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Chair’s Introduction

This is my first introduction to the annual report of the Department of Anesthesia at the University of Toronto. As I read the report several things are apparent.

First, the department is successful: our faculty members provide anesthetic care to approximately 100,000 patients during surgery or childbirth, in addition to caring for thousands of adults and children in intensive care, undergoing treatment for chronic pain, or requiring assistance during palliative care. All of this adds up to a lot of service, which is just fine, as this service is our primary aim, and what defines us as clinicians. Providing state-of-the-art service really is the hallmark of the outstanding clinician. Of course, we know all too well that ‘state-of-the-art’ only has meaning when it is driven by clinical experience, research and education of the very best caliber.

Second, the department is additionally successful in that it scores consistently in the pivotal areas of research and education. We are fortunate to be in a leadership position among departments across the country in many of the metrics of academic success: this is a feature of our size, of our being a member of the University of Toronto community, of our students and faculty, and of our patients who allow us to treat them and who provide us with provoking challenges, and who need practice-changing solutions.

Third, what does this annual report represent? Is it bragging – in the written word – about our operating grants, prizes, publications, invited talks, and awards as metrics of academic performance? It is indeed all of those things, but it is much more. Our whole mission is ultimately about looking after patients better, and our annual report is a check-up on how that enterprise has gone over the previous year.

We recognize that because our clinical outcomes – in anesthesia – are so good, some believe that there is little room, or need, for further improvements in the care that is available. But we also realize that targeting the ‘average’ patient will never adequately serve the many ‘outliers’ whom we have the privilege to treat on a daily basis. Beyond that, targeting only the ‘average’ patient will stifle our imagination and innovation. Ultrasound in regional anesthesia was developed not because ‘on average’ regional anesthesia worked adequately; it was developed because regional anesthesia did not reach an ‘excellent’ grade in every patient. Now, with the assistance of research, education and expertise in ultrasound, regional anesthesia is close to ‘excellent’ in almost every patient. This is a marvelous illustration of how things that appear to be reasonable can be made far better. Additional examples of progress in this report include research in mechanisms of anesthesia, ‘e-health’, perioperative blood product use, critical care medicine and trauma, and development of the anesthesia care team.

Please enjoy this report, share it with your friends and colleagues, and contact us if you wish to learn more about the department or the profession more broadly. Read it and realize the commitment of the many in the department towards the goal of improving the profession. Read this report and recognize that research – the discovery of new knowledge – is our only way forward, and education is how we learn about it. While we look back with pride on this year’s successes in the clinical, education and research realms, we look forward with humility, enthusiasm and determination to find out more, to teach and learn from each other, and to provide ever better care for our primary responsibilities – our patients.

On behalf of all the readers of this report, I thank those whose contributions made it possible.

Brian Kavanagh
Who Are We?

Organizational Chart
As of February 2007
**Who Are We?**

**Administrative Team**

- **Dr. Brian Kavanagh**  
  Chair

- **Dr. Patricia Houston**  
  Vice-Chair, Education

- **Ms. Wendy Kubasik**  
  Business Manager

- **Dr. Isabella DeVito**  
  Director, Undergraduate Education Program

- **Mr. Danny Cavanaugh**  
  Departmental Assistant

- **Dr. Gerald O’Leary**  
  Vice-Chair, Clinical Affairs

- **Dr. David Mazer**  
  Vice-Chair, Research

- **Dr. Mark Levine**  
  Director, Postgraduate Education Program

- **Ms. Jennifer Morris**  
  Assistant, Graduate Program

- **Ms. Kathryn Bailey**  
  Assistant, Graduate Program (on leave)

**Grants**

**Zhang, H**  

“LPS internalization and ICAM-1 signaling in the pathogenesis of sepsis,” CIHR Operating Grant. $530,600, 2005-2010

“Targeting ICAM-1/LFA-1 interaction in reducing sepsis-induced lung injury,” Premier’s Research Excellence Award. $159,000, 2005-2010

“Human neutrophil peptides in lung inflammation,” CIHR New Investigator Award. 275,000, 2005-2007


“Human neutrophil peptides in lung inflammation,” CIHR Operating Grant. $553,615, 2004-2009

**NON-PEER REVIEWED GRANTS**

- **Balki M**  
  “Impact of uterotonic agents on isolated human myometrium” Co-investigators: Kingdom J, Carvalho J. Department of Obstetrics and Gynecology, University of Toronto and Department of Anesthesia. $10,000, 2007-2008

- **Morgan, P and Tarshis, J**  
### Grants

1. **Impact of cardiopulmonary bypass and cardiac surgery on lymphocyte energetics and immune function in patients with non-insulin dependent diabetes mellitus.** (Co-investigator) Society of Cardiovascular Anesthesiologists. $40,000, 2005-2007

   - **McGrath, P.**
   - "Understanding chronic pain following surgery in women." Operating Grant. CIHR. Van Denkhorst EG, Goldstein, DH, Harrison, M, Hepman, W, Lam, Y, Tawfeek, T, Wilson, R. McGrath, PA $100,000 per year ($342,629 total), 2006-2009

2. **The effect of high-fidelity simulation debriefing on the non-technical skills of practicing Anesthesiologists.** Morgan PJ, Bertram S, Tarsis J. Continuing Education Research Award, University of Toronto. $5,000, 2007

   - **Morgan, P.**

3. **Teaching emergency life-saving skills through simulation – high-fidelity simulation vs. traditional bench models for teaching residents cricothyrotomy**, Friedman Z, Nael VN, You-Ten E. Educational Development Fund for Innovation in Education. $40,000, 2007

   - **Naik, V.**

4. **The impact of Web 2.0 on credibility indicators in health care**, Co-PI with O’Grady L. CIHR Interdisciplinary Capacity Enhancement Sub-grant. $8,000, 2007

   - **“Ethics and pandemic planning: Engaging the voices of the public,” with Upshur R. CIHR. $75,000, 2007**

5. **Canada Research Chair in Anesthesia, Tier 2: Anesthetic Drugs from Molecular Mechanisms to Patient Safety.** $500,000 per year, 2003-2008

   - **“The role of GABAA receptors in anesthetic-induced impairment of memory and consciousness,” CIHR (PI). $219,179, 2006-2011**

   - **“A multi-institutional evaluation of a checklist intervention to structure communication and promote patient safety in the operating room,” CIHR (Collaborator), $65,247 per year, 2004-2010**


   - **“The role of GABA receptors in anesthetic-induced impairment of memory and consciousness,” CIHR (PI). $219,179, 2006-2011**

   - **“A multi-institutional evaluation of a checklist intervention to structure communication and promote patient safety in the operating room,” CIHR (Collaborator), $65,247 per year, 2004-2010**

7. **“The impact of Web 2.0 on credibility indicators in health care,” Co-PI with O’Grady L. CIHR Interdisciplinary Capacity Enhancement Sub-grant. $8,000, 2007**

   - **“Ethics and pandemic planning: Engaging the voices of the public,” with Upshur R. CIHR. $75,000, 2007**

8. **“Understanding chronic pain following surgery in women.” Operating Grant. CIHR. Van Denkhorst EG, Goldstein, DH, Harrison, M, Hepman, W, Lam, Y, Tawfeek, T, Wilson, R. McGrath, PA $100,000 per year ($342,629 total), 2006-2009**

