



Scanning the Horizon

Informing Decision-Makers About Emerging Medical Technologies, Policies, Practices, and Research

As we draw to the end of 2009 and the last issue of this newsletter for the year, we would like to take the opportunity to announce the launch of a new CADTH informational product: short reports describing issues related to technology access, reimbursement, and practice intended to help decision-makers in the Canadian health care landscape. These Environmental Scanning Briefs are available at <http://www.cadth.ca/index.php/en/hta/reports-publications/environmental-scans>.

This issue of *Health Technology Update* features a new application of an old tool for diabetes screening and diagnosis. This issue also provides insight into activity-based funding and provincial interest in this payment model as a way to sustain health care budgets. Additionally, this issue presents a cross-section of emerging diagnostic tests and, as always, updates and links to recent Canadian health technology assessments and clinical practice guidelines.



We hope you find this issue informative and useful. If you would like to suggest a topic, please contact Andra Morrison at andram@cadth.ca.

In this issue

② **Diabetes screening and diagnosis:** Canadian approaches to screening and diagnosing diabetes using new evidence, risk prediction tools, and screening options.

④ **Low molecular weight heparins:** CADTH provides insight into the relative clinical effectiveness of low molecular weight heparins with a rapid review.

Overcapacity and emergency department overcrowding: CADTH's role in building a collaborative evidence-informed platform for future initiatives.

⑤ **Activity-based funding models in Canadian hospitals:** Provincial endeavours in activity-based funding.

Is a pound of prevention worth an ounce of cure? Preventing disease is not always good value for money.

⑥ **Emerging issues in diagnostic technology:** A brief look at a new breast cancer imaging system, a liquid biopsy for detecting kidney disease, a blood test for appendicitis diagnosis, and a breath test for lung cancer detection.

⑦ **Research and practice:** A list of recent health technology assessment and clinical practice guidelines from across Canada.

We want your feedback... Tell us what you think

Health Technology Update is a source of information for those involved in planning and providing health care in Canada. Did we hit the mark in our efforts to bring you information on medical technologies and issues in practice and policy as well as the HTA research used to make decisions? Tell us what you think.

Send your comments to Andra Morrison at andram@cadth.ca.

Diabetes Screening and Diagnosis

The number of Canadians diagnosed with type 2 diabetes continues to increase. This rise has been attributed to obesity, an aging population, and increasingly sedentary lifestyles. Nowhere is this more apparent than in Canadian Aboriginal communities. The emergence of new evidence, risk prediction tools, and screening options has reintroduced the issue of diabetes screening and diagnosis onto health policy agendas.

Diabetes affects approximately 2 million Canadians, and 6 million more are believed to be at high risk for future diagnosis of diabetes. This risk state, termed “prediabetes,” is defined by blood glucose levels that are abnormally high but not high enough for a diagnosis of diabetes. Prediabetes is predictive of type 2 diabetes in approximately 50% to 70% of cases. It is generally believed that early diagnosis of type 2 diabetes, which is largely asymptomatic, could lead to reduced future morbidity and mortality. This article looks at new evidence and the application of diagnostic and screening tools in use in Canada.

Diabetes complications

It is anticipated that early detection and diagnosis of individuals with prediabetes and type 2 diabetes will lead to earlier detection of microvascular complications such as diabetic nephropathy, neuropathy, and retinopathy. A 2005 national Canadian study of 2,473 type 2 diabetes patients found that 38% of these patients had a diagnosis of one or more microvascular complications.¹

Early diagnosis and treatment is also intended to prevent or delay macrovascular complications such as heart attack, stroke, and clogged

arteries.² Approximately 28% of type 2 diabetes patients in the Canadian study had one or more macrovascular complications.¹

Additionally, 14% of type 2 diabetes patients had a diagnosis of depression, 3% had glaucoma, and, among male patients, 21% had a diagnosis of erectile dysfunction.¹

Diagnostic screening tools

Screening tools for type 2 diabetes typically include risk assessment questionnaires, biochemical tests, or combinations of both. The most widely used biochemical tests and the ones currently recommended by the Canadian Diabetes Association include the fasting plasma glucose (FPG) test and the oral glucose tolerance test (OGTT).³

Another test, the hemoglobin A1C (A1C) test, reflects an average of blood glucose concentrations in the previous two to three months. Unlike the FPG test and OGTT, the A1C test does not require fasting and gives a picture of blood glucose control over a period of time. The A1C test has traditionally been used to monitor long-term glycemic control, adjust therapy, and assess risk for the development and progression of diabetic complications.

