

## A Scoping Review of Appropriateness of Care Research Activity in Canada from a Health System-Level Perspective

### Étude de la portée des activités de recherche sur la pertinence des soins au Canada, du point de vue du système

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#### Appendix 2: Summary of Literature Search Results, Search Period: January 1, 2003 – June 30, 2013

Citation (first author, year)	Article title	Health service/ intervention (primary, secondary)	Clinical area/ disease/ population/care setting (primary, secondary)	Type of analysis (primary, secondary)	Method of appropriateness rating	Scope	Summary of article rationale
Boucher et al. 2003	Drug use evaluation of oral antibiotics prescribed in the ambulatory care settings in the Canadian armed forces	drug therapy, antibiotics	primary care	appropriateness rating	guidelines	pan-Canadian	Present-day drug use evaluation (DUE); prescribing among military practitioners and assessment of the degree of adherence to two sets of guidelines
Hanna et al. 2003	Intravenous immune globulin use in Canada	biopharmaceuticals, blood products	transfusion medicine	retrospective review of use	guidelines	pan-Canadian	Evaluation of intravenous immunoglobulin use
Malcolm and Marrie 2003	Antibiotic therapy for ambulatory patients with community-acquired pneumonia in an emergency department setting	drug therapy, antibiotics	ambulatory care	prospective observational study	guidelines	health region	Evaluation of the appropriate treatment of community-acquired pneumonia in an emergency department (ED) ambulatory setting

## Appendix 2: Continued

Citation (first author, year)	Article title	Health service/ intervention (primary, secondary)	Clinical area/ disease/ population/care setting (primary, secondary)	Type of analysis (primary, secondary)	Method of appropriateness rating	Scope	Summary of article rationale
Schneeweiss et al. 2003	Clinical and economic consequences of reference pricing for dihydropyridine calcium channel blockers	drug therapy	chronic disease	longitudinal analysis		provincial	Clinical impact of reference drug pricing of calcium channel blockers (CCB)
Tamblyn et al. 2003	The medical office of the 21st century (MOXXI): effectiveness of computerized decision-making support in reducing inappropriate prescribing in primary care	drug therapy	information technology (IT)	randomized control trial (RCT)	drug indications, computerized decision support	provincial	Impact of computerized decision-making support (CDS) on reducing inappropriate prescribing
Butler and Stolberg 2004	The use of cross-sectional diagnostic imaging in a major Canadian health care centre	diagnostic imaging	acute care	appropriateness rating, peer review	peer review	hospital system	Diagnostic imaging (cross-sectional)
Cree et al. 2004	Effect of home care service levels on health outcomes in hip fracture patients in Alberta	health services utilization	home care, hip fracture	patient outcomes		provincial	Home care services
Dawar et al. 2004	A fresh look at an old vaccine: does BCG have a role in 21st-century Canada?	biopharmaceuticals, immunizations	public health, tuberculosis	epidemiology and outcomes		pan-Canadian, First Nations population	Evaluation of the appropriateness of tuberculosis (TB) vaccine in First Nations children

## Appendix 2: Continued

Citation (first author, year)	Article title	Health service/ intervention (primary, secondary)	Clinical area/ disease/ population/care setting (primary, secondary)	Type of analysis (primary, secondary)	Method of appropriateness rating	Scope	Summary of article rationale
Heckman et al. 2004	Management of heart failure in Canadian long-term care facilities	drug therapy	cardiovascular, geriatrics	cross-sectional survey	guidelines	health region	Evaluation of the treatment of heart failure in long-term care residents
Johnson et al. 2004	Appropriate antibiotic utilization in seniors prior to hospitalization for community-acquired pneumonia is associated with decreased in-hospital mortality	drug therapy, antibiotics	geriatrics, pneumonia	administrative data	guidelines	provincial	Appropriate antibiotic use in seniors hospitalized with pneumonia
Kennedy et al. 2004	Variations in rates of appropriate and inappropriate carotid endarterectomy for prevention in four Canadian provinces	surgery, carotid endarterectomy	cardiovascular		RAND/UCLA appropriateness rating	pan-Canadian	Appropriate use of carotid endarterectomy
Kent et al. 2004	Need for coronary artery bypass grafting in Newfoundland and Labrador: the impact of increased demand	diagnostic imaging, angiography	cardiovascular	incident cohort	criteria	provincial	Evaluation of the appropriateness of coronary angiography
Klinke et al. 2004	Underuse of Aspirin in type 2 diabetes mellitus: prevalence and correlates of therapy in rural Canada	drug therapy, Aspirin	chronic disease, diabetes	cohort	guidelines	provincial	Evaluation of adherence to treatment guidelines for diabetes mellitus (DM) with respect to Aspirin use

## Appendix 2: Continued

Citation (first author, year)	Article title	Health service/ intervention (primary, secondary)	Clinical area/ disease/ population/care setting (primary, secondary)	Type of analysis (primary, secondary)	Method of appropriateness rating	Scope	Summary of article rationale
Lane et al. 2004	Potentially inappropriate prescribing in Ontario community-dwelling older adults and nursing home residents	drug therapy, psychotropic drug use	geriatrics, long-term care residents and home care	cohort	guidelines	provincial	Comparisons of potentially inappropriate drug therapy in long-term care residents versus home care residents
Lau et al. 2004	Stroke prophylaxis in institutionalized elderly patients with atrial fibrillation	drug therapy, preventive care	geriatrics, stroke	retrospective analysis	guidelines	health region	Use of stroke prophylaxis in elderly patients with atrial fibrillation (AF)
Lee et al. 2004	Cost savings and effectiveness of outpatient treatment with low molecular weight heparin of deep vein thrombosis in a community hospital	drug therapy	home care	cost-effectiveness, cost savings		provincial	Outpatient treatment of deep vein thrombosis
Pilote et al. 2004	Cardiac procedures after an acute myocardial infarction across nine Canadian provinces	surgery, cardiac procedures	cardiovascular, acute myocardial infarction	longitudinal analysis of rates and wait times		pan-Canadian	Variations in cardiac procedures after acute myocardial infarction
Putnam et al. 2004	Anticoagulation in atrial fibrillation: is there a gap in care for ambulatory patients?	drug therapy, warfarin	cardiovascular, community care	survey			Evaluations of care gaps in anticoagulation in atrial fibrillation (AF) patients

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Citation (first author, year)	Article title	Health service/ intervention (primary, secondary)	Clinical area/ disease/ population/care setting (primary, secondary)	Type of analysis (primary, secondary)	Method of appropriateness rating	Scope	Summary of article rationale
Rancourt et al. 2004	Potentially inappropriate prescriptions for older patients in long-term care	drug therapy	geriatrics, long-term care residents	cross-sectional chart review	expert review	provincial	Use of criteria to determine inappropriate prescribing of medications in long-term care residents for the purpose of patient safety and quality of care
Rochon et al. 2004	Potentially inappropriate prescribing in Canada relative to the US	drug therapy	policy	retrospective cohort	Beers criteria	provincial	Evaluation of the impact of a more restrictive drug formulary on inappropriate prescribing patterns compared to a less restrictive policy
Schneeweiss et al. 2004	Clinical and economic consequences of a reimbursement restriction of nebulised respiratory therapy in adults: direct comparison of randomised and observational evaluations	non-drug technology, nebulised respiratory medications	primary care	cluster randomized control trial (RCT), observational time series analysis	guidelines	provincial	Impact of reimbursement restrictions for nebulised respiratory medications