### Departmental Committees

<table>
<thead>
<tr>
<th>Members</th>
<th>Terms of Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EXECUTIVE COMMITTEE</strong></td>
<td>B. Kavanagh (Chair), G. Facidier, P. Houston, J. Kronberg, W. Kubais, M. Levine, G. O’Leary, D. Maizer, L. Roy</td>
</tr>
<tr>
<td></td>
<td>Makes operational and policy-related decisions on basis of Chair’s strategic direction including the financial, administrative, educational and research-related issues of the Department.</td>
</tr>
<tr>
<td></td>
<td>Provides the Chair with guidance on strategic issues; harmonizes goals and operations of the Department with other UT institutions and affiliated hospitals.</td>
</tr>
<tr>
<td><strong>DEPARTMENTAL APPOINTMENTS COMMITTEE (DAC)</strong></td>
<td>D. McKnight (Chair), R. Crigo, S. Halpern, W. Kubais (secretary), M. O’Driscoll, J. Wasserman</td>
</tr>
<tr>
<td></td>
<td>Ensures consistent and appropriate appointment processes for the department; conducts performance reviews of full-time appointments in accordance with the Procedures Manual for the Policy for Clinical Faculty as revised from time to time.</td>
</tr>
<tr>
<td><strong>PROMOTIONS COMMITTEE</strong></td>
<td>G. Fox (Chair), B. Bissonnette, V. Chan, I. Devito, P. Houston, J. Katz, B. Kavanagh (ex-officio), W. Kubaik (secretary), D. Maizer, C. McCartney, P. Morgan, B. Orser, H. Zhang</td>
</tr>
<tr>
<td></td>
<td>Reviews faculty applications for promotions; provides recommendations to Chair on promotions.</td>
</tr>
<tr>
<td><strong>UNDERGRADUATE EDUCATION COMMITTEE</strong></td>
<td>I. Devito (Chair), D. Chandra, H. Eil-Beheiry, P. Houston, D. Irving, G. Kanekaloukos, B. Kavanagh, K. Lin, P. Mak, I. Randall, J. Robertson, A. Sarmah, R. Stander, M. Vandervyver, D. Cavanagh (secretary)</td>
</tr>
<tr>
<td></td>
<td>Promotes excellence in undergraduate education through all years of Medicine, specifically promoting excellence in teaching perioperative medicine (including preoperative evaluation skills; resuscitation; pain management; technical skills; team centered care). Develops and implements innovative teaching through simulation and web-based educational tools.</td>
</tr>
<tr>
<td><strong>POSTGRADUATE EDUCATION COMMITTEE</strong></td>
<td>M. Levine (Chair), I. Devito, H. Fischer, S. Halpern, P. Houston, B. Kavanagh, H. Lee, I. McChesie, D. Middleton, B. Morningstar, P. Murphy, V. Nakh, E. Ng, D. Riegel, J. Wasserman</td>
</tr>
<tr>
<td></td>
<td>Develops and revises postgraduate academic program; evaluates residents, teachers and rotations; participates in a fair, open and transparent selection process for new residents; ensures program adherence to the Standards of Accreditation of the RCPSC; reviews residents in difficulty and makes recommendations to Program Director.</td>
</tr>
<tr>
<td><strong>CONTINUING MEDICAL EDUCATION COMMITTEE</strong></td>
<td>P. Slinger (Chair), P. Angle, S. Davies, L. Eisen, P. Houston, B. Kavanagh, J. Kay, C. Knappp, C. Loffertmann, J. Tarsis, M. van der Vyer, L. Venkatraghivan, J. Wong</td>
</tr>
<tr>
<td></td>
<td>Develops, plans, implements and reviews various continuing education initiatives within the department including web-based learning.</td>
</tr>
<tr>
<td><strong>RESEARCH COMMITTEE</strong></td>
<td>D. Maizer (Chair), P. Angle, B. Kavanagh, A. Bakir, S. Beattie, M. Crawford, A. Macarturh, P. Mak, D. McKnight, B. Orser, G. Petroz</td>
</tr>
<tr>
<td></td>
<td>Defines priorities, provides advice, and implements new initiatives that promote and support current and future research activities in the department; provides protocol review service and assistance for departmental faculty applying for grants; promotes linkages to foster departmental research activities.</td>
</tr>
<tr>
<td><strong>SHELDS DAY PLANNING COMMITTEE</strong></td>
<td>G. Petroz (Chair), B. Kavanagh, W. Kubais, B. Loo</td>
</tr>
<tr>
<td></td>
<td>Organizes the scientific program including theme, speakers, and overall program. Implements program and logistical details.</td>
</tr>
</tbody>
</table>
Who Are We?

Faculty Members

Professors Emeritus

Bevan, David, Emeritus Professor

Professors

Baker, Andrew, St. Michael’s Hospital
Bohn, Desmond J, Hospital for Sick Children
Chan, Vincent, University Health Network
Cooper, Richard M, University Health Network
Fisher, Joseph, University Health Network
Halpern, Stephen, Women’s College Hospital
Jadad, Alejandro, University Health Network
Kavanagh, Brian, Hospital for Sick Children
McGrath, Patricia, Hospital for Sick Children
Slinger, Peter, University Health Network
Tweed, Arnold, University Health Network

Associate Professors

Beattie, W Scott, University Health Network
Carvalho, Jose, Mount Sinai Hospital
Crowford, Mark, Hospital for Sick Children
Hare, Gregory, St. Michael’s Hospital
Karkouti, Keyvan, University Health Network
Kronberg, Jean, Women’s College Hospital
Macarthur, Alison, Mount Sinai Hospital
McCartney, Colin, Sunnybrook Health Sciences
Mullen, Brendan, Mount Sinai Hospital
Roy, Lawrence, Hospital for Sick Children
Stoyka, William, St. Michael’s Hospital
Yao, Zhenhai, University Health Network

Assistant Professors

Abrahamson, Simon, St. Michael’s Hospital
Angle, Pamela J, Women’s College Hospital
Awad, Imad, Sunnybrook Health Sciences
Baker, James, St. Michael’s Hospital
Barlow, Ross, Hospital for Sick Children
Bercovici, Mark, Sunnybrook Health Sciences
Bertram, Susan, Sunnybrook Health Sciences
Bradwell, John, University Health Network
Brull, Richard, University Health Network
Cassar-Demajo, W, University Health Network
Chan, Herman, Sunnybrook Health Sciences
Chapman, Martin, Sunnybrook Health Sciences
Cooke, Mary Ellen, Mount Sinai Hospital
Cybulski, Karen, Hospital for Sick Children
Davallou, Moghan, Women’s College Hospital
Davies, Sharon, Mount Sinai Hospital
Duffin, James, Emeritus Professor
Bissonnette, Bruno, Hospital for Sick Children
Byrck, Robert J, St. Michael’s Hospital
Chung, Frances F, University Health Network
Cox, Peter, Hospital for Sick Children
Fox, Gordon, Mount Sinai Hospital
Houston, Patricia, St. Michael’s Hospital
Katz, Joel, University Health Network
Mazer, David, St. Michael’s Hospital
Orser, Beverley, Sunnybrook Health Sciences
Stewart, Donna, University Health Network
Brown, Stephen C, Hospital for Sick Children
Cravo, Ronald R, University Health Network
Djaiani, George, University Health Network
Jelenich, Sandra, St. Michael’s Hospital
Karski, Jacob, University Health Network
Lu, Wei-Yang, Sunnybrook Health Sciences
Manninen, Pirjo, University Health Network
McKnight, David, St. Michael’s Hospital
Murphy, Patricia, University Health Network
Stewart, Tom, Mount Sinai Hospital
Wong, David, University Health Network
Zhang, Haibo, St. Michael’s Hospital

Ananthanarayanan, G, Mount Sinai Hospital
Avila, Arsenio, Sunnybrook Health Sciences
Bahrey, Lisa, University Health Network
Balki, Mininali, Mount Sinai Hospital
Belo, Susan, Sunnybrook Health Sciences
Berdoo, Steven, Hospital for Sick Children
Bowry, Richard, St. Michael’s Hospital
Braude, Bernard, Hospital for Sick Children
Campbell, Fiona, Hospital for Sick Children
Chan, Bok Man, St. Michael’s Hospital
Chandra, Deven, St. Michael’s Hospital
Chen, Robert, St. Michael’s Hospital
Cooper, Andrew, Sunnybrook Health Sciences
Darragh, William, St. Michael’s Hospital

Friedman, Z


“Clinical impact of epistula anesthesia simulation on short and long term learning curve and complication rate: High fidelty vs. low fidelity model training.” Co-investigators: Naik V, Devito I. The Physicians Services Incorporated Foundation. $37,500, 2006-2008


Hare, G

Mechanisms of cerebral protection and injury during acute haemodilutional anemia, Bristol-Myers Squibb-CAS Career Scientist Award in Anesthesia and Perioperative Medicine. $90,000 per year, 2005-2008

“The threshold hematocrit for cerebral hypoxia is maintained by protective cardiovascular mechanism: The role for neuronal nitric oxide synthase (nNOS),” The Society of Cardiovascular Anesthesiologists (Principal Investigator). $20,000 per year, 2007-2009

“Does beta-1 adrenergic antagonism increase tissue hypoxia following acute hemodilution?” Canadian Anesthesiologists’ Society Wynands Research Award (Principal Investigator). $30,000, 2007

Joo, H

“High fidelity simulation versus traditional didactic seminars for teaching trainees Separation from cardiopulmonary bypass.” Physician’s Services Incorporated Foundation Grant, Principal Investigator: Joo HS, Co-Investigators: Naik VN, Savoldelli GL, LeBlanc VR, Latter DA, Mazer CD. $55,000 per year, 2006-2007

“Investigation of communication modalities for pediatric patients during transient voicelessness,” co-applicant with Lau T (PI). NSERC. $12,000, 2003-2006

“Neural assisted ventilation in pre-term infants,” NIH. Co-Applicant with Sniderly C (PI). $150,000, 2003-2006


