrees of freedom. 2. Reported that no one else helps. 3. Reported that gave most help. 4. The significance levels refer to one-way analysis of variance, i.e. Scheffé's test of the variance ratio. 5. Among men, Type 1 and Type 3 significantly different from Type 2. 6. Among men, Type 1 significantly different from Types 2 and 3. 7. Among men and among women, Type 1 and Type 2 significantly different from Type 3.

Significance levels: ** $p < 0.01$, *** $p < 0.001$.

TABLE 5. *Costs of care-giving by type of care provided and gender*

Outcome costs	Care-giver type ¹	Men			Women		
		Mean	S.D.	F ratio	Mean	S.D.	F ratio
Stress	1	23.4	6.6	1.0	25.3	7.3	0.48
	2	22.6	6.1		24.5	6.6	
	3	23.5	6.6		25.1	6.5	
Family interference with work score	1	7.5	2.1	1.1	7.4 ²	1.7	4.9**
	2	7.4	1.8		7.7 ²	1.8	
	3	7.7	1.8		8.0	1.9	
Job costs	1	0.6 ³	1.1	4.9**	0.4	0.8	0.30
	2	0.2 ³	0.6		0.4	0.8	
	3	0.4	0.8		0.5	0.8	
Personal costs	1	2.1	2.2	2.1	2.7 ⁴	2.4	4.7**
	2	1.8	2.0		2.2 ⁴		
	3	2.3	2.1		2.2		

Notes: For the scoring of the scales, see text. Analysis of the *F* variance ratio was used to compare means. S.D. standard deviation. 1. Care-giver types: 1 only managerial care; 2 only other care; 3 managerial and other care. 2. Among women, Type 1 significantly different from Type 3 (Scheffe's test). 3. Among men, Type 1 significantly different from Types 2 and 3 (Scheffe's test). 4. Among women, Type 2 significantly different from Type 3 (Scheffe's test).

Significance level: ** $p < 0.01$.

What is the relationship between managerial care and adverse outcomes?

Table 5 presents the relationship between the type of carer and adverse outcomes. Although the male carers who delivered both managerial and other care provided the most hours of care per week, and those who provided only managerial care the least (Table 4), nevertheless those who provided only managerial care reported significantly higher job costs than those who provided only other care (Table 5). The mean job-costs scores were extremely low, however, which suggests that the relationship has little substantive importance. Among women, those who provided both managerial and other care delivered the most hours of care per week, and those who provided only managerial care the least (Table 4). The perception that family responsibilities interfered with work was highest amongst the women who provided both managerial and other care, as were personal costs (Table 5). Among women, there were no differences among the three carer types in reported job costs. It is notable that among both men and women there were no differences amongst the care groups in the reported levels of stress.

To examine whether managerial care was associated with adverse outcomes, separate multiple hierarchical regressions were carried out for men and women (Table 6). To compare the managerial factors (Factors 2

TABLE 6. Standardised β weights from listwise hierarchical regressions of the costs of being a care manager

Variable	Men				Women			
	Stress	FIW	Job costs	Personal costs	Stress	FIW	Job costs	Personal costs
Primary care-giver	0.03	0.03	0.03	0.07	0.02	0.01	0.03	0.01
Occupation								
Professional	0.00	-0.04	-0.09	0.00	-0.02	-0.03	0.109**	-0.05
Semi-professional	0.01	0.01	-0.05	-0.01	0.01	-0.03	0.07	-0.04
Care-giver's age	-0.14**	-0.13**	-0.15***	-0.27***	-0.18***	-0.12***	-0.21***	-0.10**
Sole care-giver	-0.07	-0.05	0.00	0.03	0.01	-0.01	0.02	0.04
Income	-0.08	-0.06	-0.03	-0.01	-0.14***	-0.03	-0.05	0.04
Education	-0.06	0.04	0.10*	0.07	0.03	0.06	0.05	0.15***
Provides ADL care	0.07	0.06	0.07	0.08*	0.12**	0.15***	0.13**	0.11**
Provides IADL care	-0.02	-0.03	-0.01	0.03	-0.03	0.06	0.00	0.06
MANACT	0.06	0.10*	0.10*	0.13**	0.10**	0.06	0.14***	0.16***
R^2	0.04	0.04	0.05	0.10	0.07	0.06	0.10	0.10
Primary care-giver	0.02	0.03	0.04	0.080*	0.02	0.01	0.04	0.02
Occupation								
Professional	-0.01	-0.04	-0.09	0.01	-0.02	-0.03	0.112**	-0.04
Semi-professional	0.00	0.01	-0.04	-0.01	0.01	-0.03	0.07	-0.04
Care-giver's age	-0.14**	-0.13**	-0.15***	-0.27***	-0.18***	-0.12***	-0.21***	-0.10**
Sole care-giver	-0.06	-0.05	0.00	0.03	0.00	-0.01	0.01	0.03
Income	-0.08	-0.06	-0.04	-0.01	-0.14***	-0.03	-0.05	0.04
Education	-0.07	0.04	0.10*	0.07	0.03	0.06	0.05	0.14***
Provides ADL care	0.08	0.06	0.06	0.08*	0.12**	0.15***	0.12**	0.10**
Provides IADL care	-0.01	-0.03	-0.02	0.02	-0.03	0.06	0.00	0.06
Manages fin/bur ¹	0.10*	0.04	0.02	0.02	0.03	0.03	-0.01	0.00
Orchestrates care	0.00	0.09*	0.10*	0.14**	0.09*	0.05	0.16***	0.17***
R^2	0.05	0.04	0.05	0.11	0.07	0.06	0.10	0.11

