

OHTAC E-Bulletin

Seeking the best health technologies for Ontario



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The OHTAC E-Bulletin is issued on a regular basis to provide you with updates on the latest committee recommendations.

Previous Medical Advisory Secretariat monographs and reviews and subsequent OHTAC recommendations are available on the OHTAC website, with links in each E-Bulletin issue.

Should you have any questions or additional information about any of these technologies, please submit it to the Medical Advisory Secretariat (MAS).

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Polysomnography in Patients with Obstructive Sleep Apnea

A summary of the Health Technology Policy Assessment by the Medical Advisory Secretariat and the OHTAC Recommendation

Sleep disorders are common of which obstructive sleep apnea (OSA) is the predominant type. Polysomnography (PSG) in a sleep laboratory is the current standard for the diagnosis of OSA. Continuous positive airway pressure (CPAP) therapy is the usual treatment for OSA patients.

National averages of sleep studies per 100,000 population show that in Canada, on average, there are about 370/100,000 people, 427/100,000 in the USA, 42.5/100,000 in the UK, 177/100,000 in Belgium, and 282/100,000 in Australia. In Ontario, the rate is 769/100,000 population. This makes Ontario the highest per capita user of sleep studies in the world.

Currently, there are 97 licensed sleep laboratories in Ontario in independent health facilities and several in Ontario hospitals. The rate at which sleep studies were done in Ontario rose from 376/100,000 people in 2000 to 769/100,000 people in 2004.

Key Findings

Based on the Medical Advisory Secretariat (MAS) Review, it was found that:

- In the absence of a gold standard, the claims of accuracy of PSG for diagnosis of OSA can not be substantiated. In general, there is poor correlation between PSG variables and clinical variables. A variety of cutoff points of apnea-hypopnea index (AHI) (> 5 events per hour of sleep, > 10 , > 15) are used to diagnose and categorize severity of OSA.
- Recently, a study of the use of a therapeutic trial of CPAP to diagnose OSA was reported. Using PSG as the reference standard, the authors calculated the sensitivity of this test to be 80% and specificity to be 97%. They concluded that PSG could be avoided in 46% of this population. (Senn et al., 2006).
- OSA is strongly associated with a patient's build. Up to 75% of OSA patients are obese.

OHTAC Recommendations

- A simple pragmatic study should be undertaken to explore the effectiveness and utility of PSG in sleepy patients given that new evidence suggests that OSA can be accurately diagnosed with a trial of CPAP, and given that it is not known whether PSG is being appropriately utilized in Ontario. The study should also develop a screen for appropriate utilization of PSG in sleepy patients.
- The province should reconsider insurance coverage of sleep studies in sleep laboratories based on the findings from the pragmatic study.
- OHTAC supports cooperation between sleep clinics and obesity clinics to optimize the benefits of weight reduction in OSA patients.
- OHTAC finds that this assessment of PSG in OSA patients supports its earlier recommendation that morbidly obese Ontarians be provided with increased access to bariatric surgery.

Implications

By developing appropriate screening filters for sleep studies and linking sleep clinics with obesity clinics, the province may maximize the benefits (associated with improvement in quality of life and/or cure), and minimize harms (including dollars spent on medically unnecessary sleep studies) in sleepy patients. ❖

The full downloadable version of the **Health Technology Policy Review** by the Medical Advisory Secretariat can be found [here](#)
The **OHTAC recommendation** for this technology can be found [here](#)

OHTAC is envisaged as the first step in creating a single portal for providing advice to the Ontario Ministry of Health and Long-Term Care regarding the uptake, diffusion, and distribution of new health technologies. Find out more about OHTAC, its application process, and its recommendations [here](#).

Spotlight: New OHTAC Application

Based on feedback received, OHTAC has created a more user-friendly version of the OHTAC application (currently, only the English version has been updated). The majority of the content on the application remains the same, however, the changes have streamlined the form and should make it easier for an applicant to complete. An important added feature is the application

can now be completed online. As in the past, completed applications and any relevant materials are to be mailed to the Medical Advisory Secretariat. The online application can be found [here](#). For additional help, please read the [OHTAC Application Guide](#).

For more information about the application process, please visit the [OHTAC website](#)

Several criteria are used to assess whether OHTAC will request a health technology review and policy appraisal of a technology proposed for review.