“Therapeutic hypercapnia,” CHIR (career award), $250,000, 2002-2007


Kavanagh, B

“Lung development,” CIHR Group Grant, co-applicant with AK Tanswell (PI). $1,260,000, 2004-2009

“Investigation of communication modalities for pediatric patients during transient voicelessness,” co-applicant with Lau T (PI). NSERC. $12,000, 2003-2006

“Neural assisted ventilation in pre-term infants,” NIH. Co-Applicant with Sniderly C (PI). $150,000, 2003-2006


“Therapeutic hypercapnia,” CHIR (career award), $250,000, 2002-2007


Mazer, CD

“Computer program to evaluate patients with emergencies in the fluid, electrolyte and acid-base area.” (Co-investigator) Keenan Collaborative Research Award. St. Michael’s Hospital, Toronto, Canada. $25,000, 2006-2007

“High fidelity simulation versus traditional didactic seminars for teaching trainees separation from cardiopulmonary bypass.” (Co-investigator) Physicians Services Inc. $50,000 per year, 2006-2007


“Unraveling the black box of adverse events in cardiac surgery.” (Co-investigator) Heart and Stroke Foundation of Ontario. $271,050, 2006-2009


UNIVERSITY OF TORONTO- DEPARTMENT OF ANESTHESIA, 2006-2007 ANNUAL REPORT

UNIVERSITY OF TORONTO- DEPARTMENT OF ANESTHESIA, 2006-2007 ANNUAL REPORT
PEER-REVIEWED GRANTS

Angle, P
"Randomized controlled trial examining the impact of large traditional vs. small epidural needles on the incidence of postdural puncture headache in parturients." (PI). Halpeen S, Kronberg J, Kiss A, Gaweł M (Co-Investigators). Physician Services Incorporated Foundation Grant. $149,500, 2007

Baker, AJ
"Cephalin inhibition as a white matter neuroprotective therapy after TBI: proof of principle for functional, histopathological and behavioral improvements by targeting white matter following traumatic brain injury." (PI). Ontario Neurotrauma Foundation Personnel and Operating Grant. $75,000, 2006-2007


Balki, M
"Impact of uterotonics agents on isolated human myometrium." Co-Investigators: Kingdom J, Carvalho, J. University of Toronto Dean’s Fund Research Award. 2004-2009

Briët, F


"Impact of cardiopulmonary bypass and cardiac surgery on lymphocyte energetics and immune function in patients with non insulin dependent diabetes mellitus." (Principal Investigator) Society of Cardiovascular Anesthesiologists Young Investigator Support Award. Co-applicants: Keith M, Emrekh L, Mazer D. $50,000 per year, 2005-2007

Brown, SC


El-Beheiry, H


Fisher, J


De Lacy, John, Sunnybrook Health Sciences
Devito, Isabella, Mount Sinai Hospital
Doddson, Bruce, Hospital for Sick Children
Edmonds, John, Hospital for Sick Children
El-Beheiry, Hossam, University Health Network
Faciler, Gil, Sunnybrook Health Sciences
Fischer, Howard, Mount Sinai Hospital
Foster, Harry, Sunnybrook Health Sciences
Gagliese, Lucia, University Health Network
Gofeld, Michael, Sunnybrook Health Sciences
Goldsmidt, Eric, Mount Sinai Hospital
Grant, Carol, Hospital for Sick Children
Guest, Cameron, Sunnybrook Health Sciences
Haggie, Jane, University Health Network
Hughes, Vincent, St. Michael’s Hospital
Isaac, Lisa, Hospital for Sick Children
John, Elizabeth, University Health Network
Joo, Hwan, St. Michael’s Hospital
Katz, Abraham, St. Michael’s Hospital
Kay, Joseph, Sunnybrook Health Sciences
Knox, Bruce, St. Michael’s Hospital
Kurek, Matt, The Scarborough Hospital
Lai, Jacob, University Health Network
Lee, Henderson, Toronto East General Hospital
Levene, Richard, St. Michael’s Hospital
Lugrinbuehl, Igor, Hospital for Sick Children
Macpherson, Bruce, Hospital for Sick Children
Mallon, Joseph, Sunnybrook Health Sciences
Markwell, Hazel, St. Michael’s Hospital
McDonnell, Connor, Hospital for Sick Children
McGuire, Glenn, University Health Network
McLean, John, St. Michael’s Hospital
McNama, Pat, University Health Network
Meineri, Massimiliano, University Health Network
Michel, Ernest, Mount Sinai Hospital
Minkovich, Leonid, University Health Network
Morgan, Pamela, Women’s College Hospital
Naito, Viren, St. Michael’s Hospital
Ng, Elaine, Hospital for Sick Children
O’Leary, Gerard, University Health Network
Peng, Phillip, University Health Network
Petroz, Guy, Hospital for Sick Children
Prabhu, Atul, University Health Network
Rieger, Daniel, Sunnybrook Health Sciences
Robertson, James, Hospital for Sick Children
Samahin, Arshad, Sunnybrook Health Sciences
Shumka, David, University Health Network

de Ruiter, Joost, Hospital for Sick Children
Djurdevic, Dragun, Women’s College Hospital
Dosch, Elizabeth, University Health Network
Eisen, Leonard, Mount Sinai Hospital
Evans, Wayne, University Health Network
Fedorko, Ludwik, University Health Network
Fleming, Ivor, Mount Sinai Hospital
Friedman, Zeer, Mount Sinai Hospital
Gardner-Nix, J, Sunnybrook Health Sciences
Goldenson, Gordon, Sunnybrook Health Sciences
Graham, Marianne, Sunnybrook Health Sciences
Grise, Ann, University Health Network
Hayes, Jason, Hospital for Sick Children
Holby, Helen, Hospital for Sick Children
Idestrup, Christopher, Sunnybrook Health Sciences
John, Justin, Hospital for Sick Children
Joo, Daisy, Hospital for Sick Children
Karsi, Cengiz, Hospital for Sick Children
Katznelson, Rita, University Health Network
Kettles, Jane, Toronto East General Hospital
Kolon, Michael, St. Michael’s Hospital
Laframme, Claude, Sunnybrook Health Sciences
Lambert, Stephane, St. Michael’s Hospital
Leung, Peter, St. Michael’s Hospital
Levine, Mark, Hospital for Sick Children
Mackenzie, Testence, St. Michael’s Hospital
Mak, Peter, Scarborough General Hospital
Mark, Patrick, Toronto East General Hospital
McCluskey, Stuart, University Health Network
McGhee, Irene, Sunnybrook Health Sciences
McKenzie, Robert, Sunnybrook Health Sciences
McLeod, Elizabeth, Hospital for Sick Children
McRae, Karen, University Health Network
Meschino, Alfie, Toronto East General Hospital
Middleton, William, University Health Network
Morgan, Anwar, Women’s College Hospital
Morningstar, Beverly, Sunnybrook Health Sciences
Naser, Bassem, Hospital for Sick Children
O’Driscoll, Martha, Sunnybrook Health Sciences
Ondhia, Manharlal, Sunnybrook Health Sciences
Perlas, Ana, University Health Network
Pollard, Brian, St. Michael’s Hospital
Rieger, John, Mount Sinai Hospital
Roberts, Martyn, University Health Network
Safa, Behnam, Sunnybrook Health Sciences
Sarmah, Anita, Sunnybrook Health Sciences
Sinclair, Lesley, Sunnybrook Health Sciences

Who Are We?

Grants
Who Are We?

Middleton, Claire, University Health Network
Wijeysundera, D,
Seary, Richard,
Sakotic, George,
Robison, Gordon,
Sakotic, George,
Seary, Richard,
Tanner, Keith, Sunnybrook Health Sciences
Taylor, Katherine, Hospital for Sick Children
Teresi, James, Mount Sinai Hospital
Tharmaratnam, Uma, Mount Sinai Hospital
Toussignant, Claude, St. Michael’s Hospital
Tumber, Paul, University Health Network
Urbach, Gordon, Mount Sinai Hospital
Urbanikiewicz, Les, Toronto East General Hospital
van der Vyver, M, Women’s College Hospital
van Rensburg, Adriana, University Health Network
Vegas, Annette, University Health Network
Venkat Raghavan, L, University Health Network
Wasowicz, Marcin, University Health Network
Wassermann, Jeffrey, St. Michael’s Hospital
Wong, Jean, University Health Network
Wong, Sophia, Sunnybrook Health Sciences
Yee, Doreen, Sunnybrook Health Sciences
Yoo-Ten, Eric, Mount Sinai Hospital
Zaourer, Christian, Hospital for Sick Children


Tarshe, J
University of Toronto Department of Anesthesia Faculty Development Day. Small Group Session, “Teaching and evaluating professionalism: fantasy or reality?” November 2006