## Appendix 2: Continued

Citation (first author, year)	Article title	Health service/ intervention (primary, secondary)	Clinical area/ disease/ population/care setting (primary, secondary)	Type of analysis (primary, secondary)	Method of appropriateness rating	Scope	Summary of article rationale
Anderson et al. 2005	Population-based evaluation of the management of antithrombotic therapy for atrial fibrillation	drug therapy, preventive care	cardiovascular, atrial fibrillation	survey, case scenarios	guidelines	provincial	Evaluation of the appropriate rates of antithrombotic therapy for atrial fibrillation
Barrett et al. 2005	Hospital utilization, efficiency and access to care during and shortly after restructuring acute care in Newfoundland and Labrador	health services utilization	acute care	utilization rates, appropriateness	peer review	provincial	Hospitalizations and restructuring
El Saadany et al. 2005	Economic burden of hepatitis C in Canada and the potential impact of prevention	health services utilization, preventive care	public health, hepatitis C	economic evaluation, Markov model			Economic burden of hepatitis C in Canada
Grootendorst et al. 2005	The impact of reference pricing of nonsteroidal anti-inflammatory agents on the use and costs of analgesic drugs	drug therapy	policy	estimation of expenditures		provincial	Impact of reference pricing on drug expenditures
Hagen et al. 2005	Neuroleptic and benzodiazepine use in long-term care in urban and rural Alberta: characteristics and results of an education intervention to ensure appropriate use	drug therapy, psychotropic drug use	geriatrics, long-term care residents	interrupted time-series with chart reviews	recommendations	provincial	Evaluation of the use of psychotropic drugs in long-term care (LTC) and appropriate documentation of their use

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Citation (first author, year)	Article title	Health service/ intervention (primary, secondary)	Clinical area/ disease/ population/care setting (primary, secondary)	Type of analysis (primary, secondary)	Method of appropriateness rating	Scope	Summary of article rationale
Ho et al. 2005	The impact of a pharmacist-managed dosage form conversion service on ciprofloxacin usage at a major Canadian teaching hospital: a pre- and post-intervention study	drug therapy, antibiotics	acute care	pre-post intervention	guidelines	provincial	Impact of a pharmacist-managed dosing program to reduce inappropriate ciprofloxacin use
Hogg et al. 2005	Cost savings associated with improving appropriate and reducing inappropriate preventive care: cost-consequences analysis	health services utilization, preventive care	primary care	expenditures	provincial		Evaluation of the cost consequences of implementing evidence-based appropriate preventive care practices
Mitton et al. 2005	Continuity of care and health care costs among persons with severe mental illness	health services utilization	mental health, community care	observational cohort, utilization cost analyses		provincial	Evaluation of the impact of continuity of care and related costs
Rapoport et al. 2005)	Antipsychotic use in the elderly—shifting trends and increasing costs	drug therapy, psychotropic drug use	geriatrics	cross-sectional time series analysis, expenditures		provincial	Evaluation of the trends in utilization and costs over time
Vik et al. 2005	Treatment of osteoporosis in an older home care population	drug therapy	osteoporosis	longitudinal analysis	guidelines	provincial	Evaluation of treatment of osteoporosis in home care clients

Appendix 2: Continued

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Alter et al. 2006	Proliferation of cardiac technology in Canada	diagnostic imaging	cardiovascular	utilization rates, expenditures		pan-Canadian	Cardiac technologies (e.g., electrocardiograms [ECG], stress tests, catheterization, percutaneous coronary intervention [PCI], coronary artery bypass grafting [CABG])
Azoulay et al. 2006	Patterns and utilization of isotretinoin for acne from 1984 to 2003: is there need for concern?	drug therapy, acne treatment	dermatology	retrospective cohort, administrative data	guidelines	provincial	Impact of guideline implementation on use of isotretinoin for acne
Guttmann et al. 2006	Volume matters: physician practice characteristics and immunization coverage among young children insured through a universal health plan	biopharmaceuticals, immunizations	paediatrics	longitudinal analysis	government-set target	provincial	Evaluation of immunization coverage in children
Ko et al. 2006	Appropriateness of spironolactone prescribing in heart failure patients: a population-based study	drug therapy, spironolactone	cardiovascular, heart failure	population-based	guidelines	provincial	Appropriateness of spironolactone treatment in heart failure patients

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Landry et al. 2006	Assessing the consequences of delisting publicly funded community-based physical therapy on self-reported health in Ontario, Canada: a prospective cohort study	health services utilization	community care, physiotherapy	prospective cohort		provincial	Impact of delisting community-based physiotherapy on patient outcomes
Marshall et al. 2006	Impact of administrative restrictions on antibiotic use and expenditure in Ontario: time series analysis	drug therapy, antibiotics	policy	time-series analysis, expenditures	provincial	Impact of policy change for reimbursement on antibiotic use and associated costs	Impact of delisting community-based physiotherapy on patient outcomes
Palencia et al. 2006	The costs of planned caesarean versus planned vaginal birth in the Term Breech Trial	health services utilization, labour and delivery	obstetrics	international controlled trials, cost analysis using Ontario Ministry of Health and Long-Term Care (MOHLTC) policies		provincial	A comparison of costs for planned caesarean versus vaginal delivery of breech babies at term
Rahme et al. 2006	Utilization and cost comparison of current and optimal prescribing of nonsteroidal anti-inflammatory drugs in Quebec, Canada	drug therapy, nonsteroidal anti-inflammatory drugs (NSAIDs) and COX-2 inhibitors	health system population	retrospective analysis, expenditures	guidelines	provincial	Evaluation of the appropriate prescribing of nonsteroidal anti-inflammatory drugs (NSAIDs) with gastro-protective agents and COX-2 inhibitors

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Sealy and Whitehead 2006	The impact of deinstitutionalization of psychiatric hospitals and psychological distress of the community in Canada	health services utilization	mental health	observational		pan-Canadian	Impact of deinstitutionalization policies on psychological stress
Walker et al. 2006	An assessment of linezolid utilization in selected Canadian provinces	drug therapy, antibiotics	infectious diseases, infection control	retrospective cohort	recommendations and algorithm	pan-Canadian	Evaluation of the appropriateness of use of linezolid in treating antibiotic-resistant infections
Beauséjour et al. 2007	Patient characteristics at the initial visit to a scoliosis clinic	health services utilization	orthopaedics	cross-sectional study	guidelines	provincial	Appropriateness for referral to scoliosis clinic
Constantine et al. 2007	Intravenous immunoglobulin utilization in the Canadian Atlantic provinces	biopharmaceuticals, blood products	transfusion medicine	utilization rates, cost-effectiveness	guidelines	pan-Canadian	Evaluation of intravenous immunoglobulin use and cost-effectiveness
Cremieux et al. 2007	The economic impact of a partnership-measurement model of disease management	health services utilization, community care	cardiovascular	economic impact, input-output analysis		pan-Canadian	Community partnership-based disease-management project
Institute of Health Economics 2007	Consensus statement on self-monitoring in diabetes	non-drug technology	chronic disease, diabetes	expert panel	consensus statement	pan-Canadian	Appropriate use of medical supplies in the treatment of diabetes

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Citation (first author, year)	Article title	Health service/ intervention (primary, secondary)	Clinical area/ disease/ population/care setting (primary, secondary)	Type of analysis (primary, secondary)	Method of appropriateness rating	Scope	Summary of article rationale
Kahn et al. 2007	Multicentre evaluation of the use of venous thromboembolism prophylaxis in acutely ill medical patients in Canada	non-drug therapy, preventive care	patient safety	chart audit	guidelines	pan-Canadian	Evaluation of the appropriateness and use of venous thromboembolism prophylaxis in surgical patients
Kerba et al. 2007	Defining the need for breast cancer radiotherapy in the general population: a criterion-based benchmarking approach	non-drug therapy, radiotherapy	oncology, breast cancer	registry	criterion-based benchmark approach	provincial	Determining the need for radiotherapy in breast cancer treatment
Lauber et al. 2007	Antibiotic prophylaxis practices in dentistry: a survey of dentists and physicians	drug therapy, antibiotics	dentistry, primary care	survey	guidelines	provincial	Evaluation of antibiotics use in dentists and primary care physicians
Lum et al. 2007	Urban and rural differences in the management of asthma amongst primary care physicians in Alberta	health services utilization	primary care, asthma	chart review	guidelines	provincial	Differences in management of asthma in primary care settings
Peter et al. 2007	Neither seen nor heard: children and home care policy in Canada	health services utilization, home care	paediatrics, community care	normative analysis	pan-Canadian	Policy analysis and ethical implications of home care service availability for children and youth in Canada	Differences in management of asthma in primary care settings