A recent assembly of international diabetes experts proposed that the A1C test become the reference standard for the screening and diagnosis of diabetes. The experts agreed that the A1C test demonstrated greater stability, accuracy, convenience, and correlation to the risk of developing retinopathy than either the FPG test or OGTT. This announcement is likely to impact international clinical practices because all North American and most European guidelines currently recommend the FPG test and OGTT.⁴

The recent standardization of the A1C test has been instrumental in focusing attention on its expanded use as a screening test for the diagnosis of diabetes. However, according to Dr. Stewart Harris, the lead investigator of the National Diabetes Management Strategy, the A1C test is not quite ready for widespread use. He noted that because it will be more expensive than conventional tests, studies are required to ascertain its cost-effectiveness and uptake. The A1C test costs between C\$6 and C\$8. The FPG test, in comparison, costs less than C\$1.⁵ Dr. Harris also mentioned that an absence of an A1C value for a formal definition of prediabetes is likely to raise further concerns.

Evidence

A 2007 systematic review that compared the A1C test with the FPG test found both the A1C and the FPG tests to be equally effective as screening tools for type 2 diabetes. The A1C test, however, was reported as being a superior predictor of micro- and macrovascular complications. The higher initial costs of the A1C test were believed to be offset by its ability to predict the costly and preventable complications of diabetes. It was noted that neither the A1C test nor the FPG test adequately identified impaired glucose tolerance, and an OGTT would still be required for its detection.³

A systematic review of screening for undiagnosed diabetes found that the A1C test facilitated wider diabetes screening implementation. The screening for and treatment of undiagnosed impaired glucose tolerance with an OGTT was also recognized as a potentially cost-effective alternative, particularly when lifestyle modifications were used to manage identified cases.⁶

A 2009 study on type 2 diabetes testing in an Ontario population showed that the A1C test is already being used to

screen for type 2 diabetes, in spite of its absence from Canadian Diabetes Association recommendations. An analysis of laboratory tests over 10 years revealed the A1C test to be the most commonly performed assay for people without diabetes. The study, by the Institute for Clinical Evaluative Sciences, proposed that the A1C test become the test of choice for diagnosis.⁷

Canadian Screening Strategies

Canadian screening efforts are mostly limited to passive case findings at family physician visits. Targeted screening strategies with the intent to promote early detection are, however, being piloted in regions

across Canada: CANRISK⁸ consists of a 16-item survey that is designed to predict an individual's 10-year risk of developing type 2 diabetes. During the piloting phase, an OGTT is also required. The Canadian risk prediction tool is modelled on a validated Finnish questionnaire called FINDRISC. The tool does not require laboratory tests unless a person is identified as being at high risk.

Because rates of diabetes among Aboriginal people in Canada are three to five times higher than those of the general Canadian population, more aggressive screening strategies are used. Through the Aboriginal Diabetes Initiative, a federally funded program,

a range of culturally relevant health screening initiatives are supported. These include increased and regular screening for early diagnosis using population-based and opportunistic screening methods. Screening is carried out by mobile detection programs, through local health care providers and through partnerships with neighbouring provincial health care services.⁹

According to the Canadian Diabetes Association guidelines, population-based screening is unlikely to be cost-effective, because of the relatively low prevalence of the disease. However, overall cost saving may be realized in screening people with risk factors for type 2 diabetes or with diabetes-associated conditions. This is in keeping with the findings of a 2007 systematic review that concluded that screening for undiagnosed diabetes is cost-effective for people at high risk, specifically those between the ages of 40 and 70 years, and for people who are overweight or have other indicators of metabolic risk.⁶ A comparison of North American clinical practice guideline screening criteria is presented in Table 1.

Although there is evidence that the A1C test can better predict micro- and macrovascular complications and may facilitate wider diabetes implementation, evidence is missing on the costs and consequences of detecting type 2 diabetes by either targeted or population-based screening strategies. There is potential for health care savings where diabetic complications have been delayed or averted. Application of the A1C test and the refinement of the CANRISK prediction questionnaire may be additional tools for the early detection of type 2 diabetes in Canada.

