Home and Community Care Highlights

A digest produced quarterly at the University of Toronto by the CHSRF/CIHR Health Services Chair in Health Care Settings and Canadians

Volume 9, Number 1: March 2010

In this issue:

- the use of vitamin D, low-intensity strength exercise program and physical rehabilitation for reducing falls and improving physical function of older adults;
- the effect of physical restraint use on the safety of nursing home residents;
- the economic and health benefits of early hospital discharge at home services and restorative approaches to home care;
- the impact of demographic factors on informal caregivers' psychosocial and physical health;
- factors affecting the use of health services in the end of life phase;
- whether avoidable mortality is related to physician supply using the data from 19 countries

Contact: Peter C. Coyte

peter.coyte@utoronto.ca
Department of Health Policy, Management and Evaluation,
Faculty of Medicine, University of Toronto,
155 College Street, Suite 420,
Toronto, Ontario M5T 3M6
http://www.hcerc.utoronto.ca

Home and Community Care Highlights

Volume 8, Number 4: December 2009

About *Home and Community Care Highlights*:

Home and Community Care Highlights responds to decision-makers' needs for timely and relevant evidence by providing accessible synopses of recent research pertaining to the financing, delivery, and organization of home and community-based health care activities.

This digest is produced quarterly at the University of Toronto by the CHSRF/CIHR Health Services Chair in Health Care Settings and Canadians and remains the property of the Chair.

The Chair is supported by the Canadian Health Services Research Foundation in partnership with the Canadian Institutes of Health Research, and by the regional co-sponsor, the Ontario Ministry of Health and Long Term Care.

Synopses are provided in two formats: **Headlines & Conclusions** crystallize the take-home messages of the research in a few sentences; **Thumbnail Summaries** condense the background, methods, findings, and conclusions of the research into quick-to-use, single-page overviews that include reference information.

Please see Page 13 for information on Review Team and list of Journals Reviewed.

For subscription information, please contact:

Peter C. Coyte

Email: peter.coyte@utoronto.ca

Telephone: 416.978.8369
Fax: 416.978.7350

Courier address:
155 College St, Suite 420,
Toronto, Ontario M5T 3M6

http://www.hcerc.utoronto.ca

CHSRF/CIHR Chair: Health Care Settings & Canadians

Department of Health Policy, Management & Evaluation

Faculty of Medicine, University of Toronto

Vitamin D in high doses prevents falls in the elderly
Vitamin D, given in high doses, is an effective method for reducing falls in the elderly regardless of the type of vitamin D given or whether it is given with calcium. This meta-analysis of randomized control trials examines 1) whether differences in the type of vitamin D given to patients, 2) differences in dosage, and 3) whether the supplement was given with or without calcium can affect the rate of falls amongst elderly patients. Lower doses of vitamin D were not shown to reduce falls. The type of vitamin D and whether the vitamin was taken together with calcium did not significantly alter these results.

Healthy Moves: A low-intensity strength exercise program has positive outcomes for older adults.
This research focused on an in-home intervention targeting 338 individuals who were deemed nursing home eligible. Specifically, the number of falls, fear of falling, depression and pain were assessed as outcome measures. Results show that participants who improved exercise performance, over the 3-month period of intervention, significantly reduced the occurrence of falls and level of pain experienced.

Physical rehabilitation in nursing home could improve state of physical and mental health
This systematic review evaluates the benefits and harms of rehabilitation interventions directed at maintaining, or improving the physical function of older people in nursing home. This study highlights that providing physical rehabilitation to elderly people in nursing home is worthwhile as it is found to be safe and effective in improving both physical and mental health states.

Physical restraints do not protect nursing home residents
This study examined the quantitative effect of physical restraint use on people's health in nursing homes. Behaviour issues, cognitive status, falls, walking dependence, activities of daily living, pressure ulcers, and contractures were all worse for restrained residents compared with matched residents who were not restrained. Despite its continuing use, physical restraint use represents poor clinical practice, and the benefits to residents of further reducing physical restraint use in nursing home are substantial.

