OHTAC Ontario Health Technology Advisory Committee

Seeking the best in health technologies for Ontario

E-Bulletin **July 2006, Issue #14**

The OHTAC E-bulletin is issued on a regular basis to provide you with updates on the latest committee recommendations. OHTAC has reviewed several health technologies and all its recommendations are available on the OHTAC Web site at http://www.health.gov.on.ca/english/providers/program/mas/tech/recommend/rec_mn.html

Should you have additional information about any of these technologies, please submit it to the Medical Advisory Secretariat (MAS) at the contact information found at the end of this bulletin.

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ULTRASOUND SCREENING FOR ABDOMINAL AORTIC ANEURYSM (AAA)

Issue

Abdominal aortic aneurysm (AAA) is a localized abnormal dilatation of the aorta greater than 3 cm, which is largely asymptomatic. The risk of death from ruptured AAA is 80% - 90%. Half of these deaths occur before patients reach hospital. In comparison, mortality in individuals undergoing elective surgery is only 5-7%, so early detection is important.

Detection prior to rupture is viable through ultrasound (US) screening, which has a sensitivity and specificity approaching 100% for AAA.

Key Findings

- 4 large randomized controlled trials: *one-time* screening reduces the rupture incidence of AAA, reduces costly emergency repair, increases rates of elective surgical repair, and reduces AAA-attributable mortality in men ages 65-74, particularly smokers.
- Smoking is the largest risk factor for AAA, accounting for 89% of prevalent AAA.
- Screening a population with a history of smoking would identify 89% of asymptomatic AAAs. It would avoid screening 328,461 Ontario patients who had never smoked.
- Estimated prevalence rates for AAA in women suggest that females would account for 17-25% of AAA. However, in Ontario women account for 33% of AAA deaths and have a significantly increased case-fatality rate (65%) compared to men (50%). This suggests that AAA prevalence in women is increasing, or that AAA in women is not being identified or treated.
- An economic analysis of AAA screening strategies indicated that screening is cost-effective when based on a history of smoking. It is comparable in terms of numbers needed to detect to breast, cervical and colon cancer screening programs.
- As earlier cohorts of women smokers reach 65, their prevalence of AAA will increase.

OHTAC Recommendations

- Screening for AAA for all men and women ages 65 –74 years with a history of smoking.
- Evaluation of AAA screening outcomes, particularly in women, is essential due to the paucity of data on AAA screening in women.
- An implementation strategy be developed to effectively roll out AAA screening including involvement by the Ontario College of Family Physicians and the Ontario Guidelines Advisory Committee to promote AAA screening.

Implications

While there is no formal screening program for AAA, it is an insured service, used at the discretion of the physician. Current detection is dependent on physician referral, symptomatic presentation or incidental detection.

Incremental hospital budget impact attributed to increased surgical repair of AAA discovered by screening is $24 million to $56 million if the prevalent population is treated over a 5 year period, following which the repair rate would fall considerably and cost savings in 2011 would be estimated to be between $1.7M and $6.0M.

The full downloadable version of the **Health Technology Policy Assessment** by the Medical Advisory Secretariat can be found at:
http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_adr_010106.pdf

The **OHTAC recommendation** for this technology can be found at the following link:
http://www.health.gov.on.ca/english/providers/program/mas/tech/recommend/rec_adr_012406.pdf

ARTIFICIAL DISC REPLACEMENT (ADR) FOR LUMBAR AND CERVICAL DEGENERATIVE DISC DISEASE (DDD) —UPDATED REVIEW

Issue

In March 2004, OHTAC concluded that insufficient evidence existed to warrant widespread adoption of artificial disc replacement (ADR) technology for degenerative disc disease (DDD) in Ontario. They also recommended that ADR be re-evaluated once additional evidence on improved outcomes becomes available. The updated review on the effectiveness and safety of ADR for lumbar or cervical degenerative disc disease has recently been completed.