TABLE 1: Comparison of Guideline Criteria for the Screening of Type 2 Diabetes

	CDA ¹	CTFPHC ²	USPSTF ³	ADA ⁴
Risk factors				All overweight adults with one or more risk factors
40 years of age or older	•			45 years of age or older in the absence of risk factors
Family member with type 2 diabetes	•			•
High-risk ethnic groups	•			•
History of IFG or IGT	•			•
Vascular disease (coronary, cerebrovascular, or peripheral)	•			•
History of gestational diabetes	•			•
History of delivery of a macrosomic infant	•			
Hypertension	•	•	•	•
Dyslipidemia	•			
Hyperlipidemia		•	•	•
Being overweight (especially with abdominal obesity)	•			•
Polycystic ovary syndrome	•			•
Acanthosis nigricans	•			
Schizophrenia	•			
Other	•			

IFG = impaired fasting glucose; IGT = impaired glucose tolerance.

¹ Canadian Diabetes Association: <http://www.diabetes.ca/files/cpg2008/cpg-2008.pdf>.

² Canadian Task Force on Preventive Health Care: http://www.ctfphc.org/Full_Text/Ch50full.htm.

³ US Preventive Services Task Force: <http://www.annals.org/cgi/content/full/148/11/855?maxtoshow=&HITS=25&hits=25&RESULTFORMAT=1&searchid=1&FIRSTINDEX=0&sortspec=date&resourcetype=HWCIT>.

⁴ American Diabetes Association: http://care.diabetesjournals.org/content/27/suppl_1/s11.full.

References

- Harris, S, et al. *Diabet Res Clin Pract* 2005; 70:90-97.
- Fowler M. *Clin Diabetes* 2008;26(2):77-82. Available: <http://clinical.diabetesjournals.org/content/26/2/77.full.pdf+html>.
- Bennett C, et al. *Diabet Med* 2007;24:333-43.
- Rollins G. *Clin Lab News* 2008;34(12) Available: <http://www.aacc.org/publications/clin/2008/december/Pages/CovStory1Dec08.aspx>.
- Picard A. Experts call for simplified diabetes diagnosis. *Globe and Mail* 9 A.D. Jun 5. Available: <http://www.theglobeandmail.com/news/national/experts-call-for-simplified-diabetes-diagnosis/article1171117/>.
- Waugh N, et al. *Health Tech Assess* 2007;11(17) Available: <http://www.hta.ac.uk/fullmono/mon1117.pdf>.
- Wilson S, et al. *BMC Health Serv Res* 2009;9(41).
- Government of Canada gives Canadians tools to help detect diabetes risk [News release]. Health Canada, 2009. Available: http://www.phac-aspc.gc.ca/media/nr-rp/2009/2009_0318-eng.php.
- Bell A. *Diabet Voice* 2009;54(2):11-4. Available: <http://www.diabetesvoice.org/en/articles/the-aboriginal-diabetes-initiative-tackling-type-2-diabetes-in-canada>.

Low Molecular Weight Heparins

Low molecular weight heparins (LMWHs) are a class of blood thinners. Since their introduction in the mid-1990s they have emerged as effective alternatives to unfractionated heparins. In January 2009, Dr. Dason Chu, a clinical pharmacotherapy specialist at St Paul's Hospital in Vancouver, turned to CADTH's Health Technology Inquiry Service (HTIS) to seek information on the characteristics of drugs in this class for specific indications.

LMWHs are used to manage and prevent deep vein thrombosis,



pulmonary embolism, and thromboses associated with other conditions. LMWHs prevent the formation of blood clots in blood vessels by reducing the clotting ability of blood.

Although LMWHs have demonstrated comparable or superior efficacy and safety to unfractionated heparins, there is a lack of available data on head-to-head comparisons. Four drugs in this class of blood thinners have been approved in Canada: enoxaparin, dalteparin, tinzaparin, and nadroparin. Each of these LMWHs has distinctive pharmacologic characteristics (Table 1), the clinical relevance of which, for different indications, is unclear.

CADTH's HTIS prepared a report that identified a number of randomized head-to-head studies. This report,

said Dr. Chu, "succinctly summarized and analyzed the relevant literature and helped determine the selection of a formulary drug in regards to its efficacy, safety and cost impact."

The HTIS responds to approximately 30 monthly requests that require immediate responses similar to this one.

The report is available to Canadian health care decision-makers in the federal government, provincial health ministries, Local Health Integration Networks, regional health authorities, hospitals, and national and federal health care programs in CADTH member jurisdictions: <http://cadth.ca/index.php/en/hta/programs/htis>.