Enabling independence in home care can improve quality of life and reduce costs
In contrast with the more traditional home care approach of ensuring home-based tasks are completed for clients, restorative approaches assist clients to improve their function, autonomy and control, and ability to carry out daily routines. This literature review showed that though some questions remain, such approaches were found to be more effective in improving clients' quality of life and functional status and reducing costs due to reduced need for care.

Early hospital discharge with home care saves money? Think again
Early discharge hospital at home is a service that provides active treatment by health care professionals in the patient's home for a condition that otherwise would require acute hospital in-patient care. This systematic review examined the effectiveness and cost of early discharge hospital at home compared with in-patient hospital care. Although early hospital discharge can be seen as a substitute for hospital care and as a means to control spending on acute hospital beds, this review did not find insufficient evidence to support the economic benefit or improved health outcomes of early discharge hospital at home.

Caregiving can be good for your health – if you have money and organized care
This study identified the demographic factors (i.e. socioeconomic status, caregiver/care receiver relationship and co-residence) that impact on informal caregivers' psychosocial and physical health. While informal caregivers were generally in better health than non-caregivers, there were exceptions. The research suggests that efforts to relieve co-resident caregiver burden might best be focused on less-advantaged caregivers, on ensuring that home care needs are addressed, and on attending to the social isolation of co-resident caregivers.

What drives the use of health care among individuals at end of life?
The use of health services is most intensive in the end of life phase. Age, gender, education level, income level, partner status, urban city, and number of children living in the neighbourhood were found to be associated with the use of health care among individuals in the end of life phase. Health conditions and concomitant health care utilization at the end of life are often complex. This study seeks to describe the utilization of acute and long-term care among Dutch older adults in their last year of life as compared to those not in their last year of life, and to examine determinants that can account for observed differences in care utilization.

Do we need more doctors to lower our avoidable mortality?
More doctors will not necessarily translate into better healthcare outcomes for Canadians. In January 2008, the Canadian Medical Association launched its "More Doctors, More Care" campaign because of the shortage of doctors, in comparison to other countries in the Organization for Economic Co-operation and Development. This study assessed the degree to which a specific healthcare outcome, avoidable mortality, is related to physician supply using the data from 19 countries. The study found no relationship between avoidable mortality and overall physician supply.

Vitamin D in high doses prevents falls in the elderly

Background: Previous studies have shown that taking increased amounts of vitamin D does little to prevent falls in the elderly. This meta-analysis of randomized control trials includes new trial data and gives a more detailed analysis of previous studies. This review examines 1) whether differences in the type of vitamin D given to patients, 2) differences in dosage, and 3) whether vitamin D given with or without calcium affect the rate of falls.

Methods: A systematic review was conducted to identify double-blind randomised controlled trials of people older than 65 years of age who received a defined dose of vitamin D and for which one of the outcome measures was the number of falls. A meta-analysis was then conducted on the results of these studies.

Findings: Eight trials met the inclusion criteria. The combined population of the trials was 2426 people with a mean age of 80 years. Eighty-one percent of the participants were female. These studies included those conducted in the nursing home setting and with elderly in the community. The meta-analysis of the studies showed that high doses of vitamin D (700-1000 IU a day) reduced the risk of falling among elderly by approximately 19%. Low doses of vitamin D (< 700 IU a day) were not shown to reduce falls. The type of vitamin D and whether the vitamin was taken together with calcium did not significantly decrease risk of falls.

Conclusions: Vitamin D, given in high doses, is an effective method for reducing falls in the elderly regardless of the type of vitamin D given or whether it is given with calcium. The government should examine ways to increase the use of high doses (700-1000 IU a day) of vitamin D amongst the institutionalized and non-institutionalized elderly.