Key Findings

Lumbar Artificial Disc Replacement

- Based on moderate quality evidence of effectiveness, the benefits of lumbar ADR appear to outweigh those of spinal fusion and the risks of the procedure 2 years after treatment. However, there is uncertainty in the estimates of benefits and risks beyond 2 years.

Cervical Artificial Disc Replacement

- Currently there is no comparative research evaluating the effectiveness of cervical ADR. Because of this, there was very low quality evidence to support the effectiveness of cervical ADR and to quantify the short or long-term rate of major complications.

OHTAC Recommendations

- The adoption of lumbar ADR according to well defined patient eligibility criteria to be determined by a panel of Ontario experts using the eligibility criteria from the randomized controlled trials reported in the HTPA as a starting point.

- Because data on major complications beyond 2 years after treatment is lacking, a patient registry should be developed to track long-term complications of lumbar ADR.

- Because of the uncertainty in the estimates of benefits, risks and burdens associated with cervical ADR, OHTAC does not recommend the use of cervical ADR to treat DDD over the use of other alternatives such as spinal

fusion at this time.

Implications

Currently there are 14 surgeons among 6 hospitals who are trained to implant artificial discs in Ontario. Clinical experts have cited an insufficient amount of operating room time, operating room nurses and anesthetists as barriers to diffusion for this technology. There is a disparity among hospital facilities regarding funding of the device with some facilities funding it from the hospital's global budget while others do not. Indications for ADR have expanded beyond those stated in clinical trials as surgeons become more experienced with the surgical procedure.

The full downloadable version of the **Updated Health Technology Policy Assessment** by the Medical Advisory Secretariat can be found at:
http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_adr_040106.pdf

The **OHTAC recommendation** for this technology can be found at the following link:
http://www.health.gov.on.ca/english/providers/program/mas/tech/recommend/rec_adr_041806.pdf

TECHNOLOGIES CURRENTLY UNDER REVIEW

• Cardiac positron emission tomography	• Hydrophilic Catheters
• Electroanatomic cardiac mapping and ablative techniques	• Routine Eye Exams
• Intravascular coronary ultrasound	• Sleep Disorder Clinics
• Metal-on-metal Hip Resurfacing	• Bone Densitometry
• Implantable Cardioverter defibrillator	• Energy delivery systems for treatment of Benign Prostatic Hyperplasia (BPH).
• Gastric Electrical Stimulation	• In-Vitro Fertilization
• Bladder Ultrasound	• Horizon Scanning: Nanotechnology
• Optimum Imaging Breast Technologies for Women 40-49 years of age—Modalities other than Mammography	• Diagnostic Imaging
• Breast Cancer Screening for Women 40-49 years of age--Mammography	• Optimal Health System Design for Screening
• Magnetic Resonance Spectroscopy (MRS)	• Magnetoencephalography (MEG)
Integrated Health Technology Literature Reviews	
• Heart failure	
Literature Reviews Being Updated	

- Mid-Urethral Slings (February 2004)
- Negative Pressure Wound Therapy (December 2004)

