



Effective Public Health Practice Project Summary Statement

December 2005

This is a summary statement written to condense the work of the authors of a systematic review. The reference for the full review is below. The intent of this summary is to provide an overview of the findings and implications of the full review. For more information on individual studies included in the review, please see the review itself.

Reference for Review in APA: Brodaty, H., Green, A. and Koschera, A. (2003). **Meta-Analysis of Psychosocial Interventions for Caregivers of People with Dementia.** *Journal of the American Geriatrics Society*, 51 (5), 657-664.

Issue: In 2001, an estimated 364,000 Canadians over the age of 65 had Alzheimer disease and related dementias. By 2031, it is estimated that this figure will rise to 778,000 (National Advisory Council on Aging, 1996). Similarly, in Ontario, approximately 140,000 persons have dementia; 90 percent are over the age of 65. With Ontario's aging population, it is expected that the number of people with Alzheimer's or related dementias will triple to over 350,000 by 2031 (Hopkins & Hopkins, 2002).

Informal caregivers (CGs) play a vital role in maintaining people affected with dementia in the community. In Canada, 98% of dementia patients cared for at home have one or more informal caregivers, usually a spouse, relative or friend (National Advisory Council on Aging, 1996). Research suggests that informal CGs of people with dementia are more likely to suffer from chronic physical and mental health problems and that these problems make it more likely that informal caregivers will seek to institutionalize the person with dementia (Canadian Study of Health and Aging Working Group, 1994). The National Advisory Council on Aging (2004) has recommended that "F/P/T [Federal/Provincial/Territorial] governments expand the proposed basket of national home care services to provide for services that specifically assist caregivers, including: respite/day away programs, transportation services, support groups, counselling, and information and education programs; and that these services be provided in a way that meets the needs of caregivers (e.g. day programs that operate more than 8 hours/day)".

Review Content Summary: A systematic review of published randomized or quasi-experimental studies was conducted to examine the effectiveness of interventions for informal CGs of persons diagnosed with Alzheimer's on CG psychological morbidity and burden. An "Informal Caregiver (CG)" was defined as a person providing unpaid care at home or in a non-institutional setting. CGs were predominantly female, spouses, and aged 55 or older. Respite care interventions were excluded from the review. CG interventions varied in scope. They included counselling, education, family counselling or extended family involvement, patient involvement, support group or program, stress management, and training for caregivers.

The primary outcomes of interest were psychological morbidity and burden. Measures of caregiver knowledge of Alzheimer disease, patient's mood and nursing home placements were also included. Pooled results from 30 studies indicated a modest but statistically significant effect on CG psychological morbidity. No statistically significant benefit was found for CG burden. Statistically significant small to moderate effects were shown for CG knowledge, changes in patient mood and pooled analysis of "any main outcome measure". The authors

City of Hamilton
Public Health Services

Kingston, Frontenac and Lennox
& Addington Public Health

Middlesex-London Health Unit

Sudbury District Health Unit

Ottawa People Services

Public Health Branch
Ministry of Health and Long-Term Care

concluded that some psychosocial interventions can reduce psychological harm among caregivers and help people with dementia stay at home longer. Success, as measured by delayed nursing home admission, was more likely in the intervention group compared to control for four of seven trials.

Comments on this review's methodology: A comprehensive set of electronic databases was searched for controlled trials published in English between 1985 and 2000. A study was included in the review if it met the following criteria: it was a published randomized or quasi-experimental trial in which caregivers were allocated to intervention or control groups; it involved a psychosocial intervention; and its participants were informal CGs, providing care to people with Alzheimer's. While relevant sources were searched, the restriction to English language publications and no mention of hand searching of relevant peer-reviewed journals or consultation with experts in the field may limit the review's comprehensiveness. Forty-five studies met the inclusion criteria. Fifteen studies were subsequently excluded due to small sample size (n=2), insufficient outcome data (n=11) or extreme outcome values (n=2). Thirty studies, involving 2,040 CGs, were included in the analysis (involving 34 interventions) and were scored for research quality and clinical significance by two reviewers. Quality ratings did not correlate with effect sizes.

Methods used to determine the two primary outcomes, psychological morbidity and burden, varied considerably among studies. Meta-analysis techniques used to determine pooled effect sizes were well described and appropriate. There was considerable variation among studies in terms of study methods and interventions, but statistical measures of heterogeneity were not reported. Sensitivity analysis did not detect a significant change in overall results when studies were dropped one at a time.