Reference: Bischoff-Ferrari HA, Dawson-Hughes B, Staehelin HB, Orav JE, Stuck AE, Theiler R, Wong JB, Egli A, Kiel DP, Henschkowski J. Fall prevention with supplemental and active forms of vitamin D: a meta-analysis of randomised controlled trials. BMJ 2009; 339: b3692.

Healthy Moves: A low-intensity strength exercise program has positive outcomes for older adults

Background: Physical activity has been demonstrated to be beneficial on a variety of health outcomes. Available evidence suggests that home-based exercise programs are effective in reducing physical decline among an older adult population. However, minimal research has targeted frail seniors at risk of long-term care placement.

Methods: Targeting low-income, nursing home eligible seniors in California (n=338). The evaluation consisted of a pre-test and a 3-month post-test. The Healthy Moves intervention included two main low-intensity exercises used to improve upper and lower body strength. Participants were encouraged to complete the exercises three to five times a week on their own at home for a period of five to ten minutes twice per day. Cognition and behaviour change strategies (brief negotiation) were used to help develop motivation. A total of 97 volunteer coaches were trained to deliver the counseling and to motivate participants to change.

Findings:. The 3-month post-test results showed that among individuals who improved their exercise performance also significantly reduced the total number of falls and pain level. Those who experienced face-to-face coaching compared to those motivated by phone coaching alone did result in significantly better exercise performance at 3-months post-test.

Conclusions: This study suggests that a home-based, low intensity strength exercise program has promising strategy for achieving physical activity-related health benefits among functionally impaired nursing home eligible older adults. Healthy Moves benefited participants by significantly reducing their number of falls and pain level among participants who improved their exercise performance. This program was very modest yet produced significant results.

Reference: Yan, T., Wilber, K., Wieckowski, J., Simmons, J. Results from the healthy moves for aging well program: Changes of the health outcomes. Home Health Care Services Quarterly, 2009; 28(2): 100-111.

Physical rehabilitation in nursing home could improve state of physical and mental health

Background: In responding to the pressures exerted by current aging population, there is an increased emphasis on promoting health and independence in old age, which results in greater investment in rehabilitation services. Rehabilitation may be effective in improving the physical functioning of elderly people in long-term care. This systematic review evaluated the benefits and harms of rehabilitation interventions directed at maintaining, or improving the physical function of older people in nursing home.

Method: This review included trials comparing a rehabilitation intervention designed to maintain or improve physical function with either no intervention or an alternative intervention in older people aged 60 years or over who have permanent long-term care residency. Forty-nine studies with a total of 3611 participants were included in this review. These studies covered a number of different interventions, ranging from traditional exercise programs to those requiring access to machinery. The trial outcomes addressed by this review were disability in daily life, strength, flexibility, balance, general physical condition, mood, cognitive status, death, illness, and unwanted effects associated with the intervention, such as injuries.

Findings: Physical rehabilitation interventions were associated with significant improvements in physical state, mental health and cognitive state. Individualized interventions were found to have a beneficial effect on the frailer participants, while group interventions were effective for the less disabled. Many studies concluded that rehabilitation interventions were safe, as well as effective in reducing disability and producing physical benefits such as strength, flexibility, balance and function in ADL. Moreover, this review hypothesized that traditional regular group exercise interventions will be effective in less frail participants, but frail dependent participants will only benefit from frequent intensive individual sessions.

Conclusion:
This review provided sufficient evidence to conclude that providing physical rehabilitation to elderly people in nursing home is worthwhile as it is found to be safe and effective in improving both physical and mental health states. Policy makers may consider implementing these rehabilitation services for seniors in nursing home in Ontario; however, evidence regarding the economic impacts of these services is still needed. Conceptually it seems reasonable: improving physical condition should reduce poor health conditions, reducing the burden of the individual on health care, and reducing the need for hospital treatment. Evidence for this would have to demonstrate that the cost of the intervention is less than the amount the individual would cost if they remained in the same condition, or if they deteriorated. Due to the variation between individuals in the amount of resources they use, large trials will be required to support the economic case for these interventions.

