

# Dementia in Canadian primary health care: The potential role of case management

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Dementia is a chronic disease characterized by progressive memory loss and behavioural disturbance. It has become a major concern for healthcare professionals due to the increasing number of people affected, usually presenting with more than one chronic condition.<sup>1</sup> According to the World Health Organization (WHO), up to eight million new cases of dementia are detected world-wide annually.<sup>2</sup> Today in Canada, half a million people are living with dementia and this number is expected to rise two and a half times over the next 40 years due to an aging population.<sup>3</sup> The WHO has declared dementia to be one of the most serious health challenges facing our society due to its pronounced consequences on patients, their families and society.<sup>2</sup> Various elements contribute to this quandary including patient-caregiver dyad factors (e.g., fear of stigmatization) and healthcare system issues (e.g., fragmentation of healthcare services). In this article we discuss Case Management (CM) designed for patients with dementia, and types of CM pertinent to primary care.

## Dementia and primary care: The current situation

The first contact people with dementia have in the healthcare system is with a Family Physician (FP). The FP is thus ideally positioned to address their needs. Despite the fact that four Canadian consensus conferences on dementia have recommended FPs to be in charge of the prevention, diagnosis, and care for persons with dementia,<sup>4</sup> FPs are reluctant to deal with these patients due to a lack of knowledge and confidence in using cognitive screening tests, and poorly coordinated primary and secondary care services.<sup>5</sup> Unlike most European countries, Canada does not have a national plan on dementia partly due to the fact that healthcare is a provincial responsibility. To address this challenge, the provinces of Quebec and Ontario have developed dementia collaborative care models in the context of a major primary care reform that integrates personalized dementia service delivery within

Family Medicine Groups (Quebec) and Family Health Teams (Ontario).<sup>6,7</sup>

One of the key innovative interventions of these models is CM.<sup>6,7</sup> CM is defined as a collaborative process in which a case manager assesses an individual's health, plans a care path, coordinates health services, and monitors health status. This intervention aims for the timely delivery of patient-centered, comprehensive, and inter-professional care throughout the course of the disease in primary care. A case manager works closely with FPs and can facilitate their workloads, allowing FPs to more effectively focus on care. Patients with complex issues are referred to specialists (e.g., memory clinics).

## Dementia case management: A potential solution?

The results of studies on the effectiveness of dementia CM have shown that it has the potential to improve outcomes.<sup>8</sup> A few systematic reviews have demonstrated the positive effect on clinical outcomes, service use, cost-effectiveness, and caregiver satisfaction.<sup>9</sup> Varieties of CM models are described in the literature on disease management, including hospital and service-based models. However, it is not clear what types of CM models are pertinent to primary care as systematic reviews conducted to date combine all types of CM.<sup>9</sup> For example, there are no studies comparing case managers working independently versus case managers working in collaboration with other healthcare professionals (FPs and/or specialists). An ideal combination appears to be a case manager working in collaboration with FPs: "an FP treats and a case manager organizes". There is also no agreement about the best combination of healthcare professionals to address the needs of patients with dementia. Some researchers do not consider the direct involvement of a physician and a multidisciplinary team to be essential for CM effectiveness.<sup>10</sup> ►

To identify which of the types of CM models is more effective in primary care, we conducted a systematic review of intervention studies and examined the differences in outcomes for the patient-caregiver dyad (Table 1).

The findings of our systematic review did not show a clear difference between the three types of dementia CM with respect to outcomes. For example, "*case manager working independently*" showed a more prominent effect on caregiver outcomes (e.g., burden), while "*case manager - multidisciplinary team - FP collaboration*" demonstrated effective management of dementia in terms of medication management and adherence to dementia guidelines. Better medication management was related to the improvement of neuropsychiatric symptoms of dementia.