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Sewitch et al. 2007	Receiving guideline-concordant pharmacotherapy for major depression: impact on ambulatory and in-patient health service use	drug therapy	mental health	retrospective cohort	guidelines	provincial	Evaluation of appropriate pharmacotherapy for depression
Alport et al. 2008	Cryoprecipitate use in 25 Canadian hospitals: commonly used outside of the published guidelines	biopharmaceuticals, blood products	transfusion medicine		guidelines	pan-Canadian	Evaluation of cryoprecipitate use in Canadian hospitals
Alter et al. 2008	The relationship between physician supply, cardiovascular health service use and cardiac disease burden in Ontario: supply-need mismatch	health services utilization	cardiovascular	health services utilization		provincial	Correlation between cardiovascular health service intensity and regional disease burden
Beaulieu et al. 2008	Variability of hepatitis B testing in British Columbian end-stage renal disease (ESRD) patients: the case to focus on implementation of guidelines	biopharmaceuticals, immunizations	public health, hepatitis B	retrospective cohort, registry data	guidelines	provincial	Evaluation of the immunization of dialysis patients for hepatitis B

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Citation (first author, year)	Article title	Health service/ intervention (primary, secondary)	Clinical area/ disease/ population/care setting (primary, secondary)	Type of analysis (primary, secondary)	Method of appropriateness rating	Scope	Summary of article rationale
Edworthy et al. 2008	Smoldering rheumatoid arthritis: is the Canadian healthcare system neglecting a significant disease population?	drug therapy	chronic disease, rheumatoid arthritis	audit	guidelines	pan-Canadian	Treatment of rheumatoid arthritis patients
Hopkins et al. 2008	Cost-effectiveness of reducing wait times for cataract surgery in Ontario	surgery, cataract surgery	ophthalmology	incremental cost-effectiveness ratios, queuing theory		provincial	Cost-effectiveness of reducing wait times for cataract surgery
Iskedjian et al. 2008	Cost-effectiveness of escitalopram for generalized anxiety disorder in Canada	drug therapy, blood products	mental health, general anxiety disorder	decision tree	guidelines	provincial	Cost-effectiveness of using escitalopram for generalized anxiety disorder
Mahant et al. 2008	Reducing inappropriate hospital use on a general pediatric inpatient unit	health services utilization, hospital care	paediatrics	prospective observational study	appropriateness tool	health region	Evaluation of the appropriateness of hospitalization in a paediatric hospital
Papaioannou et al. 2008	The osteoporosis care gap in men with fragility fractures: the Canadian Multicentre Osteoporosis Study	health services utilization	geriatrics, osteoporosis	prospective population-based study	guidelines	pan-Canadian	Evaluation of the care gap in diagnosing and treating men with osteoporosis

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Paul et al. 2008	Delisting publicly funded community-based physical therapy services in Ontario, Canada: a 12-month follow-up study of the perceptions of clients and providers	health services utilization	physiotherapy	survey			Impact of delisting publicly funded community physiotherapy
Sanyal et al. 2008	The relationship between type of drug therapy and blood glucose self-monitoring test strips claimed by beneficiaries of the Seniors' Pharmacare Program in Nova Scotia, Canada	non-drug technology, glucose test strips	chronic disease, diabetes	retrospective review	guidelines	provincial	Evaluation of claims for blood glucose test strips and diabetes drugs
Ackroyd-Stolarz et al. 2009	Potentially inappropriate prescribing of benzodiazepines for older adults and risk of falls during hospital stay	drug therapy, psychotropic drug use	patient safety	retrospective review of charts and administrative data	Beers criteria	hospital system	Evaluation of the inappropriate use of benzodiazepines in elderly patients in hospital
Al-Abdullah et al. 2009	The appropriateness of referrals to a paediatric emergency department via a telephone health line	health services utilization, emergency department use	paediatrics	chart review, provider survey	criteria	provincial	Evaluation of the appropriateness of referrals to an emergency department (ED) by teletriage (Telehealth Ontario)

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Cinnamon et al. 2009	Assessing the suitability of host communities for secondary palliative care hubs: a location analysis model	health services utilization	community care, palliative care	location analysis model		provincial	Determination of optimal locations for palliative care hubs
Cruess et al. 2009	The treatment of wet age-related macular degeneration (AMD) in Canada: access to therapy (policy review)	drug therapy, treatment of age-related macular degeneration (AMD)	ophthalmology, geriatrics	costs, burden of illness		provincial	Evaluation of the costs associated with treating age-related macular degeneration (AMD) and implications for public funding of treatment
Doucette et al. 2009	Improving access to care by allowing self-referral to a hepatitis C clinic	health services utilization	public health, hepatitis C	chart review		provincial	Appropriateness of self-referral to hepatitis C clinics
Gooch et al. 2009	The Alberta hip and knee replacement project: a model for health technology assessment based on comparative effectiveness of clinical pathways	health services utilization, joint replacement	orthopaedics	randomized control trial (RCT), comparative effectiveness		provincial	Health technology assessment of joint replacement
Grzybowski and Schuurman 2009	Planning the optimal level of local maternity service for small rural communities: a systems study in British Columbia	health services utilization, rural communities	obstetrics, maternity care	iterative model	guidelines	provincial	Model to predict optimal level of maternity care for rural communities

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Hawker et al. 2009	A population-based nested case-control study of the costs of hip and knee replacement surgery	surgery, joint replacement	orthopaedics	case-matched comparisons, expenditures		provincial	Comparison of cost-consequences of joint replacement in osteoarthritis patients
Jackevicius et al. 2009	Long-term trends in use of and expenditures for cardiovascular medications in Canada	drug therapy	cardiovascular	observational cohort		pan-Canadian	Evaluation of utilization trends and expenditures over time
Middelkamp et al. 2009	Evaluation of adult outpatient magnetic resonance imaging sedation practices: are patients being sedated optimally?	drug therapy, psychotropic drug use	ambulatory care, magnetic resonance imaging (MRI) clinics	survey	protocol	pan-Canadian	Use of anxiolytics in outpatient magnetic resonance imaging (MRI) clinics
Roussy et al. 2009	Cost of corneal transplantation for the Quebec health care system	surgery, corneal transplantation	ophthalmology	physician and prescription data, expenditures		provincial	Costs associated with corneal transplantation
Tang et al. 2009	Cardiac rehabilitation after stroke: need and opportunity	health services utilization	cardiovascular, rehabilitation	retrospective cohort analysis, survey	eligibility	provincial	Evaluation of barriers to cardiac rehabilitation for stroke patients

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Foster et al. 2010	Use of intravenous immune globulin (IVIg) in the intensive care unit (ICU): a retrospective review of prescribing practices and patient outcomes	biopharmaceuticals, blood products	transfusion medicine	trend analysis	drug indications	provincial	Evaluation of the use of intravenous immune globulin (IVIg)
Gomes et al. 2010	Blood glucose test strips: options to reduce usage	non-drug technology, glucose test strips	chronic disease, diabetes	cross-sectional time series analysis	guidelines	provincial	Evaluation of impact of reducing glucose test strip use
Kerba et al. 2010	Defining the need for prostate cancer radiotherapy in the general population: a criterion-based benchmarking approach	non-drug therapy, radiotherapy	oncology, prostate cancer	registry	evidence-based estimates	provincial	Determining need for radiotherapy in prostate cancer treatment
Leslie et al. 2010	A before-and-after study of fracture risk reporting and osteoporosis treatment initiation	health services utilization, preventive care	orthopaedics, bone mineral assessment testing	before and after	guidelines	provincial	Impact of change in guidelines on appropriate use of osteoporosis drugs
Lundine et al. 2010	Adherence to perioperative antibiotic prophylaxis among orthopaedic trauma patients	surgery	orthopaedics, patient safety	retrospective cohort	guidelines	pan-Canadian	Adherence to perioperative antibiotic guidelines