Reference: Forster A, Lambley R, Hardy J, Young J, Smith J, Green J, Burns E. Rehabilitation for older people in long-term care. *Cochrane Database of Systematic Reviews* 2009; Issue 1.

Physical restraints do not protect nursing home residents

Background: The use of physical restraints in nursing homes has been challenged in the past based on the notion that they represented poor clinical practice and that they were unethical. Nonetheless, physical restraints remain an option in these homes. A physical restraint is defined in Canada as in the United States as a device that is attached and cannot be easily removed by the resident which restricts freedom of movement and/or normal access to his/her body. Few studies have shown physical restraint use to be detrimental of the health of elders in long term care homes. This study quantitatively examined whether physical restraint use contributes to subsequent physical or psychological health decline.

Methods: The study participants comprised of 254,519 newly admitted nursing home residents in the United States. Data was obtained from existing data sources: the minimum data set, the on-line survey recording system, and the area resource file between the period of 2004 and 2005. Physical restraint was defined as one of the following: a) full bed rails, b) other types of side rails used, c) trunk restraint, d) limb restraint, and e) chairs preventing rising. The psychological health outcomes were depression, behaviour problems, and cognitive status. The physical health outcomes examined were falls, walking independently, activities of daily living, pressure ulcers, and contractures. A statistical method was employed to control for the difference in many characteristics between residents who were subsequently physically restrained and who were not. The association between physical restraint use and the chosen health outcomes were investigated.

Findings: With the exception of depression, outcomes for behaviour issues, cognitive status, falls, walking dependence, activities of daily living, pressure ulcers, and contractures were all worse for restrained residents compared with matched residents who were not restrained. Residents who were restrained were 4.51 times more likely to need assistance when walking than residents who were not restrained. Moreover, restrained residents were 1.34 times more likely to have fallen in the past 30 days, were 1.12 times more likely to have a pressure ulcer, and 1.10 times more likely to have a contracture than residents who were not restrained. Although some figures of restraint's harmful effects are not large (e.g., restrained residents were only 3.5 percent more likely to have fallen), health gains for nursing home residents are seldom large. These gains are significant and meaningful.

Conclusions: This study provides quantitative evidence that physical restraint use causes adverse physical and psychological consequences for nursing home residents. Despite its continuing use, physical restraint use represents poor clinical practice, and the benefits to residents of further reducing physical restraint use in nursing homes are substantial. There is a significant benefit in tailored interventions to educate family members and health care workers about the potential negative effects on patient safety and health.

Reference: Castle NG, Engberg J. The health consequences of using physical restraints in nursing homes. Medical Care. 2009;47(11):1164-1173.

Enabling independence in home care can improve quality of life and reduce costs

Background: People have argued that some home care programs lack an emphasis on the promotion of clients' healthy lifestyles and daily routines, social support, exercise, and autonomy and control, despite strong evidence that these are linked to the maintenance of health and independence. Restorative approaches to home care have been proposed as a potential alternative to reduce dependency in home care provision and to improve capacity to cope with growing demand for care. This review examined the literature to find the evidence for and against restorative approaches.

Methods: Four online databases were searched to identify peer-reviewed articles and original research published since 1996 that evaluated one or more of four pre-identified intervention components – occupational or physical therapy, social rehabilitation or health education. Studies were excluded from the review if they specifically focused on hospital in the home, mental health services or workforce interventions.

Findings: Overall, a small but growing body of evidence supports the use of time-limited, multi-component interventions focused on improving function, autonomy, control and ability to carry out daily routines. These restorative approaches have been compared to more traditional approaches in home care which emphasize the completion of home-based tasks for clients. A majority of studies focused on measuring improvement of basic functional status, some focused on quality of care outcomes, and some focused on quality of life. However, there are still questions about who is most likely to benefit, which parts of these approaches are best, and how long and intensely restorative services should be provided.