OHTAC considers first whether a technology improves health outcomes such as length of life, quality of life and functionality. The committee considers technologies where :

- Technology improves the net health outcome and/or safety for patients and/or providers or improves health systems efficiency;
- Technology must be licensed by Health Canada

and have received other applicable licensing or approvals from appropriate governmental or regulatory bodies;

- Ontario healthcare providers who are potential purchasers or users of the health technology must sponsor the application.
- Technology is at least as beneficial as any established alternative. If the technology is not better but equivalent to an existing technology, it must be shown to be potentially more cost-effective. ❖

Technologies Currently Under Review

Cardiac positron emission tomography	Hydrophilic Catheters
Electroanatomic cardiac mapping and ablative techniques	Energy Delivery Systems for treatment of Benign Prostatic Hyperplasia (BPH)
Intravascular coronary ultrasound	Routine Eye Exams
Metal-on-metal Hip Resurfacing	Bone Densitometry
Implantable Cardioverter defibrillator	In-Vitro Fertilization
Gastric Electrical Stimulation	Diagnostic Imaging
Functional Brain Imaging (includes Magnetic Resonance Spectroscopy and Magnetoencephalography)	Horizon Scanning: Nanotechnology
Methadone Compliance Testing	Optimal Health System Design for Screening
Breast Cancer Screening and Optimum Imaging Breast Technologies for Women 40-49 years of age	Optimum Imaging Breast Technologies for Women 40-49 years of age— Modalities other than Mammography

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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

Portable Bladder Ultrasound	April 2006
Artificial Disc Replacement for Lumbar and Cervical Degenerative Disc Disease	April 2006
Magnetic Resonance Imaging (MRI) Environment Safety in Ontario	April 2006
Extracorporeal Photophoresis (ECP)	March 2006
Enhanced External Counterpulsation (Update)	March 2006
Ultrasound Screening for Abdominal Aortic Aneurysm	January 2006
Coil Embolization for Intracranial Aneurysms (Update)	January 2006
Automated External Defibrillators	December 2005
Interim Report on Drug Eluting Stents	December 2005
Endovascular Repair of Descending Thoracic Aortic Aneurysm	November 2005
Air Cleaning Technologies	November 2005
Technologies for Osteoarthritis of the Knee (Integrated Health Technology Policy Assessment)	October 2005
Biventricular Pacing (Cardiac Resynchronization Therapy)	September 2005
Arthroscopic Lavage and Debridement	September 2005
Hyperbaric Oxygen Therapy for Non-Healing Ulcers in Diabetes Mellitus	August 2005
Interim Report on Endovascular Repair of Abdominal Aortic Aneurysm (EVAR)	July 2005
Intra-Articular Viscosupplementation With Hyaluron G-F 20 To Treat Osteoarthritis of the Knee	June 2005
Total Knee Replacement	June 2005
Intrathecal Baclofen Pump for Spasticity	May 2005
Osteogenic Protein-1	April 2005
Multi-detector Computed Tomography Angiography for Coronary Artery Disease	April 2005
Spinal Cord Stimulation for Neuropathic Pain	March 2005
Sacral Nerve Stimulation for Urinary Incontinence, Urgency-Frequency, Urinary Retention, and Fecal Incontinence	March 2005
Deep Brain Stimulation in Parkinson's Disease and Other Movement Disorders	March 2005
Bariatric Surgery	January 2005
Vacuum Assisted Closure Therapy for Chronic Wounds	December 2004
Balloon Kyphoplasty	December 2004
Thermal Balloon Endometrial Ablation for Dysfunctional Uterine Bleeding	October 2004
Primary Angioplasty	September 2004
Bispectral Index Monitor	August 2004
Radio Frequency Ablation for Primary Liver Cancer	June 2004
Repetitive Transcranial Magnetic Stimulation for Major Depressive Disorder	June 2004
Coil Embolization For Intracranial Aneurysms	March 2004

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Pyrocarbon Finger Joint Implant	March 2004
Video Laryngoscopy for Tracheal Intubation	March 2004
Bone Morphogenetic Proteins and Spinal Surgery for Degenerative Disc Disease	March 2004
Artificial Discs for Cervical and Lumbar Spinal Surgery for Degenerative Disease	March 2004
Computer-Assisted Hip and Knee Arthroplasty: Navigation and Robotic Systems	March 2004
Computer-Assisted Surgery Using Telemanipulators	March 2004
Tension-free Vaginal Tape for Stress Urinary Incontinence	February 2004
Patient Monitoring System for MRI	February 2004



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