Overcapacity and Emergency Department Overcrowding Round Table: Uptake of a CADTH Health Technology Assessment Report

In September 2009, the Canadian Nurses Association (CNA) and the Canadian Patient Safety Institute (CPSI) hosted a joint round table on emergency department overcapacity and overcrowding. Participants from 16 organizations and government agencies enthusiastically engaged in a lively discussion on this increasingly widespread problem.

Key objectives of the meeting included the sharing of information and evidence about the occurrence, impact, and initiatives undertaken to manage emergency department overcrowding and facility overcrowding; a discussion on the possible approaches and strategies; and the development of solutions and strategies for collaborative action.

As part of the round table discussions, CADTH's Saskatchewan Liaison Officer, Brendalynn Ens, was invited to present results from four Health Technology Assessment (HTA) reports completed by CADTH in 2006:

TABLE 1: Pharmacologic Characteristics of Low Molecular Weight Heparins

Characteristic	Enoxaparin	Dalteparin	Tinzaparin	Nadroparin
Molecular weight (Da)	4,500	6,000	6,500	4,300
Anti-Xa: anti-IIa ratio	3.8	2.7	2.0	2.5 to 4.0
Bioavailability	92%	87%	87%	89 to 98%
Half-life (hours)	4.5	2.1 to 2.3	3.4 to 3.9	3.5

Gomez-Outes A. *Expert Rev Pharmacoecon Outcomes Res* 2006;6(3):249-59.

- Measuring Overcrowding in Emergency Departments: A Call for Standardization
- Data Collection on Patients in Emergency Departments in Canada
- Frequency, Determinants, and Impact of Overcrowding in Emergency Departments in Canada: A National Survey of Emergency Department Directors
- Interventions to Reduce Overcrowding in Emergency Departments.

CADTH's reports confirmed the concept that emergency department overcrowding is not exclusively an emergency department problem, but rather a larger health system-related issue. Round table members strongly agreed with findings from the four-part HTA series: that overcrowding and overcapacity can negatively impact patient satisfaction, staff recruitment and retention, and patient safety.

These CADTH technology assessments were instrumental in building a common and collaborative evidence-informed platform for future initiatives.

Emergency department overcrowding in Canada. CADTH, 2006:

<http://www.cadth.ca/index.php/en/hta/reports-publications/search/publication/621>.

Activity-based Funding Models in Canadian Hospitals

Activity-based funding is a payment model based on the volume and type of services provided to each patient for hospital care. Its main objectives are to increase efficiency and reduce wait times. Canadian hospitals currently receive block funding or lump sum payments from the government based on previous spending patterns. Ontario was the first province to adopt activity-based funding as part of their Wait Times Strategy and has been successful in selected hospital services, such as cataract surgery, joint replacement, and cardiac bypass.

In 2008, four Vancouver hospitals enrolled in the Emergency Department Improvement Initiative, through which hospitals receive additional payments for treating patients within a specified time frame. The Vancouver Coastal Health Authority affirms that the overall health care delivery has since improved. Other provinces have the support from their health ministry to move ahead with activity-based funding. For example, Alberta will start to implement the new model in their province in April 2010. New Brunswick also may be headed in this direction, and Quebec has received recommendations from its former health minister, Claude Castonguay, to adopt this approach as a way to sustain its health care budget.

Numerous countries, including Australia, the United Kingdom, and the United States, are already using some form of activity-based funding. Critics of the proposed model argue that the focus would be shifted from the quality of patient care to volume of service, hospitals would be inclined to treat simple cases over complex cases, and rural and small health care facilities would be negatively impacted. Some health care financial experts recommend adopting a hybrid model that incorporates both activity-based and block funding. With this system, hospitals can benefit from pay for performance if they meet their targets and still continue to control costs.

Suggested Reading

CEO Forum: Service-Based Funding and Paying for Performance: Experience, Evidence and Future Prospects. CHSRF, 2009: http://www.chsrf.ca/CEO_forum2009_e.php.

Service-Based Funding and Pay for Performance: Will Incentive Payments Give Canadian Healthcare the Quality Boost It Needs? Healthcare Quarterly, 2009: <http://www.longwoods.com/product.php?productid=20872&cat=600&page=1>.

Is a Pound of Prevention Worth an Ounce of Cure?