Conclusions: This review highlighted the emerging evidence that suggests advantages of restorative approaches over the more traditional 'maintenance and support' approach, emphasizing dependency. But a move toward restorative approaches would involve a major paradigm shift for many home care providers, and may require considerable retraining and restructuring of services. As well, some questions remain about how best to implement such programs.

Reference: Ryburn B., Well, Y., Foreman, P. Enabling independence: restorative approaches to home care provision for frail older adults. Health and Social Care in the Community. 2009; 17, 225-234.

Early hospital discharge with home care saves money? Think again

Background: Early discharge hospital at home is a service that provides active treatment by health care professionals in the patient's home for a condition that otherwise would require acute hospital in-patient care. This study is a systematic review that examined the effectiveness and cost of early discharge hospital at home compared with in-patient hospital care.

Method: A review of the study comparing the effect of services for patients discharged home early was conducted. Two authors independently extracted data and assessed study quality for 26 relevant studies. These studies examined the effect of the home care services in patients with different types of conditions: patients who had a stroke, patients who had surgery, and elderly patients who had different types of conditions.

Findings:
There was insufficient evidence that providing services to people at home after being discharge early from a hospital may increase the risk of death or readmission; or adversely effect quality of life or the completion of daily activities such as dressing or daily chores. Patients who had a stroke or elderly patients may have less risk of being admitted to residential care if they are discharged home early with home care services. Hospital length of stay was reduced in the trials recruiting patients recovering from a stroke with a median reduction ranging from –8 days to –15 days. Additionally, discharging hospitalized patient early with home care support appeared to result in an increase in patient satisfaction. However, there was little evidence of cost-savings to the health care system by discharging hospitalized patients early with home care support. One trial found that the severity of the patient's condition determined the cost difference between early discharge hospital at home and in-patient care, with home care being more cost-effective than hospital care if limited to patients with mild disability. Overall, the studies included in this review did not provide compelling evidence that early discharge hospital at home produced cost savings, nor that costs were shifted from acute to primary care.

Conclusion:
Although early hospital discharge can be seen as a substitute for hospital care and as a means to control spending on acute hospital beds, this review provided insufficient objective evidence of economic benefit or improved health outcomes of early discharge hospital at home. Additionally, this review did not support the widespread development of early discharge home services as a cheaper substitute for in-patient care within the health care system.

Reference: Shepperd S, Doll H, Broad J, Gladman J, Iliffe S, Langhorne P, Richards S, Martin F, Harris R. Early discharge hospital at home. Cochrane Database of Systematic Reviews 2009, Issue 1.

Caregiving can be good for your health – if you have money and organized care

Background: Many studies have pointed out that the health and psychosocial burden of informal caregiving can be heavy, with increased depression and stress, suppressed immune responses, less engagement in illness preventative behaviours, disruptions to work life, and financial, family and social problems. As well, different studies have examined the impact of one or two aspects of the caregiving situation, including the caregiver's gender, stage in life, birth cohort (baby boomers versus older adults), spousal status, work demands, income, relationship and co-residence with the care receiver. This study looked at all these factors at once, as well as disposable income, unmet need for services, caregiver/care receiver relationship and co-residence to discover which demographic factors have relative importance for which caregiver health and psychosocial problems.

Methods: The researchers used data from a survey of 4,700 Connecticut residents, and compared the responses of 767 people who provided informal care to an older adult with the 3,274 who did not. Using logistic regression, they tested the independent effects of caregiver characteristics and the caregiving situation on the identified health outcomes. To measure income adequacy, the researchers asked whether caregivers could make ends meet monthly. To measure unmet needs, they asked whether the care receiver had all necessary services.

Findings: The caregivers rated their health higher than the non-caregivers, but there were no differences between the groups regarding depressive symptoms or social isolation when gender, age and work status were considered. The likelihood of depressive symptoms among caregivers was affected only by inadequate income and unmet need for services and the relationship with the care receiver and memory impairment did not affect caregivers' depressive symptoms. As well, female and baby boomer caregivers missed more work, and co-residence with the care receiver increased the likelihood of a caregiver's social isolation.