Vegas, A
Tygerberg Hospital, Transesophageal Echocardiography (TEE) Practical intraoperative demonstration and didactic talks, “TEE indications and role,” “TEE Doppler,” and “TEE advanced cases.” Capetown, South Africa, September/October 2006
Toronto General Hospital, Toronto, Ontario, November 2006

Wasowicz, M
John Paul II Hospital, “Cardiac assessment in patient with heart disease undergoing non-cardiac surgery” and “Heparin induced thrombocytopenia and its importance in anesthesia and critical care.” Krakow, Poland, December 2006

Zhang, H
Federation of Clinical Immunology Societies Annual Meeting, “Molecular mechanisms of α-defensins in immune modulation.” San Francisco, California, July 2006
International Meeting on pathologic mechanisms of HSN1 influenza and virally induced respiratory human diseases, “Mechanisms of acute lung injury and ARDS.” Hong Kong, July 2006
Hong Kong University Department of Microbiology, Visiting Professors. Hong Kong, July 2006
21st Annual Meeting of the International Symposium on Critical Care Medicine, “Molecular biology and genetics in respiratory system.” Venice, Italy, November 2006
University of Toronto Department of Physiology, “Lung defense.” Toronto, Ontario February 2007

Invited Lectures

Invited Lectures

Smith, Terry, Sunnybrook Health Sciences
Solaric, Bojana, University Health Network
Srebnjak, M, Women’s College Hospital
Tanner, Keith, Sunnybrook Health Sciences
Tarshe, J, Sunnybrook Health Sciences
Taylor, Katherine, Hospital for Sick Children
Teresi, James, Mount Sinai Hospital
Tharmaratnam, Uma, Mount Sinai Hospital
Toussignant, Claude, St. Michael’s Hospital
Tumber, Paul, University Health Network
Urbach, Gordon, Mount Sinai Hospital
Urbanikiewicz, Les, Toronto East General Hospital
van der Vyver, M, Women’s College Hospital
van Rensburg, Adriana, University Health Network
Vegas, Annette, University Health Network
Venkat Raghavan, L, University Health Network
Wasowicz, Marcin, University Health Network
Wassermann, Jeffrey, St. Michael’s Hospital
Wong, Jean, University Health Network
Wong, Sophia, Sunnybrook Health Sciences
Yee, Doreen, Sunnybrook Health Sciences
Yoo-Ten, Eric, Mount Sinai Hospital
Zaourer, Christian, Hospital for Sick Children

Brown, Stephen D, North York General
Choi, Mabel, Sunnybrook Health Sciences
Dickson, Jeffrey, St. Michael’s Hospital
Gourlay, Douglas, Mount Sinai Hospital
Ho, Peter, Mount Sinai Hospital
Hussain, Kamal, Women’s College Hospital
Jarani, Marjan, University Health Network
Kanellakos, George, University Health Network
Kashin, Brian, North York General Hospital
Kemp, Sheelah, Hospital for Sick Children
Ko, Raynauld, University Health Network
Kulchyk, James, Toronto East General Hospital
Lin, Ken, St. Michael’s Hospital
Locke, Julian, University Health Network
Mosher, Emily, Toronto East General Hospital
Pelowski, Arie, Hospital for Sick Children
Rucker, Joshua, Mount Sinai Hospital
Salman, Aliya, Mount Sinai Hospital
Singh, Davindra, St. Michael’s Hospital


Tarshe, J
University of Toronto Department of Anesthesia Faculty Development Day. Small Group Session, “Teaching and evaluating professionalism: fantasy or reality?” November 2006

Vegas, A
Tygerberg Hospital, Transesophageal Echocardiography (TEE) Practical intraoperative demonstration and didactic talks, “TEE indications and role,” “TEE Doppler,” and “TEE advanced cases.” Capetown, South Africa, September/October 2006
Toronto General Hospital, Toronto, Ontario, November 2006

Wasowicz, M
John Paul II Hospital, “Cardiac assessment in patient with heart disease undergoing non-cardiac surgery” and “Heparin induced thrombocytopenia and its importance in anesthesia and critical care.” Krakow, Poland, December 2006

Zhang, H
Federation of Clinical Immunology Societies Annual Meeting, “Molecular mechanisms of α-defensins in immune modulation.” San Francisco, California, July 2006
International Meeting on pathologic mechanisms of HSN1 influenza and virally induced respiratory human diseases, “Mechanisms of acute lung injury and ARDS.” Hong Kong, July 2006
Hong Kong University Department of Microbiology, Visiting Professors. Hong Kong, July 2006
21st Annual Meeting of the International Symposium on Critical Care Medicine, “Molecular biology and genetics in respiratory system.” Venice, Italy, November 2006
University of Toronto Department of Physiology, “Lung defense.” Toronto, Ontario February 2007
Anesthesia Fellows 2006-2007

The Hospital for Sick Children

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Mount Sinai Hospital

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St. Michael's Hospital

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Sunnybrook Health Sciences Centre

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UHN/Toronto General Hospital

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Wijayatilake, Dhileep | UK |     |         |

Invited Lectures


Canadian Anesthesiologists’ Society Annual Meeting, “Update from the Royal College – changes to the written exam.” Calgary, Alberta, June 2007

O’Leary, G


University Health Network, Surgical Services Planning Session, “Anesthesia where are we going and who cares?” Toronto, Ontario, May 2007


Oeret, B


Australia Anesthesia Society National Scientific Congress (Keynote Address), “Unraveling the mysteries of anesthetics: From molecular substrates to behavior.” Coolum, Australia, October 2006


Royal Darwin Hospital, “Mechanisms of anesthesia.” Darwin Australia, October 2006

Royal Darwin Hospital, “Anesthesia patient safety.” Darwin Australia, October 2006

University of Alberta Department of Pharmacology, “Anesthesics and memory.” Edmonton, Alberta, January 2007

Queen’s University Whistler Anesthesia Meeting, “New insights into how anesthetics work: Implications for clinicians.” Whistler, British Columbia, February 2007

Queen’s University, Whistler Anesthesia Meeting, “Improving drug safety in your anesthetic practice.” British Columbia, February 2007

Scientific Day Department of Anesthesia, Royal College Lecturer. Queen’s University, Kingston, Ontario, March 2007

Sunnybrook Health Sciences Centre Grand Medical Rounds, “Anesthesia, amnesia and postoperative cognitive dysfunction.” Toronto, Ontario, April 2007


St. Michael’s Hospital

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Wijayatilake, Dhileep | UK |     |         |
**Residents 2006-2007**

**PG5:**
- Ali Asghar Abbass
- Michael Bloom
- Jonathan Kong
- Paul McHardy
- Timothy Weike
- Nasser Al-Kemyani
- David Chang
- Rohit Kumar
- Diana Tamir
- Rashad Alqasim
- Meredith Ford
- Hoi Kwan Lee
- Anna Topchicheva

**PG4:**
- Raed Alali
- Jennifer Brunton
- Rosemarie Darani
- Catherine Kim
- Jasvir Marwaha
- Dov Weiss
- Yasser Alsayegh
- Liza Chelico
- Peter Darby
- Alyssa Li
- Daniella Samuel
- Steven Bernstein
- Hance Clarke
- Anton Marinov
- Kathryn Simms

**PG3:**
- Richard Ahn
- Chris Coultho
- Danny Grossi
- Nisha Kanani
- Magid Morgan
- Collan Simmons
- Elizabeth Au-Yeung
- Thomas Donnelly
- Mohammed Hussein
- Sheila Razi
- Greg Silverman
- Avin Chang
- Ockert Fourie
- Mital Joshi
- Katharine Ryan

**PG2:**
- Maria Carmen Angeles
- Jasmine Cheung
- Jerod Gollant
- Megan Hayter
- Alison Ling
- Lisa Roberts
- Nisha Al-Kaneyani
- Stephen Choi
- Ahmed Hamdy
- Michael Hiscox
- Rachel Martin
- Hala Sunbul
- Maneesh Deshpande
- John Hanlon
- Rob Kriz
- Philip Perina
- Hamid Yarkandi

**PG1:**
- Abdi Abdurrahman
- Monica Chuang
- Ben Ari Fried
- Han Kim
- Rachel Meyer
- Amy Trang
- Tim Ararat
- Abelina D’Costa
- Diana Hayward
- Kyle Kirkham
- Rachael Seib
- Darlene Weekes
- Karen Caputo
- Catherine Delbridge
- Terence Ip
- Bobby Mehta
- Usha Shastri
- Mohammad Yaseen

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**McKnight, D**
- University of Toronto, Teaching the Teachers Bioethics, “Royal College accreditation of bioethics in residency: What do they expect? What can we do?” Toronto, Ontario, December 2006
- University of Toronto Anesthesia Faculty Development Day, “Incorporating ethics into your teaching program.” Toronto, Ontario, November 2007