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Atzema et al. 2011	Temporal changes in emergency department triage of acute myocardial infarction patients and the effect on outcomes	health services utilization, emergency department use	cardiovascular, acute myocardial infarction	retrospective cohort, administrative data	guidelines	provincial	Triage of acute myocardial infarction patients in the emergency department (ED)
Grover et al. 2011	Estimating the benefits of patient and physician adherence to cardiovascular prevention guidelines: the MyHealthCheckup survey	drug therapy, preventive care	cardiovascular	Markov model	guidelines	pan-Canadian	Estimate of benefits of optimal treatment of cardiovascular disease
Guertin et al. 2011	The potential economic impact of restricted access to angiotensin-receptor blockers (ARBs)	drug therapy	cardiovascular, ACE-inhibitors versus angiotensin-receptor blockers (ARBs)	cost minimization model, Monte Carlo simulations		pan-Canadian	Evaluation of cost savings had use of angiotensin-receptor blockers (ARBs) been restricted rather than used as an alternative to ACE-inhibitors
Landry et al., 2011	Do family physicians request ultrasound scans appropriately?	diagnostic imaging, ultrasound	primary care	retrospective review	guidelines	health region	Appropriateness of referral for diagnostic imaging by primary care physicians
Lin et al. 2011	Post-discharge care for depression in Ontario	health services utilization	mental health	administrative data review and chart abstraction	indicators, evidence-based, Delphi panel	provincial	Rate of appropriate post-discharge care for depression

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Ohinmaa et al. 2011	Impacts of anti-TNF on health care utilization and costs in patients with rheumatoid arthritis in Alberta, Canada	biopharmaceuticals	chronic disease, rheumatoid arthritis	propensity score matching, cost-effectiveness		provincial	Cost-effectiveness of anti-TNF versus disease modifying antirheumatic drugs (DMARDs) in treating rheumatoid arthritis
Pan et al. 2011	Cost-utility analysis based on a head-to-head Phase 3 Trial comparing ustekinumab and etanercept in patients with moderate-to-severe plaque psoriasis: a Canadian perspective	biopharmaceuticals	dermatology, psoriasis	cost utility, Markov model		pan-Canadian	Head-to-head comparison of effectiveness and costs of two dermatology treatments (ustekinumab and etanercept)
Sorensen et al. 2011	Cost-effectiveness of dabigatran etexilate for the prevention of stroke and systemic embolism in atrial fibrillation: a Canadian payer perspective	drug therapy, preventive care	cardiovascular, atrial fibrillation	cost effectiveness, Markov model		pan-Canadian	Evaluation of the cost-effectiveness of a therapy to prevent stroke in atrial fibrillation patients using the Canadian payer-perspective
Wilbur et al. 2011	Low-molecular-weight heparin versus unfractionated heparin for prophylaxis of venous thromboembolism in medicine patients: a pharmaco-economic analysis	drug therapy, preventive care	patient safety	probabilistic decision analysis model		system-level	Cost-effectiveness of low-molecular-weight heparin therapy in the prevention of venous thromboembolism

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Wong et al. 2011	Cost-effectiveness of screening immigrants for hepatitis B	health services utilization, screening	infectious diseases, hepatitis B	Markov simulation		pan-Canadian	Cost-effectiveness of screening for chronic hepatitis B
Atzema et al. 2012	Wait times in the emergency department for patients with mental illness	health services utilization, emergency department use	mental health	retrospective cohort, administrative data	guidelines	provincial	Emergency department triaging of patients with mental illness
Chalmers et al. 2012	Rates of interventions in labour and birth across Canada: findings of the Canadian Maternity Experiences Survey	health services utilization, labour and delivery	obstetrics	survey	rates of use of evidence-based interventions	pan-Canadian	Evaluation of the variations in labour and delivery interventions across Canada
Cohen et al. 2012	Specialized cardiological care may be overutilized in Quebec	health services utilization	cardiovascular	small area analysis, modelling using utilization variables		provincial	Potential overuse of medical specialists (internists and cardiologists) and revascularization procedures
Feasby et al. 2012	Appropriateness of the use of intravenous immune globulin (IVIG) before and after the introduction of a utilization control program	biopharmaceuticals, blood products	transfusion medicine	chart review	RAND/UCLA Appropriateness rating	provincial	Appropriate use of intravenous immune globulin (IVIG)

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Fehlings et al. 2012	Is surgery for cervical spondylotic myelopathy cost-effective? A cost-utility analysis based on data from the AOSpine North America prospective cervical spondylotic myelopathy (CSM) study	surgery	spinal surgery	cost-benefit analysis, cost-utility ratio		provincial	Cost-effectiveness of surgery for cervical spondylotic myelopathy (CSM)
Grace et al. 2012	The role of systematic inpatient cardiac rehabilitation referral in increasing equitable access and utilization	health services utilization	cardiovascular, rehabilitation	prospective observational study	guidelines	provincial	Impact of systematic referral for cardiac rehabilitation and socio-demographic distribution of services use; "underuse"
Jin et al. 2012	De-insurance in Ontario has reduced use of eye care services by the socially disadvantaged	health services utilization	optometry, ophthalmology	survey		provincial	Impact of de-listing eye care services
Ko et al. 2012	Assessing the association of appropriateness of coronary revascularization and clinical outcomes for patients with stable coronary artery disease	surgery, re-vascularization	cardiovascular, coronary artery disease	retrospective chart review	criteria	provincial	Evaluation of the use of revascularization in appropriate cases and outcomes

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MacFadden et al. 2012	Sex differences in implantable cardioverter-defibrillator outcomes: findings from a prospective defibrillator database	non-drug therapy, implantable cardiac defibrillator	cardiovascular, atrial fibrillation	prospective observational study	peer review	provincial	Evaluation of the variation in implantable cardioverter-defibrillator (ICD) use between men and women, including appropriate use of ICD therapies
Maleki-Yazdi et al. 2012	The burden of illness in patients with moderate to severe chronic obstructive pulmonary disease in Canada	health services utilization	chronic disease, chronic obstructive pulmonary disease (COPD)	chart review and patient survey, expenditures		pan-Canadian	Costs associated with treatment of acute exacerbations of chronic obstructive pulmonary disease (COPD)
Puyat et al. 2012	The essential and potential inappropriate use of antipsychotics across income groups: an analysis of linked administrative data	drug therapy, psychotropic drug use	health system population	administrative data	guidelines	provincial	Evaluation of antipsychotic use across income groups
Rahme et al. 2012	Concordance with guideline recommendations: previous and more recent nonsteroidal anti-inflammatory drug prescriptions in Quebec, Canada	drug therapy, nonsteroidal anti-inflammatory drugs (NSAIDs) and COX-2 inhibitors	health system population	physician billing and prescription data	guidelines	provincial	Concordance of nonsteroidal anti-inflammatory drug (NSAID) and COX-2 inhibitor prescriptions with guideline recommendations

## Appendix 2: Continued

Citation (first author, year)	Article title	Health service/ intervention (primary, secondary)	Clinical area/ disease/ population/care setting (primary, secondary)	Type of analysis (primary, secondary)	Method of appropriateness rating	Scope	Summary of article rationale
Guilcher et al. 2013	Is the emergency department an appropriate substitute for primary care for persons with traumatic spinal cord injury?	health services utilization, emergency department use	primary care, acute spinal cord injury	longitudinal analysis	guidelines	provincial	Evaluation of the use of emergency departments for primary care-related issues by patients with spinal cord injury
Herrmann et al. 2013	Management of neuropsychiatric symptoms in long-term care residents with Parkinson's disease	drug therapy, psychotropic drug use	mental health, long-term care residents	cohort	guidelines	provincial	Management of psychotic symptoms in long-term care residents with Parkinson's disease
Singh et al. 2013	Economic evaluation of percutaneous left atrial appendage occlusion, dabigatran, and warfarin for stroke prevention in patients with nonvalvular atrial fibrillation	drug therapy, preventive care	cardiovascular, atrial fibrillation	economic evaluation, Markov model		provincial	Evaluation of new stroke therapy (dabigatran) versus two standard therapies (warfarin and surgical intervention)