It is largely believed that investments in preventive measures will lead to improved health outcomes and reduced resource use. In a synthesis of economic evidence of preventive and treatment services, Cohen et al. suggest that "Although some preventative measures do save money, the vast majority reviewed in the health economics literature do not."¹ Their research suggests that sweeping generalizations about the value of preventive medicine is not supported by empirical research and that "careful analysis of the costs and benefits of specific interventions... is critical."¹ Most importantly, their research also indicates that the value of preventive measures is similar to that of treatment. These findings suggest an ounce of prevention might only be worth an ounce of cure.

In a more recent examination of the value of prevention, Cohen and Neumann further suggest that cost-saving interventions, such as child immunizations, are already in widespread use, and "it is unlikely that substantial cost savings can be achieved by increasing the level of investment in clinical preventive measures."² The authors identify those services that are cost-saving or represent better and worse value for money. Although counselling women to use calcium supplements was identified as of potentially good value, examples of preventive measures of poor value include adult tetanus-diphtheria booster shots every 10 years and screening of women for osteoporosis.

1. Cohen JT, et al. *NEJM* 2008; 358(7): 661-663.
2. Cohen JT, et al. Robert Wood Johnson Foundation. Research Synthesis Report 18.

Emerging Issues in Diagnostic Technology

Liquid Biopsy for the Detection of Kidney Disease

A non-invasive urine-based test for the early diagnosis and monitoring of kidney disease has been developed by Nephrocor. The test, RenalVysion, is intended to identify and measure urinary sediment findings not detected in routine urinalysis.

According to the manufacturer, RenalVysion distinguishes specific categories of renal and bladder lesions by integrating urine cytopathology with urine chemistries. Tests currently used to diagnose and evaluate different types of kidney disease include blood and urine tests, imaging tests, and kidney biopsies.

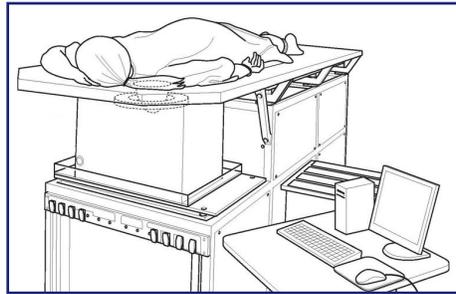
The test is intended to assess patients with symptoms of renal injury and refine the diagnostic possibilities for patients with evidence of kidney or urinary tract disease. The test may assist in determining the need to perform a biopsy and may reduce the need for multiple biopsies.

Kidney disease often progresses silently and can destroy approximately 50% of kidney function before causing symptoms. Early diagnosis and intervention can significantly increase the likelihood of delaying or preventing kidney failure.

RenalVysion
<https://www.nephrocor.com/global/services/laboratory-services/renalvysion.aspx>

Water Ultrasound for Breast Imaging

A new breast cancer imaging system that uses a new approach to scan the whole breast in a water tank has been developed at the Barbara Ann Karmanos Cancer Institute in Detroit. The technology, SoftVue, measures multiple mass characteristics by



combining sound speed, attenuation, and reflection images.

Computer algorithms convert the ultrasound data into a three-dimensional image. The developers of this new imaging modality claim that it enables fast (one-minute) exams and more accurate diagnosis of tumours by providing multiple diagnostic parameters in the form of fused images. Since the breast is scanned in a water bath using ultrasound waves, no discomfort is felt and exposure to potentially harmful radiation is eliminated.

The device is movable and does not require a specialized room or the support of other technologies. The only infrastructural requirement is access to water.

Karmanos Cancer Institute launches company and innovative breast imaging tool
http://www.karmanos.org/view_news.asp?id=658

Blood Test for Appendicitis Diagnosis

A new in vitro test for the diagnosis of acute appendicitis has been developed by AspenBio Pharma. The rapid assay, AppyScore, will be launched with a cassette and instrument system. Test results may be produced within 15 minutes and can be integrated into hospital laboratory information systems.

The test is designed to screen patients entering an emergency department or urgent care facility complaining of abdominal pain. The blood test's scoring system is intended to measure the blood

marker level, which will allow physicians to determine the presence and severity of appendicitis.

The device is intended to be used as an adjunctive tool for the diagnosis of acute appendicitis in conjunction with additional diagnostic modalities (such as clinical exam, basic laboratory testing, and diagnostic imaging). The test can aid in the ruling out of patients who do not have appendicitis, and it may be able to better discriminate between patients who require surgical intervention and those who do not.