PREVIOUS OHTAC RECOMMENDATIONS

- Magnetic Resonance Imaging (MRI) Environment Safety in Ontario (NOW POSTED!) — April 2006
  http://www.health.gov.on.ca/english/providers/program/mas/tech/technology/tech_mri_040106.html
- Extracorporeal Photopheresis (ECP) — March 2006
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_ecp_030106.pdf
- Enhanced External Counterpulsation (Update) — March 2006
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_eecp_030106.pdf
- Coil Embolization for Intracranial Aneurysms (Update) — January 2006
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_coil_010106.pdf
- Automated External Defibrillators — December 2005
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_aed_120105.pdf
- Interim Report on Drug Eluting Stents — December 2005
  http://www.path-hta.ca/DESreport.pdf
- Endovascular Repair of Descending Thoracic Aortic Aneurysm — November 2005
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_thor_110105.pdf
- Air Cleaning Technologies — November 2005
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_act_110105.pdf
- Technologies for Osteoarthritis of the Knee (Integrated Health Technology Policy Assessment) — October 2005
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_ostknee_100105.pdf
- Biventricular Pacing (Cardiac Resynchronization Therapy) — September 2005
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_biv_090105.pdf
- Arthroscopic Lavage and Debridement — September 2005
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_lavdeb_090105.pdf
- Hyperbaric Oxygen Therapy for Non-Healing Ulcers in Diabetes Mellitus — August 2005
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_hypox_081105.pdf
- Interim Report on Endovascular Repair of Abdominal Aortic Aneurysm (EVAR) — July 2005
  http://www.path-hta.ca/EVAR%20Interim%20Report%20Jul%202005.pdf
- Intra-Articular Viscosupplementation With Hylan G-F 20 To Treat Osteoarthritis of the Knee — June 2005
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_hylan_061705.pdf
- Total Knee Replacement — June 2005
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_tkr_061705.pdf
- Intrathecal Baclofen Pump for Spasticity — May 2005
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_pump_081605.pdf
- Osteogenic Protein-1 — April 2005
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_osteo_070105.pdf
- Multi-detector Computed Tomography Angiography for Coronary Artery Disease — April 2005
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_multi_050105.pdf
- Spinal Cord Stimulation for Neuropathic Pain — March 2005
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_scs_030105.pdf
- Sacral Nerve Stimulation for Urinary Incontinence, Urgency-Frequency, Urinary Retention, and Fecal Incontinence — March 2005
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_sns_030105.pdf
- Deep Brain Stimulation in Parkinson's Disease and Other Movement Disorders — March 2005
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_dbs_030105.pdf
- Bariatric Surgery — January 2005
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_baria_010105.pdf
- Vacuum Assisted Closure Therapy for Chronic Wounds — December 2004
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_vac_120104.pdf
- Balloon Kyphoplasty — December 2004
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_kypho_120104.pdf

OHTAC is envisaged as the first step in creating a single portal for providing advice to the Ministry of Health and Long-Term Care regarding the uptake, diffusion, and distribution for new health technologies. Find more about OHTAC, its application process, and its recommendations at the following Web site: http://www.health.gov.on.ca/english/providers/program/mas/ohtac_about.html.

- Thermal Balloon Endometrial Ablation for Dysfunctional Uterine Bleeding — October 2004
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_tbea_090104.pdf
- Primary Angioplasty — September 2004
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_bis_060104.pdf
- Bispectral Index Monitor — August 2004
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_bis_060104.pdf
- Radio Frequency Ablation for Primary Liver Cancer — June 2004
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_rfa_060104.pdf
- Repetitive Transcranial Magnetic Stimulation for Major Depressive Disorder — June 2004
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_rtms_060104.pdf
- Coil Embolization For Intracranial Aneurysms — March 2004
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_coil_030104.pdf
- Pyrocarbon Finger Joint Implant — March 2004
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_pyrocarb_030104.pdf
- Video Laryngoscopy for Tracheal Intubation — March 2004
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_vidlaryng_030104.pdf
- Bone Morphogenetic Proteins and Spinal Surgery for Degenerative Disc Disease — March 2004
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_bmp_030104.pdf
- Artificial Discs for Cervical and Lumbar Spinal Surgery for Degenerative Disease — March 2004
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_artdisc_030104.pdf
- Computer-Assisted Hip and Knee Arthroplasty: Navigation and Robotic Systems — March 2004
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_arthro_020104.pdf
- Computer-Assisted Surgery Using Telemanipulators — March 2004
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_teleman_020104.pdf
- Tension-free Vaginal Tape for Stress Urinary Incontinence — February 2004
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_tvt_020104.pdf
- Patient Monitoring System for MRI — February 2004
  http://www.health.gov.on.ca/english/providers/program/mas/tech/reviews/pdf/rev_patmri_120103.pdf

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