## Appendix 2: Continued

### References

- Ackroyd-Stolarz, S., N.J. MacKinnon, I. Sketris and B. Sabo. 2009. "Potentially Inappropriate Prescribing of Benzodiazepines for Older Adults and Risk of Falls during a Hospital Stay: A Descriptive Study." *Canadian Journal of Hospital Pharmacy* 62(4): 276–83.
- Al-Abdullah, T., A.C. Plint, A. Shaw, R. Correll, I. Gaboury, C. Pitters and T. Clifford. 2009. "The Appropriateness of Referrals to a Pediatric Emergency Department via a Telephone Health Line." *Canadian Journal of Emergency Medical Care* 11(2):139–48.
- Alport, E.C., J.L. Callum, S. Nahirniak, B. Eurich and H.A. Hume. 2008. "Cryoprecipitate Use in 25 Canadian Hospitals: Commonly Used Outside of the Published Guidelines." *Transfusion* 48(10): 2122–27. doi: 10.1111/j.1537-2995.2008.01826.x.
- Alter, D.A., T.A. Stukel and A. Newman. 2006. "Proliferation of Cardiac Technology in Canada: A Challenge to the Sustainability of Medicare." *Circulation* 113(3): 380–87. doi: 10.1161/CIRCULATIONAHA.105.560466.
- Alter, D.A., T.A. Stukel and A. Newman. 2008. "The Relationship between Physician Supply, Cardiovascular Health Service Use and Cardiac Disease Burden in Ontario: Supply–Need Mismatch." *Canadian Journal of Cardiology* 24(3): 187–93.
- Anderson, D.R., M.J. Gardner, W. Putnam, D. Jassal, B. Brownell, G. Flowerdew and J.L. Cox. 2005. "Population-Based Evaluation of the Management of Antithrombotic Therapy for Atrial Fibrillation." *Canadian Journal of Cardiology* 21(3): 257–66.
- Atzema, C.L., M.J. Schull, P.C. Austin and J.V. Tu. 2011. "Temporal Changes in Emergency Department Triage of Acute Myocardial Infarction Patients, and the Effect on Outcomes." *Academic Emergency Medicine* 1: S45–46. doi: 10.1016/j.ahj.2011.015.
- Atzema, C.L., M.J. Schull, P. Kurdyak, N.M. Menezes, A.S. Wilton, M.J. Vermeulen and P.C. Austin. 2012. "Wait Times in the Emergency Department for Patients with Mental Illness." *Canadian Medical Association Journal* 184(18): E969–76. doi: 10.1503/cmaj.111043.
- Azoulay, L., D. Oraichi and A. Berard. 2006. "Patterns and Utilization of Isotretinoin for Acne from 1984 to 2003: Is There Need?" *European Journal of Clinical Pharmacology* 62(8): 667–74. doi: 10.1007/s00228-006-0151-x.
- Barrett, B., C. Way, J. McDonald and P. Parfrey. 2005. "Hospital Utilization, Efficiency and Access to Care During and Shortly After Restructuring Acute Care in Newfoundland and Labrador." *Journal of Health Services & Research Policy* 10 (Suppl. 2): 31–37.
- Beaulieu, M., M. Krajden, J. Buxton, L. Er, O. Djurdjev and A. Levin. 2008. "Variability of Hepatitis B Testing in British Columbian ESRD Patients: The Case to Focus on Implementation of Guidelines." *American Journal of Kidney Diseases* 52(5): 939–46. doi: 10.1053/j.ajkd.2008.05.010.
- Beauséjour, M., M. Roy-Beaudry, L. Goulet and H. Labelle. 2007. "Patient Characteristics at the Initial Visit to a Scoliosis Clinic: A Cross-Sectional Study in a Community without School Screening." *Spine* 32(12): 1349–54.
- Boucher, M., R. Vaillancourt and A. McCarthy. 2003. "Drug Use Evaluation of Oral Antibiotics Prescribed in the Ambulatory Care Settings in the Canadian Armed Forces." *Canadian Journal of Clinical Pharmacology* 10(1): 5–10.
- Butler, G.J. and H.O. Stolberg. 2004. "The Use of Cross-Sectional Diagnostic Imaging in a Major Canadian Health Care Centre." *Canadian Association of Radiologists Journal* 55(3): 174–77.
- Chalmers, B., J. Kaczorowski, B. O'Brien and C. Royle. 2012. "Rates of Interventions in Labor and Birth Across Canada: Findings of the Canadian Maternity Experiences Survey." *Birth* 39(3): 203–10. doi: 10.1111/j.1523-536X.2012.00549.x.
- Cinnamon, J., N. Schuurman and V.A. Crooks. 2009. "Assessing the Suitability of Host Communities for Secondary Palliative Care Hubs: A Location Analysis Model." *Health & Place* 15(3): 792–800. doi: 10.1016/j.healthplace.2009.01.003.
- Cohen, A.A., A. Vanasse and J. Courteau. 2012. "Specialized Cardiological Care May Be Overutilized in Urban Areas of Quebec." *European Journal of Preventive Cardiology* 19(4): 731–37. doi: 10.1177/1741826711413371.

## Appendix 2: Continued

- Constantine, M.M., W. Thomas, L. Whitman, E. Kahwash, S. Dolan and S. Smith. 2007. "Intravenous Immunoglobulin Utilization in the Canadian Atlantic Provinces: A Report of the Atlantic Collaborative Intravenous Immune Globulin Utilization Working Group." *Transfusion* 47(11): 2072–80. doi: 10.1111/j.1537-2995.2007.01400.x.
- Cree, M.W., A.G. Juby and K.C. Carriere. 2004. "Effect of Home Care Service Levels on Health Outcomes in Hip Fracture Patients in Alberta." *Healthcare Quarterly* 7(2): 49–53. doi: 10.12927/hcq.16629.
- Creieux, P.-Y., P. Fortin, M.-C. Meilleur, T. Montague and J. Royer. 2007. "The Economic Impact of a Partnership-Measurement Model of Disease Management: Improving Cardiovascular Outcomes in Nova Scotia (ICONS)." *Healthcare Quarterly* 10(2): 38–46.
- Cruess, A., D. Maberley, D. Wong and J. Chen. 2009. "The Treatment of Wet AMD in Canada: Access to Therapy (Policy Review)." *Canadian Journal of Ophthalmology* 44(5): 548–56. doi: 10.3129/i09-140.
- Dawar, M., M. Clark, S.L. Deeks, W. Walop and N. Ahmadipour. 2004. "A Fresh Look at an Old Vaccine: Does BCG Have a Role in 21st-Century Canada?" *International Journal of Circumpolar Health* 63 (Suppl. 2): 230–36.
- Doucette, K., V. Robson, S. Shafran and D. Kunimoto. 2009. "Improving Access to Care by Allowing Self-Referral to a Hepatitis C Clinic." *Canadian Journal of Gastroenterology* 23(6): 421–24.
- Edworthy, S., M. Zimmer, S. Garner, G. Boire, S. LeClercq, V. Bykerk and J. Henderson. 2008. "Smoldering Rheumatoid Arthritis: Is the Canadian Healthcare System Neglecting a Significant Disease Population?" *Journal of Rheumatology* 35(8): 1506–12.
- El Saadany, S., D. Coyle, A. Giulivi and M. Afzal. 2005. "Economic Burden of Hepatitis C in Canada and the Potential Impact of Prevention. Results from a Disease Model." *European Journal of Health Economics* 6(2): 159–65. doi: 10.1007/s10198-004-0273-y.
- Feasby, T.E., H. Quan, M. Tubman, D. Pi, A. Tinmouth, L. So and W.A. Ghali. 2012. "Appropriateness of the Use of Intravenous Immune Globulin Before and After the Introduction of a Utilization Control Program." *Open Medicine* 6(1): e28–34.
- Fehlings, M.G., N.K. Jha, S.M. Hewson, E.M. Massicotte, B. Kopjar and S. Kalsi-Ryan. 2012. "Is Surgery for Cervical Spondylotic Myelopathy Cost-Effective? A Cost–Utility Analysis Based on Data from the AOSpine North America Prospective CSM Study." *Journal of Neurosurgery Spine* 17 (Suppl. 1): 89–93. doi: 10.3171/2012.6.AOSPINE111069.
- Foster, R., A. Suri, W. Filate, D. Hallett, J. Meyer, T. Ruijs and S. Mehta. 2010. "Use of Intravenous Immune Globulin in the ICU: A Retrospective Review of Prescribing Practices and Patient Outcomes." *Transfusion Medicine* 20(6): 403–08. doi: 10.1111/j.1365-3148.2010.01022.x.
- Gomes, T., D.N. Juurlink, B.R. Shah, J.M. Paterson and M.M. Mamdani. 2010. "Blood Glucose Test Strips: Options to Reduce Usage." *Canadian Medical Association Journal* 182(1): 35–38. doi: 10.1503/cmaj.091017.
- Gooch, K.L., D. Smith, T. Wasylak, P.D. Faris, D.A. Marshall, H. Khong and C.B. Frank. 2009. "The Alberta Hip and Knee Replacement Project: A Model for Health Technology Assessment Based on Comparative Effectiveness of Clinical Pathways." *International Journal of Technology Assessment in Health Care* 25(2): 113–23. doi: 10.1017/S0266462309090163.
- Grace, S.L., Y.W. Leung, R. Reid, P. Oh, G. Wu and D.A. Alter. 2012. "The Role of Systematic Inpatient Cardiac Rehabilitation Referral in Increasing Equitable Access and Utilization." *Journal of Cardiopulmonary Rehabilitation & Prevention* 32(1): 41–47. doi: 10.1097/HCR.0b013e31823be13b.
- Grootendorst, P.V., J.K. Marshall, A.M. Holbrook, L.R. Dolovich, B.J. O'Brien and A.R. Levy. 2005. "The Impact of Reference Pricing of Nonsteroidal Anti-Inflammatory Agents on the Use and Costs of Analgesic Drugs." *Health Services Research* 40(5 Pt. 1): 1297–317. doi: 10.1111/j.1475-6773.2005.00420.x.