**Meineri, M**
- Stellenbosch University’s First Hands-on perioperative TEE course, Visiting Professor. Cape Town, Republic of South Africa, September/October 2006
- University of Toronto Department of Anesthesia Departmental Round, “Update on Cardiac Anesthesia: Fast track Cardiac anesthesia, can we make it faster?” Italy, June 2007

**Morgan, P**
- Women’s College Hospital Department Rounds. “Medication safety.” Toronto, Ontario, January 2007
- Canadian Anesthesiologists’ Society Annual Meeting, “Simulation based education: What it can and can’t do.” Calgary, Alberta, June 2007
- Continuing Medical Education lecture to William Osler Department of Anesthesia, “Anesthesia for cesarean section.” Toronto, Ontario, June 2007
- Women’s College Hospital Combined Obstetrics/Anesthesia/Nursing Rounds, “Turning a team of OB experts into an expert OB team.” Toronto, Ontario, June 2007

**Murphy, P**
- Alberta Society of Intensive Care Physicians, “Journey to the bottom of the world, testing physiologic limits in Antarctica.” Lake Louise, Alberta, January 2007
- Visiting Professor of the Royal College of Physicians and Surgeons of Canada, Continuing Medical Education Program, University of Calgary, “Journey to the bottom of the world, testing physiologic limits in Antarctica.” Calgary, Alberta, March 2007
- Memorial University Department of Anesthesia, Annual Anesthesia Residents Research Day (Keynote Speaker), “Journey to the bottom of the world, testing physiologic limits in Antarctica.” St. John, Newfoundland, May 2007

**Naik, V**

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**Who Are We?**

**Women’s College Hospital**

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- Rachael Seib
- Darlene Weekes
- Karen Caputo
- Catherine Delbridge
- Terence Ip
- Bobby Mehta
- Usha Shastri
- Mohammad Yaseen

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**Invited Lectures**


Mazer, CD
51st Annual Ontario Anesthesia Meeting, "The last minute cardiac work-up." Hamilton, Ontario, September 2006


29th Annual Meeting of the Society of Cardiovascular Anesthesiologists, "Blood conservation in cardiac surgery." Montreal, Canada, April 2007


University of Manitoba Department of Anesthesia, Visiting Professor, "Cardiovascular Anesthesia Research: Have all the questions already been answered?" Winnipeg, Manitoba, November 2006


McCluskey, SA

Toronto Western Hospital, "Perioperative blood conservation for total joint arthroplasty and spine surgery: Current statistics and future plan." Toronto, Ontario, November 2006

University Health Network, Department of Cardiovascular Surgery Grand Rounds, "Current issues in transfusion medicine for CV surgery." Toronto, Ontario, February 2007

University Health Network, Department of Urology Grand Rounds, "Current issues in transfusion medicine for urology." Toronto, Ontario, March 2007

Canadian Anesthesiologists’ Society (CAS) Annual Meeting, "Lessons learned from liver transplantation," (Session Co-Chair and Presenter) "Hepatopulmonary Syndrome and Portopulmonary Hypertension." Calgary, Alberta, June 2007

McGrath, PA
Conference on Chronic Abdominal Pain in Children (Keynote Speaker), "Children with chronic pain – vulnerability factors that affect onset and treatment." Massachusetts General Hospital, Boston, Massachusetts, October 2006


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**Selected Chairs, Honors and Awards**

We are pleased to announce the recipients of our departmental awards in 2007. The following awards were presented to the awardees at our 28th Annual Shields Research Day, 2007:

- The Dr. John Desmond Award recognizes excellence in clinical teaching of undergraduate students: **Robert Chen** (Assistant Professor, St. Michael’s Hospital)
- The Dr. Gerald Edelist Award is awarded to a faculty member in recognition of excellence as a clinical teacher of residents in anesthesia: **Viren Naik** (Assistant Professor, St. Michael’s Hospital)
- The David Fear Award is awarded for outstanding contributions to continuing medical education and continuing professional development in the Department of Anesthesia: **Sharon Davies** (Assistant Professor, University Health Network, Mount Sinai Hospital)
- The UT Anesthesia Faculty Research Award is awarded in recognition of contributions to research in anesthesia: **Joel Katz** (Professor, University Health Network, TGH)
- The RJ Byrick Award recognizes the best Fellow’s research paper presented at the Annual Shields Research Day: **Michelle White** (Clinical Fellow, The Hospital for Sick Children)
- The AC Bryan Award is awarded to a graduate student judged to have presented the best research project at the Annual Shields Research Day: **Albert Tsui** (Graduate Student, St. Michael’s Hospital)
- The Dr. Hynek Rothbart Award is awarded to the best paper presented by a resident at the Annual Shields Research Day: **Dov Weiss** (PG4)
- The Thomas Donald Hambell Memorial Award in Anesthesia recognizes outstanding contributions to the Residency Program (as chosen by other residents): **Timothy Welke** (PG5)
- The Dr. Evelyn Bateman Award is awarded in recognition of excellence in anesthesia at the undergraduate level: **Ian Randall** (OT7)
- The Alan Laws Travel Fellowships are awarded to support academic and research interests/projects in anesthesia: **Angelina Guzzo** (Clinical Fellow, Sunnybrook Health Sciences Centre) and **Paul McHardy** (PG5)

We are also pleased to announce that members of the Department of Anesthesia at the University of Toronto were the recipients of numerous prestigious awards at the Canadian Anesthesiologists’ Society (CAS) meeting in Calgary, AB. Please join us in congratulating the following individuals:

- The Dr. John Bradley Young Educator Award: **Viren Naik** (Assistant Professor, St. Michael’s Hospital)
- The CAS Research Recognition Award: **Frances Chung** (Professor, University Health Network, TWH)
- The CAS Research Award in Anesthesia: **Zeef Friedman** (Assistant Professor, University Health Network, Mount Sinai Hospital)
- The Dr. RA Gordon Patient Safety Research Award: **Pamela Angle** (Assistant Professor, Women’s College Hospital)
- The Dr. Earl Wynnands Research Award in Cardiovascular Anesthesia and/or Peri-Operative Blood Conservation: **Gregory Hare** (Associate Professor, St. Michael’s Hospital)
• The Richard Knill Research Competition: Gregory Hare (Associate Professor, St. Michael’s Hospital)

• The Bristol Myers Squibb Canada-CAS Career Scientist Award in Anesthesia and Peri-Operative Medicine: Keyvan Karkouti (Associate Professor, University Health Network, TGH)

• The Baxter Corporation Canadian Research Award in Anesthesia: Richard Brull (Assistant Professor, University Health Network, TWH)

• The Smiths Medical Canada Ltd Canadian Research Award in Pain Research and/or Regional Anesthesia: Joseph Kay (Assistant Professor, Sunnybrook Health Sciences Centre)

• The Abbott Laboratories Ltd/CAS Fellowship in Anesthesia: Meredith Ford (PG5)

• The Resident’s Competition: Dov Weiss (PG4)

The following awards were also bestowed in 2006-2007:

• Pamela Morgan (Professor, Women’s College Hospital), received the Best Paper in Anesthesia Education and Simulation award at the Canadian Anesthesiologists’ Society Annual Meeting in June 2007

• Beverley Orser’s (Professor, Sunnybrook Health Sciences Centre) research was profiled in Scientific America in June 2007. She also received the Research Recognition award from the Canadian Anesthetists’ Society in June 2006

• Marianne Graham (Assistant Professor, Sunnybrook Health Sciences Centre) received the Bob Mackenzie Clinical Teachers Award in December 2006, Sunnybrook Anesthesia Department

• Alejandro Jadad (Professor, University Health Network, TGH) gave the Gary Hermance Lecture at the Association for Excellence in Communication and received the Chief Scientist’s Distinguished Lecturer Award from Health Canada in 2006

18th Conference of the Canadian Bioethics Society Conference and 3rd International Conference of Clinical Ethics and Consultation, “Toward a person-centered health system in the age of humanodes and demographic tsunamis.” Toronto, Ontario, June 2007


John, J
The Children’s Hospital at St. Peter’s University Hospital, Pediatric Grand Rounds Lecture, “Pediatric pain management.” New Brunswick, New Jersey, October 2006

Kavanagh, B

European Society of intensive Care Medicine (Invited Speaker), “Permissive and therapeutic hypercapnia.” Barcelona, Spain, September 2006


7th Mexican National Pediatric Intensive Care Congress (Invited Speaker), “Mechanisms of Ventilator-Induced Lung injury.” Ixtapa, Mexico, November 2006


40th Anniversary Celebration of the Nagoya City University Graduate School of Medical Sciences, Department of Anesthesiology & Medical Crisis Management. Nagoya, Japan, June 2007


5th World Congress of Pediatric Intensive Care Medicine, Course Coordinator and Invited Speaker, “Mechanisms of Ventilator-Induced Lung injury,” and “Controlling Glucose in the PICU.” Geneva, Switzerland, June 2007

Loke, J

Toronto General Hospital, Lecture to Operating Room Nurses, “Malignant hyperthermia In-service.” Toronto, Ontario, February 2007


Macarthur, A
Society for Obstetric Anesthesia and Perinatology and Obstetric Anaesthetists’ Association (SOAP-OAA) Joint Meeting, “What’s new in the management of postpartum hemorrhage?” Dublin, Ireland, August 2006
Report from the Vice-Chair, Clinical Practice
Dr. Gerald O’Leary

Anesthesia care teams – the ‘made in Ontario’ response to personnel concerns and a desire to permit the development of meaningful inter-professional, team-based practice – are now being piloted throughout the province. This is the most significant issue in clinical practice that occurred in 2006-07.