Appendicitis can be a challenging condition to diagnose because many other conditions share similar symptoms.

AspenBio Pharma company overview; 2009.
<http://www.aspenbiopharma.com/doc/AspenBioCompanyOverview.pdf>

Nanoparticle Breath Test for Lung Cancer Detection

Scientists in Israel have developed a sensor made with gold nanoparticles that they claim detects lung cancer in a patient's breath. The breath test is designed to diagnose tumours before they are visible with other screening methods.

The lung cancer biomarkers were found by comparing breath samples from 40 diagnosed patients with those of 56 healthy individuals. Forty-two lung cancer biomarkers were identified, from which four of the most reliable biomarkers were used to make a sensor array made from gold particles covered with reactive chemicals sensitive to the compound.

The developers of this technology believe it could lead to fast, cheap, and easy screening for lung cancer. Diagnosis of lung cancer currently involves a variety of tests including chest X-ray, CT (computerized tomography) scan, bronchoscopy, mediastinoscopy, and lung biopsy.

Research and Practice

These reports are available without cost at the websites below:

CADTH HTAs

- 📖 Long-Acting Beta₂-Agonist and Inhaled Corticosteroid Combination Therapy for Adult Persistent Asthma: Systematic Review of Clinical Outcomes and Economic Evaluation. CADTH, November 2009: http://www.cadth.ca/media/pdf/480_LABA_&_ICCT_for_Adult_Persistent_Asthma_tr_e.pdf
- 📖 Fecal Immunochemical Testing in Colorectal Cancer Screening of Average Risk Individuals: Economic Evaluation. CADTH, October 2009: http://www.cadth.ca/media/pdf/M0012_FIT_Economic_Evaluation_L3_e.pdf
- 📖 Radioimmunotherapies for Non-Hodgkin Lymphoma: Systematic Review of Clinical Effectiveness, Cost-Effectiveness, and Guidelines. CADTH, October 2009: http://www.cadth.ca/media/pdf/M0013_Radiopharmaceuticals_NHL_L3_e.pdf
- 📖 Computed Tomography for Pediatric Patients: Review of Clinical Effectiveness and Indications for Use. CADTH, September 2009: http://www.cadth.ca/media/pdf/M0009_Computed_Tomography_for_Pediatric_Patients_L3_e.pdf
- 📖 Fecal Immunochemical Tests for Colorectal Cancer Screening: A Systematic Review of Accuracy and Compliance. CADTH, September 2009: http://www.cadth.ca/media/pdf/M0010_FIT_for_colorectal_cancer_L3_e.pdf
- 📖 TomoTherapy, Gamma Knife, and CyberKnife Therapies for Patients with Tumours of the Lung, Central Nervous System, or Intra-abdomen: A Systematic Review of Clinical Effectiveness and Cost-Effectiveness. CADTH, September 2009: http://www.cadth.ca/media/pdf/M0008_Radiation_Therapy_for_Cancer_L3_e.pdf
- 📖 Technologies to Reduce Errors in Dispensing and Administration of Medication in Hospitals: Clinical and Economic Analyses. CADTH, August 2009: http://www.cadth.ca/media/pdf/H0472_med-errors_tr_e.pdf
- 📖 Endobronchial Ultrasound for Lung Cancer Diagnosis and Staging: A Review

of the Clinical- and Cost-Effectiveness. CADTH, August 2009: http://www.cadth.ca/media/pdf/M0011_EBUS_for_Lung_Cancer_L3_e.pdf