## Appendix 2: Continued

- Grover, S., L. Coupal, M. Kouache, I. Lowensteyn, S. Marchand and N. Campbell. 2011. "Estimating the Benefits of Patient and Physician Adherence to Cardiovascular Prevention Guidelines: The MyHealthCheckup Survey." *Canadian Journal of Cardiology* 27(2):159–66. doi: 10.1016/j.cjca.2011.01.007.
- Grzybowski, S.K.J. and N. Schuurman. 2009. "Planning the Optimal Level of Local Maternity Service for Small Rural Communities: A Systems Study in British Columbia." *Health Policy* 92(2–3): 149–57. doi: 10.1016/j.healthpol.2009.03.007.
- Guertin, J.R., C.A. Jackevicius, J.L. Cox, K. Humphries, L. Pilote and D. So, for the Canadian Cardiovascular Outcomes Research Team. 2011. "The Potential Economic Impact of Restricted Access to Angiotensin-Receptor Blockers." *Canadian Medical Association Journal* 183(3): E180–86. doi: 10.1503/cmaj.100787.
- Guilcher, S.J.T., B.C. Craven, A. Calzavara, M.A. McColl and S.B. Jaglal. 2013. "Is the Emergency Department an Appropriate Substitute for Primary Care for Persons with Traumatic Spinal Cord Injury?" *Spinal Cord* 51(3): 202–8. doi: 10.1038/sc.2012.123
- Guttmann, A., D. Manuel, P.T. Dick, T. To, K. Lam and T.A. Stukel. 2006. "Volume Matters: Physician Practice Characteristics and Immunization Coverage among Young Children Insured through a Universal Health Plan." *Pediatrics* 117(3): 595–602. doi: 10.1542/peds.2004-2784.
- Hagen, B.F., C. Armstrong-Esther, P. Quail, R.J. Williams, P.C. Norton, C.L. Le Navenec and R. Zieb. 2005. "Neuroleptic and Benzodiazepine Use in Long-Term Care in Urban and Rural Alberta: Characteristics and Results of an Education Intervention to Ensure Appropriate Use." *International Psychogeriatrics* 17(4): 631–52. doi: 10.1017/S1041610205002188.
- Hanna, K., M. Poulin-Costello, M. Preston and N. Maresky. 2003. "Intravenous Immune Globulin Use in Canada." *Canadian Journal of Clinical Pharmacology* 10(1): 11–16.
- Hawker, G.A., E.M. Badley, R. Croxford, P.C. Coyte, R.H. Glazier, J. Guan and J.G. Wright. 2009. "A Population-Based Nested Case-Control Study of the Costs of Hip and Knee Replacement Surgery." *Medical Care* 47(7): 732–41.
- Heckman, G.A., B. Misiaszek, F. Merali, I.D. Turpie, C.J. Patterson, N. Flett and R.S. McKelvie. 2004. "Management of Heart Failure in Canadian Long-Term Care Facilities." *Canadian Journal of Cardiology* 20(10): 963–69.
- Herrmann, N., C. Marras, H.D. Fischer, X. Wang, G.M. Anderson and P. Rochon. 2013. "Management of Neuropsychiatric Symptoms in Long-Term Care Residents with Parkinson's Disease: A Retrospective Cohort Study." *Drugs and Aging* 30(1): 19–22. doi: 10.1007/s40266-012-0038-8.
- Ho, B.P., T.T.Y. Lau, R.M. Balen, T.L. Naumann and N. Jewesson. 2005. "The Impact of a Pharmacist-Managed Dosage Form Conversion Service on Ciprofloxacin Usage at a Major Canadian Teaching Hospital: A Pre- and Post-Intervention Study." *BMC Health Services Research* 5: 48. doi: 10.1186/1472-6963-5-48.
- Hogg, W., N. Baskerville and J. Lemelin. 2005. "Cost Savings Associated with Improving Appropriate and Reducing Inappropriate Preventive Care: Cost-Consequences Analysis." *BMC Health Services Research* 5(1): 20. doi: 10.1186/1472-6963-5-20.
- Hopkins, R.B., J.-E. Tarride, J. Bowen, G. Blackhouse, D. O'Reilly, K. Campbell and R. Goeree. 2008. "Cost-Effectiveness of Reducing Wait Times for Cataract Surgery in Ontario." *Canadian Journal of Ophthalmology* 43(2): 213–17. doi: 10.3129/i08-002.
- Institute of Health Economics. 2007. "Consensus Statement on Self-Monitoring in Diabetes." *Institute of Health Economics Consensus Statements* 1(1): 1–18.
- Iskedjian, M., J.H. Walker, B.G. Bereza, J.M. Le Melleo and T.R. Einarson. 2008. "Cost-Effectiveness of Escitalopram for Generalized Anxiety Disorder in Canada." *Current Medical Research and Opinion* 24(5): 1539–48. doi: 10.1185/030079908X297277.
- Jackevicius, C.A., J.L. Cox, D. Carreon, J.V. Tu, S. Rinfret, D. So and L. Pilote. 2009. "Long-Term Trends in Use of and Expenditures for Cardiovascular Medications in Canada." *Canadian Medical Association Journal* 181: E19–28. doi: 10.1503/cmaj.081913.