Notes: FIW: family interference with work. MANACT: consolidated scores of two managerial care factors (see text). (I)ADL: (Instrumental) activities of daily living. 1. Manages money and bureaucratic forms.

Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

and 5) with other types of care, they were first pooled in a single measure (MANACT). The upper panel of Table 6 shows that, among women, MANACT was significantly associated with stress, job costs and personal costs, and that among men, it was not significantly associated with stress but was associated with family interference with work and with job and personal costs. In the second set of regressions, presented in the lower panel of Table 6, the factor scores for the two dimensions of managerial care were entered separately, one variable being the scores for Factor 2 (Orchestrating care), and the other the scores for Factor 5 (Financial and bureaucratic management). Among women, 'Orchestrating care' significantly related to stress, but among men, it was 'Financial and bureaucratic management' that was significantly associated with stress. For both men and women, of the two types of managerial care, only orchestrating care was significantly related to job costs and personal costs. Therefore, the relationship seen earlier between managerial care and both job and personal costs actually arose from the impact of orchestrating care.

Discussion

The analysis reported in this paper has explored several questions about a type of family care-giving that we term managerial care. It has shown that, among a sample of Canadian care-givers who were employed full-time, managerial care was distinct from other types of care (as for ADL and IADL) and is therefore a meaningful construct. In the study sample, some people provided only managerial care and some provided only other care, but the majority provided both. Archbold (1983) valuably identified and contrasted the provision and management components of the parent-caring role. Although her small convenience sample did not permit generalisation to a broader population, she implied that the two types of care-giving occur separately rather than in combination. The evidence presented here suggests, however, that most employed care-givers combine the two types of care-giving.

Managerial care was very common among the respondents and usually involved tasks besides arranging formal services. This contrasts with the delineation of the work of care-managers by Archbold (1983), Brody (2004: 35) and Seltzer *et al.* (1987). The broader conceptualisation of managerial care that has been used and validated in this study probably accounts for the higher prevalence of managerial care than found by the Seltzer team. Managerial care is multi-dimensional and the factor analysis identified two clear components: orchestrating care, and financial and bureaucratic management. Other studies on other samples may identify other components.

The carers who provided both managerial and other (direct) care spent most hours providing care, while those engaged in only managerial care provided the least. This does not imply that managerial care activities require little or inconsequential time, but rather that other types of care are more time-consuming (partly because many involve travelling to be with the care-recipient). Most of the care-givers reported a combination of the two types of care, and adding managerial care to hands-on care significantly increased the time requirement. Some distinctive characteristics of those who provided only managerial care have been shown: men in this category had higher income than other male care-giver types, but among women there were no significant differences in income by care group. In contrast, Archbold (1983) found that the women who provided managerial care had higher incomes.

Among men, those who provided only managerial care lived at significantly greater distances from the care recipient than other types of care-giver, but the same differentiation was not found among women. The relationship among men no doubt reflects the fact that the provision of direct, 'hands-on' care tends to require proximity. There were also interesting findings on the relationship between providing only managerial care and being a primary or sole care-giver. Because one expects the primary care-giver to provide different types of care and to be in the best position to co-ordinate other carers, if managerial care primarily took the form of arranging and managing formal services, those who provided only such assistance would be unlikely to be primary or sole care-givers. This study has conceived and measured managerial care more broadly, as including help with financial and bureaucratic transactions, which makes the relationship with being the primary or sole care-giver less clear. In fact, the men and women who provided only managerial care were more likely to be primary care-givers than those who provided only other care, but less likely to have this role than those who provided both types of care. Women who provided only managerial care were more likely to be sole care-givers than those who provided both types of care. Among men there was a different pattern, in that those who provided only managerial care were less likely to be sole care-givers than those who provided only other care. The gender-related influences on the provision of managerial care and its various components merit further investigation.