Last fall, the MOHLTC funded a $10M, 2-year project led by Keith Rose across nine hospitals to evaluate the integration of anesthesia care teams into anesthesia practice. This was a competitive process, wherein all hospitals in the province were invited to propose how they would develop an anesthesia care team in their institution. Each institution provided a business plan and a vision for anesthesia care, and all proposals were signed off by the CEO Anesthetists-in-Chief. The departments of anesthesia in all the province’s hospitals were invited to compete for inclusion in the anesthesia care team pilot project, and most did. The successful institutions were: Halton Healthcare; Kingston General Hospital; London Health Sciences Centre; Royal Victoria Hospital; Sault Area Hospital; Sunnybrook Health Sciences Centre; the Ottawa Hospital; Toronto East General Hospital; and the University Health Network. The diversity in geographic location was as great as the diversity in the depth of previous experience of working with anesthesia care teams. Moreover, similar diversity was found in the range of scope of proposed practice across the continuum of perioperative anesthesia; this feature suggests that the care teams will explore the full and evolving range of perioperative care that characterizes the practice of the modern anesthesiologist. The leader of this project, Dr. Keith Rose, is Associate Professor of Anesthesia at the University of Toronto and formerly anesthetist-in-chief at St. Michael’s Hospital, is currently VP Medical Affairs at the North York General Hospital.

In preparation for this province-wide initiative, two committees are busy at work. First, the ACT advisory committee, co-chaired by Dr. Stephen Brown and Ms. Sue Bead, reviewed the candidate applications and continue to advise on the implementation specifics. Several members of this committee meet on a regular basis with local site leaders and refine elements of the proposed teams’ functions. So far so good. At the UHN we have at this stage extensive experience with anesthesia care teams. Our sense is that the team approach is superior. Indeed, our faculty value the prospect immensely, and contribute extensively to the education of anesthesia assistants (respiratory therapists and nurses training at the Michener Institute), in order that the team members will be taught by those best qualified to do so. I am a strong proponent of the ACT model. I simply see no viable, palatable alternative to address our personnel resource issue. I equally firmly believe that there are areas of care that can be safely delegated and supervised. I think our goal should be to have the best educated, motivated assistants that we can recruit and train. I think we need to proactively discuss how we integrate them and their skill set safely, effectively and openly into our practice at each of our hospitals. However, the introduction of any system can bring problems as well as benefits.

Hence, the second committee involved in the Anesthesia Care Team project. Chaired by Dr. Brian Kavanagh, this committee is charged with evaluating the effectiveness of the anesthesia care teams, and has a broad membership including the chairs of all the provincial medical schools. Dr. Keyvan Karkouti, a member of this committee, has the responsibility of designing and overseeing the research methodology that will demonstrate whether – and why – the teams have had a favorable impact on the safety, quality, and volume of anesthesia services, as well as the cost, compared with previous practice.
This pilot project is a very constructive approach to the anesthesia care team issue. All professions undergo significant changes over time – we are hopeful that this will be good for the profession, good for standards, good for cost-benefit, and most importantly, good for patients. We must celebrate the accomplishments of 2006-07 (and before), by making sure that we are open to continued development and excellence in 2007-08 (and beyond).

Hospital Statistics

The following table records anesthesia-related clinical data obtained from the UT affiliated local teaching hospitals for the period July 1, 2006 to June 30, 2007:

<table>
<thead>
<tr>
<th>TGH</th>
<th>TWH</th>
<th>Mount Sinai</th>
<th>Women’s</th>
<th>Sunnybrook</th>
<th>St. Mike’s</th>
<th>Sick Children’s</th>
<th>TOTAL - ALL SITES</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Anesthetics:</td>
<td>9,461</td>
<td>7,030</td>
<td>9,295</td>
<td>4,041</td>
<td>11,600</td>
<td>14,800</td>
<td>18,000</td>
</tr>
<tr>
<td>Regional Anesthetics:</td>
<td>200</td>
<td>3,600</td>
<td>5,684</td>
<td>73</td>
<td>2,500</td>
<td>1,210</td>
<td>1,000</td>
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<tr>
<td>Deliveries:</td>
<td>n/a*</td>
<td>n/a*</td>
<td>6,385</td>
<td>3,642</td>
<td>n/a*</td>
<td>2,825</td>
<td>n/a*</td>
</tr>
<tr>
<td>Epidurals/spinals:</td>
<td>704</td>
<td>1,200</td>
<td>5,351</td>
<td>2,051</td>
<td>1,200</td>
<td>2,120</td>
<td>300</td>
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<tr>
<td>Caesarian sections:</td>
<td>n/a*</td>
<td>n/a*</td>
<td>2,170</td>
<td>1,248</td>
<td>n/a*</td>
<td>832</td>
<td>n/a*</td>
</tr>
<tr>
<td>Pain clinic cases:</td>
<td>n/a*</td>
<td>n/a*</td>
<td>34%</td>
<td>34%</td>
<td>n/a*</td>
<td>29%</td>
<td>n/a*</td>
</tr>
<tr>
<td>Acute pain services:</td>
<td>3,082</td>
<td>2,472</td>
<td>2,601</td>
<td>252</td>
<td>7,000</td>
<td>500</td>
<td>860</td>
</tr>
<tr>
<td>ICU beds:</td>
<td>60</td>
<td>23</td>
<td>16</td>
<td>2</td>
<td>65</td>
<td>56</td>
<td>25</td>
</tr>
</tbody>
</table>

* This service is not provided at this hospital

Invited Lectures

Sunnybrook Health Sciences Centre, Lecture to Internal Medicine Residents, “Appropriate use of life support.” Toronto, Ontario, 2007

Halpern, S
Canadian Society of Anesthesiologists Annual Meeting (Chairman), “Poster-Discussion Obstetrical Anaesthesia Research.” Calgary, Alberta, June 2006
Women’s College Hospital, Department of Family Medicine Consultant Rounds, “Preoperative assessment.” Toronto, Ontario, November 2006

Hare, G
University of Ottawa Department of Anesthesia, David Power Memorial Lecture, “Genomics, Proteomics and Informatics in the Management of Perioperative Patients: What can we learn and what can’t we learn.” Ottawa, Ontario, October 2006

Hayes, J
Canadian Pediatric Anesthesia Society, “Rapid sequence induction is contraindicated in children.” Vancouver, British Columbia, November 2006

Hollby, H
Congenital Cardiac Anesthesia Society Pediatric Cardiac Anesthesia Conference at Pediatric Anesthesiology (CCAS/SPA), Moderator and Presenter of a session on pulmonary hypertension, “Dangerous times in out-of-the-way places: MRI and pulmonary hypertension.” Phoenix, Arizona, February 2007
Cardiovascular Rounds Texas Children’s Hospital, “Physiological Considerations for the Hybrid Procedure for HLHS.” Houston, Texas, September 2006

Houston, P
Canadian Anesthesiologist Society Meeting, “Community vs. academic anesthesia – Career choices for anesthesia residents.” Calgary, Alberta, June 2007
Report from the Vice-Chair, Education

Dr. Patricia Houston

The Department of Anesthesia provides exemplary educational programs across the spectrum of undergraduate, graduate and continuing medical education and professional development. This is accomplished due to the commitment and dedication of our excellent teachers and the recognition of the value of their contribution to the academic achievements of our department. We are teachers of perioperative medicine and include in our curriculum and evaluation processes the Canadian Medical Education Directions for Specialists (CanMEDS) competencies. Anesthetists are recognized by the other departments and faculties as experts at teaching resuscitation and team-centered skills both in the clinical setting and in simulation centers.