### Conclusion: Future directions to be considered

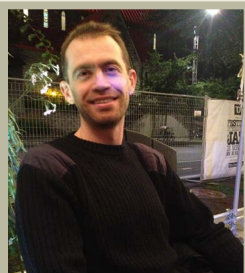
Dementia CM in primary care is a potential solution to improve the outcomes of the patient-caregiver dyad. While the outcomes of CM cannot be explained by the CM type only, the patient-caregiver dyad will benefit from the close collaboration of a case manager, FPs and a multidisciplinary team. This collaboration can provide a comprehensive approach to meet their needs (e.g., assessment of functional status of patients). However, CM should be carefully implemented for its successful adoption by FPs. High CM intensity (e.g., a small caseload, proactive versus reactive follow-up), and effective communication between healthcare professionals in primary care should be monitored.<sup>8</sup> ■

Stages of the systematic review	
Stage 1. Definition of research question	
Question	With regard to patients with dementia in primary care, what type of CM is more effective?
Stage 2. Definition of eligibility criteria	
Inclusion criteria	<i>Population</i> : people of any age and gender with any type of dementia. <i>Setting</i> : CM intervention implemented in a range of community settings. <i>Types of interventions</i> : CM interventions that comprise assessment, coordination, monitoring, and delivery of services to meet patients' needs. <i>Type of studies</i> : intervention studies assessing outcomes of CM (e.g., randomized controlled trial – RCT). <i>Types of outcome measures</i> : <i>clinical outcomes</i> (e.g., neuropsychiatric symptoms), <i>service use</i> (e.g., nursing home admission), <i>caregiver outcomes</i> (e.g., depression), <i>satisfaction</i> , <i>cost-effectiveness</i> , and <i>other outcomes</i> .
Stage 3. Development of an extensive search strategy	
Databases	Publications listed in MEDLINE, PsycInfo, EMBASE, the Cochrane Database.
Timeframe	Between 1995 (official publication of the CM Standards of Practice) and 2012.
Language	English and French
Stage 4. Identification of relevant studies and selection of the data	
Identification of the studies	Titles and abstracts were selected independently by two reviewers (VK, IV). Then, full text copies were examined for final inclusion. Kappa scores were calculated to estimate inter-reviewer reliability.
Stage 5. Appraisal of the quality of included studies	
Quality assessment	The validated Mixed Methods Appraisal Tool was used. Inter-rater reliability was calculated based on weighted kappa.
Stage 6. Synthesis of included studies	
Synthesis approach	A narrative synthesis approach was used. A meta-analysis was not possible due to the heterogeneity of CM implementation. To evaluate the magnitude of the positive outcomes we calculated the effect size using the Cohen method.
Results	
Types of CM	Based on the composition of health care professionals, three types of CM were identified: <i>case manager working independently</i> , <i>case manager-multidisciplinary team collaboration</i> , and <i>case manager- multidisciplinary team-FP collaboration</i>
Characteristics of the types	<i>Case manager working independently</i> : primarily focused on support of the patient-caregiver dyad; strictly applies the traditional tasks of case manager; no interaction with physicians on a regular basis. <i>Case manager-multidisciplinary team collaboration</i> : case manager acts as a liaison between different healthcare professionals (FP, geriatrician); FP is not involved in the care. <i>Case manager- multidisciplinary team-FP collaboration</i> : FP is a key element of a strong partnership; case manager has regular contact with FP of patients and their caregivers.
Outcomes	<i>Case manager working independently</i> : caregiver burden (effect size: 0.5) and mood (effect size: 0.41). <i>Case manager-multidisciplinary team collaboration</i> : behavioral symptoms of dementia (effect size: 1.5) and caregiver mood (effect size: 1.5). <i>Case manager- multidisciplinary team-FP collaboration</i> : medication management (e.g., rate of anticholinesterase prescription by FPs) (effect size: 1.07) and adherence to dementia guidelines (effect size: 0.65).

Table 1. Types of dementia CM

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**Vladimir Khanassov**

Vladimir Khanassov, MD, MSc Candidate, Department of Family Medicine, McGill University, Montreal, Canada. He is #1 ranked applicant for The Master's Scholarship from the Fond de la Recherche du Québec-Santé (FRQS) (2013-2015). The scope of his interest is case management for patients with Alzheimer's disease and related disorders living in the community. He studies conditions related to successful implementation of case management and strategies to enhance its adoption. He starts residency training in the Public Health/Preventive Medicine with Family medicine program at McGill University in July 2014. For his PhD program he will explore the needs of patients with dementia and their caregivers and capacity of case management to address these needs within The Alzheimer Plan of Quebec. He has an expertise in systematic reviews, mixed studies reviews, scoping review, configurational comparative analysis.

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