HTAs from Other Organizations

- 📖 Screening Mammography for Women Aged 40 to 49 Years: Update. AETMIS, October 2009: http://www.aetmis.gouv.qc.ca/site/phpwcms_filestorage/5a405ea8cb76234c55cd6f36fb1ced70.pdf
- 📖 Comparative Analysis of Pasteurization and Thermal Disinfection in a Washer-Disinfector: Anesthesia and Respiratory Devices. AETMIS, September 2009: http://www.aetmis.gouv.qc.ca/site/phpwcms_filestorage/22e36cf417e8e8e4032952b579b66385.pdf
- 📖 Initial Staging of Esophageal Cancer: Systematic Review of the Performance of Diagnostic Methods. AETMIS, June 2009: http://www.aetmis.gouv.qc.ca/site/phpwcms_filestorage/8056d7d28de7177b420c53ffb24aa057.pdf
- 📖 Consensus Statement on Fetal Alcohol Spectrum Disorder (FASD) – Across the Lifespan. Institute of Health Economics, October 2009: http://www.ihe.ca/documents/FinalWeb_FASDStatement.pdf
- 📖 Specialized Multidisciplinary Community-Based Care Series. Ontario Medical Advisory Secretariat, October 2009: http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_smcc_compedium_20091019.pdf
- 📖 Diabetes Strategy Evidence Platform. Ontario Medical Advisory Secretariat, October 2009: http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_diabetes_compedium_20091020.pdf
- 📖 Oral Appliances for Obstructive Sleep Apnea. Ontario Medical Advisory Secretariat, September 2009: http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_osa_20090901.pdf
- 📖 Screening Methods for Early Detection of Colorectal Cancers and Polyps. Ontario Medical Advisory Secretariat, September 2009: http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_crc_20090928.pdf
- 📖 Point-of-Care International Normalized Ratio (INR) Monitoring Devices for Patients on Long-term Oral Anticoagulation Therapy. Ontario Medical Advisory Secretariat, September 2009: http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_poc_20090928.pdf
- 📖 Optical Coherence Tomography for Age-Related Macular Degeneration and Diabetic Macular Edema: An Evidence-Based Analysis. Ontario Medical Advisory Secretariat, September 2009: http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_oct_20090925.pdf
- 📖 Phakic Intraocular Lenses for the Treatment of Refractive Errors: An Evidence-Based Analysis. Ontario Medical Advisory Secretariat, September 2009: http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_piols_20090929.pdf
- 📖 Fenestrated Endovascular Grafts for the Repair of Juxtarenal Aortic Aneurysms: An Evidence-Based Analysis. Ontario Medical Advisory Secretariat, July 2009: http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_fevar_20090701.pdf
- 📖 The Impella® Percutaneous Ventricular Assist Device. McGill Technology Assessment Unit of the McGill University Health Centre, June 2009: http://www.mcgill.ca/files/tau/IMPELLA_FINAL_JUNE_2009.pdf
- 📖 Clinical Efficacy and Cost of Allogenic Acellular Dermal Matrix (AADM) in Implant-Based Breast Reconstruction of Post Mastectomy Cancer Patients. McGill Technology Assessment Unit of the McGill University Health Centre, May 2009: http://www.mcgill.ca/files/tau/DERMAMATRIX_FINAL_JUNE_09.pdf

New Canadian Practice Guidelines

- 📖 Active Management of the Third Stage of Labour: Prevention and Treatment of Postpartum Hemorrhage. Society of Obstetricians and Gynaecologists of Canada, October 2009: <http://sogc.org/guidelines/documents/gui235CPG0910.pdf>