## Appendix 2: Continued

- Jin, Y.-P., Y.M. Buys, W. Hatch and G.E. Trope. 2012. "De-Insurance in Ontario Has Reduced Use of Eye Care Services by the Socially Disadvantaged." *Canadian Journal of Ophthalmology* 47(3): 203–10.
- Johnson, D., K.C. Carriere, Y. Jin and T. Marrie. 2004. "Appropriate Antibiotic Utilization in Seniors Prior to Hospitalization for Community-Acquired Pneumonia Is Associated with Decreased In-Hospital Mortality." *Journal of Clinical Pharmacy and Therapeutics* 29(3): 231–39.
- Kahn, S.R., A. Panju, W. Geerts, G.F. Pineo, L. Desjardins, A.G.G. Turpie and R.J. Sebaldt. 2007. "Multicenter Evaluation of the Use of Venous Thromboembolism Prophylaxis in Acutely Ill Medical Patients in Canada." *Thrombosis Research* 119(2): 145–55.
- Kennedy, J., H. Quan, W.A. Ghali and T.E. Feasby. 2004. "Variations in Rates of Appropriate and Inappropriate Carotid Endarterectomy for Stroke Prevention in 4 Canadian Provinces." *Canadian Medical Association Journal* 171(5): 455–59.
- Kent, G.M., L. Power, D.M. Gregory, B.J. Barrett, G.C. MacCallum, E.W. Stone and P.S. Parfrey. 2004. "Need for Coronary Artery Bypass Grafting in Newfoundland and Labrador: The Impact of Increased Demand." *Canadian Journal of Cardiology* 20(4): 399–404.
- Kerba, M., Q. Miao, J. Zhang-Salomons and W. Mackillop. 2007. "Defining the Need for Breast Cancer Radiotherapy in the General Population: A Criterion-Based Benchmarking Approach." *Clinical Oncology* 19(7): 481–89.
- Kerba, M., Q. Miao, J. Zhang-Salomons and W. Mackillop. 2010. "Defining the Need for Prostate Cancer Radiotherapy in the General Population: A Criterion-Based Benchmarking Approach." *Clinical Oncology* 22(10): 801–09.
- Klinke, J.A., J.A. Johnson, L.M.L. Guirguis, T.K. Lee, R.Z. Lewanczuk and S.R. Majumdar. 2004. "Underuse of Aspirin in Type 2 Diabetes Mellitus: Prevalence and Correlates of Therapy in Rural Canada." *Clinical Therapeutics* 26(3): 436–46.
- Ko, D.T., H. Guo, H.C. Wijeyesundera, M.K. Natarajan, D. Nagpal, C.M. Feindel and J.V. Tu. 2012. "Assessing the Association of Appropriateness of Coronary Revascularization and Clinical Outcomes for Patients with Stable Coronary Artery Disease." *Journal of the American College of Cardiology* 60(19): 1876–84.
- Ko, D.T., D.N. Juurlink, M.M. Mamdani, J.J. You, J.T. Wang, L.R. Donovan and J.V. Tu. 2006. "Appropriateness of Spironolactone Prescribing in Heart Failure Patients: A Population-Based Study." *Journal of Cardiac Failure* 12(3): 205–10.
- Landry, B.A., D. Barnes, V. Keough, A. Watson, J. Rowe, A. Mallory and M. Abdoell. 2011. "Do Family Physicians Request Ultrasound Scans Appropriately?" *Canadian Family Physician* 57(8): e299–304.
- Landry, M.D., R.B. Deber, S. Jaglal, A. Laporte, P. Holyoke, R. Devitt and C. Cott. 2006. "Assessing the Consequences of Delisting Publicly Funded Community-Based Physical Therapy on Self-Reported Health in Ontario, Canada: A Prospective Cohort Study." *International Journal of Rehabilitation Research* 29(4): 303–07.
- Lane, C.J., S.E. Bronskill, K. Sykora, I.A. Dhalla, G.M. Anderson, M.M. Mamdani and P.A. Rochon. 2004. "Potentially Inappropriate Prescribing in Ontario Community-Dwelling Older Adults and Nursing Home Residents." *Journal of the American Geriatrics Society* 52(6): 861–66.
- Lau, E., T.J. Bungard and R.T. Tsuyuki. 2004. "Stroke Prophylaxis in Institutionalized Elderly Patients with Atrial Fibrillation." *Journal of the American Geriatrics Society* 52(3): 428–33.
- Lauber, C., S.S. Lalh, M. Grace, M.H. Smith, K. MacDougall, P. West and S. Compton. 2007. "Antibiotic Prophylaxis Practices in Dentistry: A Survey of Dentists and Physicians." *Journal of the Canadian Dental Association* 73(3): 245.
- Lee, M., D. Pao, T. Hsu and A. Sonderskov. 2004. "Cost Savings and Effectiveness of Outpatient Treatment with Low Molecular Weight Heparin of Deep Vein Thrombosis in a Community Hospital." *Canadian Journal of Clinical Pharmacology* 11(1): e17–27.
- Leslie, W.D., S. Morin and L.M. Lix. 2010. "A Before-and-After Study of Fracture Risk Reporting and Osteoporosis Treatment Initiation." *Annals of Internal Medicine* 153(9): 580–86.

## Appendix 2: Continued

- Lin, E., N. Diaz-Granados, D.E. Stewart and A.S. Bierman. 2011. "Postdischarge Care for Depression in Ontario." *Canadian Journal of Psychiatry* 56(8): 481–89.
- Lum, E.Y., H.M. Sharpe, C. Nilsson, E.M. Andrews, R.T. Tsuyuki, I. Mayers and R.L. Cowie. 2007. "Urban and Rural Differences in the Management of Asthma amongst Primary Care Physicians in Alberta." *Canadian Journal of Clinical Pharmacology* 14(3): e275–282.
- Lundine, K.M., S. Nelson, R. Buckley, S. Putnis and P.J. Duffy. 2010. "Adherence to Perioperative Antibiotic Prophylaxis among Orthopedic Trauma Patients." *Canadian Journal of Surgery* 53(6): 367–72.
- MacFadden, D.R., E. Crystal, A.D. Krahn, I. Mangat, J.S. Healey, P. Dorian and D.S. Lee. 2012. "Sex Differences in Implantable Cardioverter–Defibrillator Outcomes: Findings from a Prospective Defibrillator Database." *Annals of Internal Medicine* 156(3): 195–203.
- Mahant, S., R. Peterson, M. Campbell, D.L. MacGregor and J.N. Friedman. 2008. "Reducing Inappropriate Hospital Use on a General Pediatric Inpatient Unit." *Pediatrics* 121(5): e106–73.
- Malcolm, C. and T.J. Marrie. 2003. "Antibiotic Therapy for Ambulatory Patients with Community-Acquired Pneumonia in an Emergency Department Setting." *Archives of Internal Medicine* 163(7): 797–802.
- Maleki-Yazdi, M.R., S.M. Kelly, S.S. Lam, M. Marin, M. Barbeau and V. Walker. 2012. "The Burden of Illness in Patients with Moderate to Severe Chronic Obstructive Pulmonary Disease in Canada." *Canadian Respiratory Journal* 19(5): 319–24.
- Marshall, D., J. Gough, P. Grootendorst, M. Buitendyk, B. Jaszewski, S. Simonyi and S. Macleod. 2006. "Impact of Administrative Restrictions on Antibiotic Use and Expenditure in Ontario: Time Series Analysis." *Journal of Health Services & Research Policy* 11(1): 13–20.
- Middelkamp, J.E., B.B. Forster, C. Keogh, P. Lennox and K. Mayson. 2009. "Evaluation of Adult Outpatient Magnetic Resonance Imaging Sedation Practices: Are Patients Being Sedated Optimally?" *Canadian Association of Radiologists Journal* 60(4): 190–95.
- Mitton, C.R., C.E. Adair, G.M. McDougall and G. Marcoux. 2005. "Continuity of Care and Health Care Costs among Persons with Severe Mental Illness." *Psychiatric Services* 56(9): 1070–76.
- Ohinmaa, A., N.X. Thanh, L. Martin, A. Russell, S. Barr, D. Shelter and W. Maksymowych. 2011. "Impact of Anti-TNF on Health Care Utilization and Costs in Patients with Rheumatoid Arthritis in Alberta, Canada." *Value in Health* 14 (3A): 132.
- Palencia, R., A. Gafni, M.E. Hannah, S. Ross, A.R. Willan, S. Hewson and S. Saigal. 2006. "The Costs of Planned Cesarean versus Planned Vaginal Birth in the Term Breech Trial." *Canadian Medical Association Journal* 174(8): 1109–13.
- Pan, F., N.C. Brazier, N.H. Shear, F. Jivraj, B. Schenkel and R. Brown. 2011. "Cost Utility Analysis Based on a Head-to-Head Phase 3 Trial Comparing Ustekinumab and Etanercept in Patients with Moderate-to-Severe Plaque Psoriasis: A Canadian Perspective." *Value in Health* 14(5): 652–56.
- Papaioannou, A., C.C. Kennedy, G. Ioannidis, Y. Gao, A.M. Sawka, D. Goltzman and J.D. Adachi. 2008. "The Osteoporosis Care Gap in Men with Fragility Fractures: The Canadian Multicentre Osteoporosis Study." *Osteoporosis International* 19(4): 581–87.
- Paul, J., L. Park, E. Ryter, W. Miller, S. Ahmed, C.A. Cott and M.D. Landry. 2008. "Delisting Publicly Funded Community-Based Physical Therapy Services in Ontario, Canada: A 12-Month Follow-Up Study of the Perceptions of Clients and Providers." *Physiotherapy Theory and Practice* 24(5): 329–43.
- Peter, E., K. Spalding, N. Kenny, P. Conrad, P. McKeever and A. Macfarlane. 2007. "Neither Seen nor Heard: Children and Homecare Policy in Canada." *Social Science and Medicine* 64(8): 1624–35.
- Pilote, L., P. Merrett, I. Karp, D. Alter, P.C. Austin, J.L. Cox and J.V. Tu. 2004. "Cardiac Procedures After an Acute Myocardial Infarction across Nine Canadian Provinces." *Canadian Journal of Cardiology* 20(5): 491–500.