Conclusions: The study results highlight that though caregiving may not have a detrimental effect on their health, there are some subgroups of caregivers who are negatively affected. The findings suggest that efforts to relieve caregiver burden might best be focused on less financially-advantaged caregivers, on ensuring that long-term care needs are addressed, and on attending to the social isolation of co-resident caregivers.

Reference: Robison J, Fortinsky R, Kleppinger A, Shugrue N, Porter M. A broader view of family caregiving: effects of caregiving and caregiver conditions on depressive symptoms, health, work, and social isolation. The Journals of Gerontology Series B: Psychological Sciences and Social Sciences 2009;64B:788-98.

What drives the use of health care among individuals in the end of life phase?

Background: The use of health care is most intensive in the end stages of life. Previous studies have shown that end of life care is more costly in terms of care utilization; however those studies focused only on its costs. Health conditions and concomitant health care utilization at the end of life are often complex. This study aims to describe the utilization of acute and long-term care among older adults in their last year of life as compared to those not in their last year of life, and to examine determinants that can account for observed differences in care utilization.

Methods: In this a retrospective cohort study, data was drawn from the first three cycles of Longitudinal Aging Study Amsterdam (LASA), Netherland. One-year and three-year mortality information following each cycle was obtained from the municipalities where respondents lived at their time of death. At baseline, a cohort of 3107 persons aged 55 – 85 years was included. Two groups were distinguished; 1) survivors: respondents who were still alive at the next cycle, and; 2) end-of-life group: respondents who died within 12 months after a cycle. Utilization of acute care and long-term care services were recorded. Also recorded at each cycle was the use of professional and informal care along with health-related and psychosocial variables.

Findings: The end-of-life group used more health care than the survivors. In the younger-old, this difference was most pronounced for acute care, and in the older-old, it was for most pronounced long-term care. Older age, being male, higher education level, and having a partner could increase the likelihood of using medical specialists. The use of institutional care was positively associated with older age, being male and low income. Having a partner and having children within 15 minutes travel distance were associated with an increase in the use of informal personal care. The use of professional home care was positively associated with older age, having children within 15 minutes travel distance, but it was negatively associated with urbanicity. Moreover, having health problems were associated with the use of all types of health services.

Conclusions: The use of health care is most intensive in the end of life phase. In survivors, this difference is most pronounced for acute care, but in the older group, it is most pronounced for long-term care. Although this study was conducted in Netherland, findings from the study could be and essential for an appropriate allocation and organization of health care for elders and their informal caregivers in Canada.

Reference: Pot AM, Portrait F, Visser G, Puts M, van Groenou MI, Deeg DJ. Utilization of acute and long-term care in the last year of life: comparison with survivors in a population-based study. BMC Health Serv Res. 2009;9:139.

Do we need more doctors to lower our avoidable mortality?

Background: In January 2008, the Canadian Medical Association (CMA) launched its "More Doctors, More Care" campaign because of the shortage of doctors, in comparison to other countries in the Organization for Economic Co-operation and Development (OECD). According to the CMA (2008), "Canada would need 26,000 more doctors to meet the OECD average of doctors per population." However, is this the right, or even a relevant, metric? Would having the OECD average of doctors per population improve Canadian health care system? This study assessed the degree to which a specific healthcare outcome is related to physician supply by examining the relationship between physician supply and avoidable mortality.

Methods: Using the data from 19 different countries in the OECD, the authors examined whether more doctors would lead to better care or would reduce avoidable mortality in Canada. Although it is only one specific health outcome, avoidable mortality is widely recognized as a valid healthcare outcome indicator and is used extensively in several countries to inform policy and practice. Avoidable mortality measures the extent of premature death (before age 75) from causes (such as treatable cancers, bacterial infections, and influenza) that should be avoidable through timely and effective healthcare, as identified through systematic reviews. Data on number of physicians per 1,000 population and avoidable mortality per 100,000 population from 19 countries were compared.