The Undergraduate program continues to meet the challenge of teaching an increasing number of undergraduate students from the University of Toronto and elective students from Canada and abroad. Dr. Pam Morgan stepped down this year from the position of Chair of Undergraduate Education after eleven years of dedication to the undergraduate portfolio. She is noted for the development of a Simulator Education Day which has been emulated by many other departments in Canada since its inception. Dr. Isabella Devito has taken on this important position as of July 1, 2007 and is leading the development of the University of Toronto Medical Student Textbook. Dr. Devito and the Undergraduate Committee will also be exploring the increased use of simulation and web-enabled learning in the undergraduate program.

The Postgraduate program led by Dr. Mark Levine underwent a very successful Royal College of Physicians and Surgeons of Canada accreditation review this year. The program was noted for its use of simulation in the curriculum and the opportunities provided to residents for developing research skills and participating in scholarly activities. Dr. Viren Naik, a member of the Postgraduate Committee, who is internationally known for his teaching and research activities in simulation, was awarded the John Bradley Young Educator Award at the Canadian Anesthesiologists Society meeting. A resident from the program, Dr. Dov Weiss, won the resident research prize at this year’s CAS for a research project he completed with Dr. Naik. The number of international Fellows seeking further post-residency training at our university continues to grow exponentially. Currently, there are 88 Fellows training in sub-specialty anesthesia from 24 different countries at the University of Toronto.

Dr. Peter Slinger chairs the Continuing Education Committee. The CE committee expanded its mandate this year to include professional development as one of its core roles. The committee is responsible for fourteen different courses as well as a University-wide Grand Rounds webcast and online CME modules on the University website. These programs are nationally recognized for their excellence and are very well attended by local faculty and community hospital physicians, as well as academic physicians from across Canada. The Committee plans to undertake a needs assessment of the faculty in the upcoming year to better formulate educational objectives for our continuing education and professional development programs, and to support the design of curriculum and evaluation tools to meet these needs.

As the educational programs in the department continue to grow, it is clear that additional educational expertise and support will be required to maintain and improve the quality of our programs. To this end, the UT department has initiated the recruitment of a full-time professional educator who will work collaboratively with the Vice-Chair Education, Education Directors, and other education leaders to enhance the educational experience for both teachers and trainees across the continuum of anesthesia education.

Invited Lectures

Gofeld, M


McGill University Medical Skills Centre, Interventional Cadaver Course, “Sacral/ligament radiofrequency denervation.” Montreal, Quebec, June 2007

3rd International Forum of Pain Medicine, “Oxycontin under the magnifying glass.” Lumbar medial branches, dorsal roots and intervertebral disc lesioning.” Montreal, Quebec, June 2007

Goldszmidt, E


Mount Sinai Department of Nursing; Operating Rooms and Endoscopy, “Cardiac arrest in the O.R.” Toronto, Ontario, July 2006

Graham, M
Toronto Anesthetic Practice Conference, “Obstructive sleep apnea - Nothing to snore at.” Toronto, Ontario, November 2006

Guest, C


Lecture to Gynecologic Oncology Fellows, University of Toronto, “Principles of critical care medicine.” Toronto, Ontario, 2006

Lecture at Scarborough General Hospital, “Organ donor identification and management.” Scarborough, Ontario, 2006

South Muskoka Memorial Hospital, “Organ donor identification and management.” Bracebridge, Ontario, 2006

Sudbury Regional Hospital, “Organ donation after cardiac death.” Sudbury, Ontario, 2006

Sunnybrook Health Sciences Centre, Division of Nephrology, “Donation for transplantation.” Toronto, Ontario, November 2006

Sunnybrook and Women’s College Health Sciences Centre, Department of Critical Care Medicine Grand Rounds and Emergency Medicine Grand Rounds, “Organ donation after cardiac death.” Toronto, Ontario, 2006

Sunnybrook Health Sciences Centre, Lecture to Internal Medicine Residents, “Appropriate use of life support.” Toronto, Ontario, 2006

University of Toronto Joint Centre for Bioethics, “Organ donation after cardiac death: A panel discussion of the ethical issues.” Toronto, Ontario, 2006
Undergraduate Education
Dr. Isabella Devito, Director
Undergraduate Education Program

The strength of the Undergraduate program continues to be the dedication of the faculty of the Department of Anesthesia. Our faculty are involved in all years of the medical curriculum. Our involvement begins with the selection of the medical school class and ends with the graduation ceremonies.

In Years 1 and 2, the faculty are involved in teaching ASCM (Art and Science of Clinical Medicine) I and II, DOCH (Determinants of Community Health) II, Metabolism and Nutrition, Foundations of Medical Practice and Brain and Behavior. They are highly evaluated and their commitment to excellence is greatly appreciated.

This year, Roderick Cheung, one of our second year medical students at the University of Toronto placed second in the CAS Medical Student Essay Contest for his essay entitled, “High-Fidelity Patient Simulation: Future of Anesthesia Education.”

The Department of Anesthesia’s elective program continues to be an extremely popular program. Our electives program accepts local, national and international students in their third or fourth year of medicine. We continue to have record numbers of students requesting rotations in Toronto. Our rotations are in such high demand, that we unfortunately had to turn away students. To remedy this, we will be encouraging Community Hospitals with faculty who have an interest in teaching to partner with us. This will be a tremendous support to our already established program.

Our faculty’s most intensive contribution to undergraduate teaching is the fourth year Anesthesia rotation. This is comprised of a two-week rotation for the first two blocks, and a seven to eight day rotation for the last three blocks. The shortened rotation is necessary to accommodate the CallRMS interviews. The students in the shortened blocks continue to ask for a longer rotation. The major objectives of the rotation are to understand the implications of pre-existing disease for patients undergoing anesthesia, to learn the principles and practices of acute resuscitation, and pain management.

As part of their two-week rotation, all fourth year students participate in the Simulator Education Day. The Department of Anesthesia at the University of Toronto was the first in Canada to incorporate simulation into the curriculum. The simulation day includes instruction on airway management, intravenous cannulation and clinical scenarios involving resuscitation. This educational day is highly evaluated by our students. Our senior residents contribute immensely to the success of this day.

At the end of 2006, Dr. Pamela Morgan stepped down as Chair of Undergraduate Education. Dr. Morgan was the Anesthesia Clerkship Course Director since 1995 and became Chair of Undergraduate Education in 2002. Under her leadership, the Anesthesia Simulator Education Day for undergraduate students was developed.

With increasing enrollment in Medicine, one of our biggest challenges is incorporating the increased numbers while still providing an excellent educational experience. Over 200 students were enrolled in Year 4 during the 2006-2007 academic year. The Toronto East General Hospital has been added to the Wightman-Derris Anesthesia rotation to assist with the increase in student numbers. The feedback from all sites has been excellent.
Peripheral Nerve, Obstetric and Pediatric Ultrasound-Guided Blocks (POP), sponsored by Sonosite (Lecturer and Workshop Instructor), “Ultrasound facilitated spinal and epidurals in obstetrics.” Chicago, Illinois, June 2007

Chen YY

Cooper, RM
Columbia University Medical Center, Visiting Professor. New York, New York, July 2006
Society for Airway Management, Annual Scientific Meeting, “Managing the unanticipated difficult intubation,” and “Airway Workshop: Extubation of the high-risk airway.” La Jolla, California, September 2006

The Toronto Anesthesia Symposium, Airway Workshop, “Is direct laryngoscopy obsolete?” University of Toronto, Toronto, April 2007
European Society of Anesthesiology Annual Scientific Meeting, Euroanesthesia 2007, “Visualized vs. blind intubation techniques in the difficult airway: what makes the difference?” Munich, Germany, June 2007

Crawford, MW
University of Toronto, Department of Pediatric Laboratory Medicine, City-wide Clinical Biochemistry Rounds, “Propofol infusion syndrome.” Toronto, Ontario, April 2007
Canadian Anesthesiologists’ Society Annual Meeting, “Pediatric publications that have changed my practice.” Calgary, Alberta, June 2007

Davallou, M

Davies, S
Ontario Medical Association, Department of Anesthesia, “When your epidural doesn’t work.” Toronto, September 2006
University of Toronto, Anesthetic Practice, “The bleeding parturient.” Toronto, Ontario, November 2006
Trillium Health Center, “Management of post partum hemorrhage.” June 2007

A University of Toronto Medical Student Textbook is presently in progress, with faculty from all hospitals contributing to this project. The support that this project received from all departments demonstrates the tremendous commitment of our faculty to Undergraduate Education. The textbook was announced at the ACUDA meeting, June 2007 and many undergraduate departments across Canada are awaiting its publication.

Our focus for the next academic year is the development of instructional videos for intravenous cannulation and airway management, that can be accessed through our website. As well, the development of web-based educational tools will be a priority, focusing on pre-operative evaluation skills, resuscitation, pain management, technical skills, team centered care and other essential skills necessary for all physicians.