-  Antibiotic Therapy in Preterm Premature Rupture of the Membranes. Society of Obstetricians and Gynaecologists of Canada, September 2009: <http://www.sogc.org/guidelines/documents/gui233CPG0909.pdf>
-  Evaluation of Prenatally Diagnosed Structural Congenital Anomalies. Society of Obstetricians and Gynaecologists of Canada, September 2009: <http://www.sogc.org/guidelines/documents/gui234CO0909.pdf>
-  Guidelines for the Management of Vasa Previa. Society of Obstetricians and Gynaecologists of Canada, August 2009: <http://www.sogc.org/guidelines/documents/gui231CPG0908.pdf>
-  Preimplantation Genetic Testing. Society of Obstetricians and Gynaecologists of Canada, August 2009: <http://www.sogc.org/guidelines/documents/gui232TU0908.pdf>
-  Guideline for Screening for Cervical Cancer, Revised in 2009. Toward Optimized Practice, October 2009: http://www.topalbertadoctors.org/PDF/complete%20set/Cervical%20Cancer/cervical_cancer.pdf
-  Post-Thrombotic Syndrome (Clinical Guide). Thrombosis Interest Group of Canada, October 2009: <http://www.tigc.org/pdf/post-thromboticSyndrome.pdf>
-  H1N1 Management Guidelines for Pregnancy, Postpartum and Newborns with Suspected or Confirmed H1N1 Influenza Virus (Novel H1N1). British Columbia Perinatal Health Program, September 2009: http://www.bcphp.ca/sites/bcrpcp/files/spotlight/guideline_h1n1.pdf
-  Individual and Community Based Measures to Help Prevent Transmission of Influenza-Like-Illness (ILI) in the Community, Including the Pandemic Influenza (H1N1) 2009 Virus. Public Health Agency of Canada, September 2009: http://www.phac-aspc.gc.ca/alert-alerte/h1n1/hp-ps-info_health-sante-eng.php
-  Management of Acute Otitis Media. Canadian Paediatric Society, September 2009: <http://www.cps.ca/english/statements/ID/ID09-01.pdf>
-  Guidelines for Paediatric Emergency Equipment and Supplies for a Physician's Office. Canadian Paediatric Society, August 2009: <http://www.cps.ca/english/statements/CP/cp09-03.pdf>
-  Nutrition in Neurologically Impaired Children. Canadian Paediatric Society, August 2009: <http://www.cps.ca/english/statements/N/N09-01.pdf>
-  Management of Dysfunctional Tear Syndrome: a Canadian Consensus. Consensus Panel on Management of Dysfunctional Tear Syndrome, August 2009: <http://article.pubs.nrc-cnrc.gc.ca/RPAS/rpv?hm=Hlnit&calyLang=eng&journal=cjo&volume=44&afpf=i09-015.pdf>
-  High-intensity Focused Ultrasound for Prostate Cancer: Guideline Recommendations. Cancer Care Ontario Program in Evidence-based Care. July 2009: <http://www.cancercare.on.ca/common/pages/UserFile.aspx?fileId=47392>
-  Sentinel Lymph Node Biopsy in Early-Stage Breast Cancer: Guideline Recommendations. Cancer Care Ontario Program in Evidence-based Care, July 2009: <http://www.cancercare.on.ca/common/pages/UserFile.aspx?fileId=45872>
-  Canadian Recommendations for the Prevention and Treatment of Malaria Among International Travellers - 2009. Public Health Agency of Canada, July 2009: <http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/09pdf/35s1-eng.pdf>
-  Decision Support for Adults Living with Chronic Kidney Disease. Registered Nurses' Association of Ontario, July 2009: http://www.rnao.org/Storage/61/5545_Decision_Support_for_Adults_Living_with_Chronic_Kidney_Disease-_Revised_Final_Sept_23,_2009.pdf
-  Initial Evaluation and Referral Guidelines for Management of Pelvic/Ovarian Masses. Society of Gynecologic Oncologists of Canada / Society of Canadian Colposcopists, July 2009: <http://www.sogc.org/guidelines/documents/gui230CPG0907.pdf>
-  Supporting Clients on Methadone Maintenance Treatment. Registered Nurses' Association of Ontario, July 2009: http://www.rnao.org/Storage/58/5254_BPG_Managing_Methadone_Treatment.pdf



Canadian Agency for
Drugs and Technologies
in Health

Cite as: Morrison A., Ens B., Polisen J., Huserau D. *Health Technology Update*, Issue 12, Ottawa: Canadian Agency for Drugs and Technologies in Health; 2009.

Production Notes

Health Technology Update is published by: Canadian Agency for Drugs and Technologies in Health (CADTH)
600-865 Carling Ave.
Ottawa, ON Canada K1S 5S8
Tel.: 613-226-2553
Fax: 613-226-5392
Website: www.cadth.ca

This document may be reproduced provided that the reproduction is for non-commercial purposes only and that appropriate credit is given to CADTH as the original publisher.

Health Technology Update is a source of information for those involved in planning and providing health care in Canada. The information contained in this newsletter is based on a limited literature review and should not be construed as a recommendation for or against the use of a particular health technology. Readers should also be aware that a lack of good quality evidence to support effectiveness does not necessarily mean a lack of effectiveness, particularly in the case of new and emerging technologies.

Production of this newsletter is made possible by a financial contribution from Health Canada and the governments of Alberta, British Columbia, Manitoba, New Brunswick, Newfoundland and Labrador, Northwest Territories, Nova Scotia, Nunavut, Prince Edward Island, Saskatchewan, and Yukon. CADTH takes sole responsibility for the final form and content of this newsletter. The statements, conclusions, and views expressed in this newsletter do not necessarily represent the view of Health Canada or any provincial or territorial government.

© 2009 CADTH

ISSN: 1715-5541 (print)
ISSN: 1715-555X (online)
Printed in English