Findings: There is no relationship between avoidable mortality and overall physician supply. There is also no relationship between avoidable mortality and a) general practitioners and family physicians per capita, b) specialists per capita, c) nurses per capita, d) doctors and nurses per capita, or d) health expenditures per capita. Most OECD countries that have more physicians per capita have similar or worse healthcare outcomes than Canada. For example, Spain, Norway and Italy have more physicians per capita and similar outcomes. Portugal, Denmark, Germany and Greece have more physicians per capita and worse outcomes.

Conclusions: This study addresses the contribution of more doctors on a specific health outcome. From the comparison with other OECD countries, the findings showed that more doctors will not necessarily translate into better avoidable mortality for Canadians. Taken together, the evidence suggests that there is no compelling reason to spend billions more dollars to increase our physician supply simply for the purpose of bringing our ratio more in line with OECD average or to lower our avoidable mortality. There are real physician supply issues that should motivate us to continue to focus policy on this area, such as workload differences between younger physicians and older retirees, and geographic variation in availability. Additionally, it is important to bear in mind that the study outcome was only one specific variable. There are many other crucial health outcomes which should be considered when deciding where to invest the money such as whether or not to spend money in the recruitment of physicians.

Reference: Watson DE, McGrail KM. More doctors or better care? Healthcare Policy. 2009;5(1):26-31.

Why is *Home and Community Care Highlights* important?

Under the supervision of Dr. Peter C. Coyte and Nancy Cooper, graduate researchers review academic publications (both peer-reviewed and grey literature) on an ongoing basis and summarize a range of studies that are of immediate or potential interest to industry and policy communities. This mentorship initiative of the CHSRF/CIHR Chair cultivates knowledge translation skills and promotes researchers' awareness of the perspectives of decision-makers. Subscription revenues are used to fund graduate trainees.

Review Team:

Winnie Sun (editor), Roger Chafe, Nancy Cooper, Peter Coyte, Zhaoxin Dong, Paul Holyoke, Wanrudee Isaranuwatchai, Allie Peckham, Kednapa Thavorn.

Further information and subscription forms can be found at:

http://www.hcerc.utoronto.ca/KnwlTrnsTraining.html

Comments on this and subsequent issues are welcome. Write to:

peter.coyte@utoronto.ca

Journals Reviewed:

American Journal of Preventative Medicine
American Journal of Public Health
Annals of Internal Medicine
BMC Health Services Research
British Medicine Journal
Canadian Journal of Cardiology
Canadian Journal of Cardiovascular Nursing
Canadian Journal of Policy Research
Canadian Journal on Aging
Canadian Medical Associational Journal
Canadian Journal of Public Health
Cochrane Data of Systematic Review
Disability & Society
Health Affairs
Health Care Financial Review
Health Care Management Review
Health Economics
Health & Place
Health Policy
Health Services Research
Health Services Management
Health & Social Care in the Community
Healthcare Management Forum
Healthcare Policy
Home Health Care Services Quarterly
Home Healthcare Nurse
Image: Journal of Nursing Scholarship
Int'l Journal of Medical Informatics
Int'l Journal for Quality in Health Care
Int'l Journal of Technology Assessment in Health Care
Journal of Aging Health
Journal of American Medical Association
Journal of Community Health
Journal of Community Health Nursing
Journal of Gerontology: Social Sciences
Journals of Gerontology Series B: Psychological Sciences and Social Sciences
Journal of Health Care Management
Journal of Health Economics
Journal of Health Politics, Policy & Law
Journal of Health Services Research and Policy
Journal of Pediatrics
Medical Care
Medical Decision Making
Milbank Quarterly
New England Journal of Medicine
Nursing Administration Quarterly
Journal of Nursing Research
Open Medicine
Pain
Pediatrics
Pharmacoeconomics
Social Science Medicine
Support Care in Cancer
Value in Health

To respect copyright restrictions, the Chair does not provide copies of the articles reviewed