Evidence points *ARE NOT* weighted or ranked according to strength

What's the evidence?	Implications for practice and policy:
<ul style="list-style-type: none"> > CG interventions were found to have modest but statistically significant benefits on CG psychological morbidity (26 studies), CG knowledge (8 studies) and patient mood (5 studies). The interventions evaluated do not appear to influence CG burden (20 studies). > It should be noted that, with the exception of caregiver knowledge and changes in patient mood, the average effect sizes were less than moderate (i.e. < 0.5) and may not be considered clinically important. > Interventions that involve patients and their families and which are more intensive and modified to meet CGs' needs may be more successful. > CG interventions can have effects on delaying nursing home admission. 	<ul style="list-style-type: none"> > Further high-quality research is needed to identify, develop and evaluate individual intervention strategies in isolation and in combination, to determine what strategies or combination of strategies, are most effective in influencing psychological morbidity and burden, and what intensity of intervention is required to have an effect. > We need research on the care giving process and a better understanding of the pathways in and out of the caregiver role and from moderate to highly demanding levels of care giving. > Research should be conducted with more rigour, include randomized control trials, have 6 months of follow-up, and use well-validated and reliable outcome criteria to measure outcomes proximally and distally.

<ul style="list-style-type: none"> > There was no information on cultural setting of the included studies, which may limit applicability of results. 	
<p>General Implications:</p> <ul style="list-style-type: none"> > GC interventions were found to have modest but significant benefits on psychological morbidity but not on burden. However, the results of the meta-analysis may be inconclusive due to the methodological limitations of the studies. > Additional studies are needed to identify effective interventions and their intensity, duration and timing, and include marginalized and understudies CGs (e.g., rural, minority groups, and those whose mother tongue is neither English nor French). > Addressing methodological weaknesses in future studies would strengthen research results. > An evaluation component should be incorporated into the design of intervention programs to allow good quality and rigorous evaluation of interventions. > Funding for the implementation and evaluation of interventions targeting CGs of people with dementia should be provided. > Conceptual frameworks, such as Pearlin's model of care giving, should be considered as a theoretical basis for research on the effects of caring for people with Alzheimer's. 	

Cost Benefit or Cost-Effectiveness Information: Not included in review.

References Used to Outline Issue:

- National Advisory Council on Aging. (1996). Vignette No. 35: A quick portrait of dementia in Canada: How many people are affected? http://www.naca-ccnta.ca/vignette/pdf/vig34-50_e.pdf. Accessed November 18, 2005.
- Hopkins, W. & Hopkins, J. F. (2002). Geriatric Psychiatry Programme Clinical/Research Bulletin #13: Dementia Projections for the Counties, Regional Municipalities and Districts of Ontario. <http://asmt.org/docsNpdfs/Hopkins2002.pdf>. Accessed November 18, 2004.
- National Advisory Council on Aging. (1996). Vignette No. 45: A quick portrait of dementia in Canada: How important are informal caregivers? http://www.naca-ccnta.ca/vignette/pdf/vig34-50_e.pdf. Accessed November 18, 2005.
- Canadian Study of Health and Aging Working Group. (1994). Patterns of caring for people with dementia in Canada. *Canadian Journal on Aging*, 13(4), 470-487.
- National Advisory Council on Aging. (October 2004). The NACA Position on Alzheimer Disease and related dementias. http://www.naca-ccnta.ca/position/23_alzheimer/pdf/23-alzheimer_e.pdf. Accessed November 18, 2005.

Other References on this Topic:

- Pusey, H. and Richards, D. (2001). A systematic review of the effectiveness of psychosocial interventions for carers of people with dementia. *Aging and Mental Health*. 5, 107-119.

Summary Statement Author: Adriana Newbury B.N.Sc., M.A., Program Planning and Evaluation Officer, Ottawa Public Health, Ottawa, Ontario.

Contact Information for the Effective Public Health Practice Project (EPHPP):

Public Health Services
Effective Public Health Practice Project
2 King Street West, 3rd Floor
Dundas, Ontario L9H 6Z1

Phone: 905-546-2424, Ext. 1578
Fax: 905-628-6465
Email: ephpp@hamilton.ca
Website: <http://www.hamilton.ca/ephpp>



The format of this summary statement has been adapted from health-evidence.ca
(www.health-evidence.ca)

City of Hamilton
Public Health Services

Kingston, Frontenac and Lennox
& Addington Public Health

Middlesex-London Health Unit

Sudbury District Health Unit

Ottawa People Services

Public Health Branch
Ministry of Health and Long-Term Care