The adverse impact of managerial care on job costs and personal costs was over and above that of direct care provision. This important finding indicates that research on the impact of care-giving needs to move beyond its usual focus on assistance with ADLs and IADLs. Managerial care was associated with stress among women but not among men. Overall, the findings show that managerial care is not a 'lesser' form of care, which can

be ignored because it has little impact on those who provide it, as some commentators have implied. Finley (1989), for example, suggested that having external resources, such as income from employment, confers greater power in the family and translates into doing less care-giving. While this may be reflected in the hours spent providing care, our analysis has shown that managerial care had a negative impact on the full-time employed care-givers in the sample.

The presented evidence on the association between the different components of managerial care and several negative outcomes adds to our understanding of the personal impacts of care-giving. Gottlieb, Kelloway and Fraboni (1994) showed that managerial activities were associated with higher stress, family interference with work and job costs, but did not distinguish the various components of managerial care. Other research has suggested that locating and co-ordinating formal services is associated with stress (Neal *et al.* 1993; Stoller and Pugliesi 1989), but has not examined other types of managerial care. The present analysis has showed that the orchestration of care – which includes both formal services and informal assistance from other family members – is the aspect of managerial care that was associated with personal and job costs, and that among women it contributed to stress. The analyses of variance for both men and women showed no differences in stress amongst the three care groups, which underlines the finding that providing only managerial care still engenders stress. The implication is that providing managerial care is not necessarily less difficult emotionally than providing direct care. Among men, the type of care provided was associated with job costs, while for women, it was associated with family interference with work and personal costs. Thus, while the findings are consistent with those of Neal, Ingersoll-Dayton and Starrels (1997) and Finley (1989), in that similar percentages of men and women provided managerial care, it has been shown that the effects of providing this type of care differ by gender.

This study and its findings have several limitations. The explained variance was low in all the models of managerial care (from four to 11 per cent), so the impact of managerial care, or indeed any type of care, on the outcome variables should not be over-emphasised. Our purpose, however, was not to identify all predictors of the adverse outcomes but to demonstrate that managerial care is a distinctive care activity, and to compare its negative outcomes with those of other types of care. Another limitation is that the study has focused on the negative outcomes of care-giving; we recognise that there may also be positive outcomes, but the data did not permit their study. Furthermore, the care-givers reported only whether they provided care to an older relative, and were not asked about helping friends, neighbours or others, and the study has examined only full-time

employed care-givers. It should also be noted that the generalisability of the findings is limited. Although the data were collected from employees in nine organisations, future studies should compile more heterogeneous samples from more diverse workplaces. Finally, the particular health-care system within which care-givers function has an impact on the cost and availability of formal services, which are clearly considerations in care management. In Canada, despite a national health insurance plan which covers medical and hospital care, eligibility for no-pay or subsidised home-care and community-care services varies considerably by province. Future research in countries with different health-care systems and that includes respondents of other employment statuses would advance our understanding of managerial care and its impact on care-givers.

Acknowledgements

The data reported in this paper were collected by the Work and Eldercare Research Group of the Canadian Aging Research Network (CARNET), funded by the Government of Canada. Work on this paper was supported by the Social Sciences and Humanities Research Council of Canada through a grant to the SEDAP (Social and Economic Dimensions of an Aging Population) project. The authors acknowledge the technical assistance of Glenda Hawkins.

NOTES

- 1 The extent to which formal services entail a financial cost depends, of course, on the local health-care system. Archbold's participants lived in the United States, a country without government-sponsored universal health care. Even countries that have national health insurance, such as Canada and the UK, differ in the extent to which community-support services are offered without charge. In Canada, for example, acute medical and hospital care are covered by the government's plan, but there is no national plan for home care and other support services. Instead, the cost and availability of these services vary from province to province.
- 2 The first author was the principal investigator and the second author was a co-investigator on the original study. For further information on the study and the relationship of its major findings to the literature on work and elder care, see Gottlieb, Kelloway and Fraboni (1994) and Martin-Matthews and Rosenthal (1993).
- 3 In all but two organisations, the surveys were distributed to pre-designated employees through the internal mail system. The respondents could choose between returning the completed survey in a sealed, pre-addressed stamped envelope through the same internal mail system or through the public postal system. In two organisations, however, the surveys were mass distributed at one location rather than being sent to specific employees.
- 4 Individuals providing these categories of help on average provided more hours of care per week than others who helped older adults – they were more than minimally involved in the provision of assistance. For more details, see the Measures section. Using these criteria, 1,052 women, 788 men and seven people who did not identify their gender were described as care-givers.

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Accepted 15 January 2007

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