## Appendix 2: Continued

- Putnam, W., K. Nicol, D. Anderson, B. Brownell, M. Chiasson, F.I. Burge and J. Cox. 2004. "Anticoagulation in Atrial Fibrillation. Is There a Gap in Care for Ambulatory Patients?" *Canadian Family Physician* 50: 1244–50.
- Puyat, J.H., M.R. Law, S.T. Wong, J.M. Sutherland and S.G. Morgan. 2012. "The Essential and Potentially Inappropriate Use of Antipsychotics across Income Groups: An Analysis of Linked Administrative Data." *Canadian Journal of Psychiatry* 57(8): 488–95.
- Rahme, E., J.-P. Roussy, J.-P. Lafrance, H. Nedjar and S. Morin. 2012. "Concordance with Guideline Recommendations: Previous and More Recent Nonsteroidal Anti-Inflammatory Drug Prescriptions in Quebec, Canada." *Pharmacoeconomics & Drug Safety* 21(4): 420–27.
- Rahme, E., Y. Toubouti and J. Leloir. 2006. "Utilization and Cost Comparison of Current and Optimal Prescribing of Nonsteroidal Antiinflammatory Drugs in Quebec, Canada." *Journal of Rheumatology* 33(3): 588–96.
- Rancourt, C., J. Moisan, L. Baillargeon, R. Verreault, D. Laurin and J.P. Gregoire. 2004. "Potentially Inappropriate Prescriptions for Older Patients in Long-Term Care." *BMC Geriatrics* 4(9).
- Rapoport, M., M. Mamdani, K.I. Shulman, N. Herrmann and P.A. Rochon. 2005. "Antipsychotic Use in the Elderly: Shifting Trends and Increasing Costs." *International Journal of Geriatric Psychiatry* 20: 749–53. doi: 10.1002/gps.1358.
- Rochon, P.A., C.J. Lane, S.E. Bronskill, K. Sykora, G.M. Anderson, M.M. Mamdani and I.A. Dhalla. 2004. "Potentially Inappropriate Prescribing in Canada Relative to the US." *Drugs and Aging* 21(14): 936–47.
- Roussy, J.-P.F., M.-J. Aubin, I. Brunette and J. Lachaine. 2009. "Cost of Corneal Transplantation for the Quebec Health Care System." *Canadian Journal of Ophthalmology* 44(1): 36–41.
- Sanyal, C., S.D. Graham, C. Cooke, I. Sketris, D.M. Frail and G. Flowerdew. 2008. "The Relationship between Type of Drug Therapy and Blood Glucose Self-Monitoring Test Strips Claimed by Beneficiaries of the Seniors' Pharmacare Program in Nova Scotia, Canada." *BMC Health Services Research* 8: 111.
- Schneeweiss, S., M. Maclure, B. Carleton, R.J. Glynn and J. Avorn. 2004. "Clinical and Economic Consequences of a Reimbursement Restriction of Nebulised Respiratory Therapy in Adults: Direct Comparison of Randomised and Observational Evaluations." *British Medical Journal* 328(7439): 560.
- Schneeweiss, S., S.B. Soumerai, M. Maclure, C. Dormuth, A.M. Walker and R.J. Glynn. 2003. "Clinical and Economic Consequences of Reference Pricing for Dihydropyridine Calcium Channel Blockers." *Clinical Pharmacology and Therapeutics* 74(4): 388–400.
- Sealy, P. and P.C. Whitehead. 2006. "The Impact of Deinstitutionalization of Psychiatric Hospitals on Psychological Distress of the Community in Canada." *Journal of Health and Social Policy* 21(4): 73–94.
- Sewitch, M.J., R. Blais, E. Rahme, B. Bexton and S. Galarneau. 2007. "Receiving Guideline-Concordant Pharmacotherapy for Major Depression: Impact on Ambulatory and Inpatient Health Service Use." *Canadian Journal of Psychiatry* 52(3): 191–200.
- Singh, S., A. Micieli and H. Wijesundera. 2013. "Economic Evaluation of Percutaneous Left Atrial Appendage Occlusion, Dabigatran, and Warfarin for Stroke Prevention in Patients with Nonvalvular Atrial Fibrillation." *Journal of the American Heart Association* 127: 2414–23. doi: 10.1161/CIRCULATIONAHA.112.000920.
- Sorensen, S.V., A.R. Kansal, S. Connolly, S. Peng, J. Linnehan, C. Bradley-Kennedy and J.M. Plumb. 2011. "Cost-Effectiveness of Dabigatran Etxilate for the Prevention of Stroke and Systemic Embolism in Atrial Fibrillation: A Canadian Payer Perspective." *Thrombosis and Haemostasis* 105(5): 908–19.
- Tamblyn, R., A. Huang, R. Perreault, A. Jacques, D. Roy, J. Hanley and R. Laprise. 2003. "The Medical Office of the 21st Century (MOXXI): Effectiveness of Computerized Decision-Making Support in Reducing Inappropriate Prescribing in Primary Care." *Canadian Medical Association Journal* 169(6): 549–56.

## Appendix 2: Continued

Tang, A., V. Closson, S. Marzolini, P. Oh, W. McIlroy and D. Brooks. 2009. "Cardiac Rehabilitation After Stroke: Need and Opportunity." *Journal of Cardiopulmonary Rehabilitation & Prevention* 29(2): 97–104.

Vik, S.A., C.J. Maxwell and D.A. Hanley. 2005. "Treatment of Osteoporosis in an Older Home Care Population." *BMC Musculoskeletal Disorders* 6: 7.

Walker, S., L. Dresser, D. Becker and A. Scalera. 2006. "An Assessment of Linezolid Utilization in Selected Canadian Provinces." *Canadian Journal of Infectious Diseases and Medical Microbiology* 17(3): 177–82.

Wilbur, K., L.D. Lynd and M. Sadatsafavi. 2011. "Low-Molecular-Weight Heparin versus Unfractionated Heparin for Prophylaxis of Venous Thromboembolism in Medicine Patients: A Pharmacoeconomic Analysis." *Clinical and Applied Thrombosis/Hemostasis* 17(5): 454–65.

Wong, W.W.L., G. Woo, E.J. Jenny Heathcote and M. Krahn. 2011. "Cost-Effectiveness of Screening Immigrants for Hepatitis B." *Liver International* 31(8): 1179–90.