We are pleased to have the following faculty members participate in the Undergraduate Education Program, and thank them for their numerous and ongoing contributions to the program and the University:

UGE Chair and Clerkship Course Director:
Dr. Pamela Morgan Sunnybrook/Women’s College Hospital
(June – December 2006)

Interim UGE Chair and Pre-Clerkship Coordinator:
Dr. Isabella Devito UHN/Mount Sinai Hospital
(January – June 2007)

Undergraduate Education Committee Members:
Dr. D. Chandra St. Michael’s Hospital
Dr. I. Devito (Chair) UHN/Mount Sinai Hospital
Dr. H. El-Beheiry UHN/Toronto Western Hospital
Dr. P. Houston Vice-Chair, Education, UT Department of Anesthesia/SMH
Dr. D. Irwin UHN/Mount Sinai Hospital
Dr. G. Kanellakos UHN/Toronto General Hospital
Dr. B. Kavanagh Chair, UT Department of Anesthesia/Hospital for Sick Children
Dr. R. Mai St. Michael’s Hospital
Dr. P. Mark Toronto East General
Dr. P. Morgan Sunnybrook/Women’s College Hospital
Mr. I. Randall Student Representative, Year 4
Dr. J. Robertson Hospital for Sick Children: Electives Committee Representative
Dr. A. Sarmah Sunnybrook
Mr. R. Sunder Student Representative, Year 3
Dr. M. van der Vyver Women’s College Hospital
Pre-Clerkship
Members of each hospital department are involved in teaching courses in first and second year. We also thank them for their on-going contributions and excellence.

Pre-Clerkship Lectures
Dr. S. Belo
Sunnybrook
Dr. D. Chandra
St. Michael's Hospital
Dr. R. Chen
St. Michael's Hospital
Dr. A. Ho
St. Michael's Hospital
Dr. J. Wasserman
St. Michael's Hospital

ASCM I Tutors
Dr. D. Chandra
St. Michael's Hospital
Dr. E. Goldszmidt
UHN/Mount Sinai Hospital
Dr. V. Hughes
St. Michael's Hospital
Dr. L. Mathieson
St. Michael's Hospital
Dr. A. van Rensburg
UHN/Toronto General Hospital
Dr. E. You-Ten
UHN/Mount Sinai Hospital

ASCM II Tutors
Dr. M. Chochinov
Sunnybrook
Dr. M. Jariani
UHN/Toronto General Hospital
Dr. G. Kaneliakos
UHN/Toronto General Hospital

DOCH II (Determinants of Community Health II)
Dr. S. Brown
Hospital for Sick Children

Problem Based Learning Tutors, Year 1: Metabolism and Nutrition
Dr. M. van der Vyver
Women's College Hospital

Problem Based Learning Tutors, Year 2: Foundations of Medical Practice
Dr. S. Abrahamsen
St. Michael's Hospital
Dr. R. Barklow
Hospital for Sick Children
Dr. R. Crago
UHN/Toronto Western Hospital
Dr. K. Lin
St. Michael's Hospital
Dr. W. Middleton
UHN/Toronto Western Hospital
Dr. J. Robertson
Hospital for Sick Children
Dr. J. Rucker
UHN/Mount Sinai Hospital

Problem Based Learning Tutors: Brain and Behavior
Dr. A. Prabhu
UHN/Toronto Western Hospital
Dr. L. V. Raghavan
UHN/Toronto Western Hospital

Foundations of Medical Practice Seminar Leaders, Year 2
Dr. D. Chandra
St. Michael's Hospital

Carvalho, J
XXXIV Jornadas Aniversario Dr. Gerardo Hernandez Munoz, "Patient-controlled analgesia in labor: Regional and intravenous." Caracas, Venezuela, July 2006

Regional Anesthesia and Pain Medicine 2006, "Recent advances in obstetrical analgesia and anesthesia." Toronto, Ontario, October 2006

Mount Sinai Hospital Combined Obstetrics and Anesthesia Grand Rounds (Moderator), "Perioperative hemodynamic management in severe pregnancy-induced hypertension." Toronto, Ontario, October 2006

Mount Sinai Hospital Obstetric Anesthesia Conference, "Accelerated recovery post-caesarean section." Toronto, Ontario, October 2006

53rd Brazilian Congress of Anesthesiology (Moderator, Panel), "Anesthesia for special situations in Obstetrics." Rio de Janeiro, Brazil, November 2006

53rd Brazilian Congress of Anesthesiology Pro-Con Debate, "Best anesthesia for cesarean section is spinal." Rio de Janeiro, Brazil, November 2006

53rd Brazilian Congress of Anesthesiology Panel, "Anesthesia for special situations in obstetric anesthesiology, pre-eclampsia." Rio de Janeiro, Brazil, November 2006

53rd Brazilian Congress of Anesthesiology, "New perspectives in regional anesthesia for obstetrics." Rio de Janeiro, Brazil, November 2006


Academic Day for Materno-Fetal Medicine, Cardiology and Obstetric Anesthesia Fellows, Cardiology and Obstetric Anesthesia Fellows, "Anesthetic issues in women with heart disease." Toronto General Hospital, Toronto, Ontario, February 2007


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53rd Brazilian Congress of Anesthesiology Panel, "Anesthesia for special situations in obstetric anesthesiology, pre-eclampsia." Rio de Janeiro, Brazil, November 2006

53rd Brazilian Congress of Anesthesiology, "New perspectives in regional anesthesia for obstetrics." Rio de Janeiro, Brazil, November 2006


Academic Day for Materno-Fetal Medicine, Cardiology and Obstetric Anesthesia Fellows, Cardiology and Obstetric Anesthesia Fellows, "Anesthetic issues in women with heart disease." Toronto General Hospital, Toronto, Ontario, February 2007


39th Annual Meeting of the Society for Obstetric Anesthesia and Perinatology (Workshop Director), "Regional Anesthesia in Obstetrics, including stations of glass spine model, CSE model, Tsui test demonstration and spine ultrasound." Banff, Alberta, May 2007

Detroit Medical Center, Wayne State University, "Ultrasound facilitated epidurals and spinals." Detroit, Michigan, June 2007

Detroit Medical Center, Wayne State University, "Pharmacology of spinal and epidural analgesics: reshaping our practice based on minimum local anesthetic concentration studies." Detroit, Michigan, June 2007

Canadian Anesthesiologists' Society 2007 Annual Meeting (Workshop Instructor), "Ultrasound guided spinals and epidurals." Calgary, Alberta, June 2007
Angle, P

Canadian Anesthesiologist’s Society Meeting, “Evidence-based Management of PDPH.” Calgary, Alberta, June 2007

Baker, AJ

William Osler Health Centre ICU Day: Decision making at the end of life, “Donation in 2007 and donation after cardiac death (DCD).” Peel Memorial Hospital, Brampton, Ontario, March 2007

Balki, M


Brown, SC

European Society of Anaesthesiology, “Effectiveness of a new paracutaneous sedation device.” Munich, Germany, June 2007
Canadian Broadcasting Corporation – G Binks, Interview for program on headaches in pediatrics. Toronto, Ontario, July 2007
The Department of Anesthesia at the University of Toronto is the largest and most productive academic department in Canada. Our residents rotate through 7 different hospital sites and are therefore exposed to every aspect of clinical anesthesia, having the opportunity to work with over 230 faculty members. The experience that residents obtain, with respect to volume and variety of clinical material and complexity of patients and procedures, is unparalleled. Regional anesthesia has become a major focus at a number of sites. All residents now have the opportunity to complete a one-month rotation in regional anesthesia and many opportunities exist for research in this field – particularly in the area of ultrasound guided regional anesthesia.

The Postgraduate Education Committee of the Department of Anesthesia is composed of the Chair of the Department, Program Coordinators in charge of the teaching program at each hospital, Resident Counselors, the Director of Education from the University Health Network, Chair of the Education Committee, the Director of the simulator centre, Chair of the Research Committee, one resident member from each of the PG year levels (elected by peers) and the Program Assistant. The committee is chaired by the Program Director, and meets monthly to oversee all aspects of the training program in anesthesia. Its responsibilities include selection, evaluation, and promotion of residents, and the design, operation, and evaluation of the teaching program.

The past academic year has been particularly busy for the Postgraduate Education Committee. The Postgraduate Training Program underwent a Royal College Survey in April 2007 and received full approval. A number of strengths were identified – these included use of the high-fidelity anesthesia simulator both to teach various CanMEDS roles to residents and to enhance their abilities to teach medical students and the regional anesthesia program. It was also noted that awareness of research opportunities has become heightened amongst the residents and there has been an increase in the number of residents participating in research projects. This is due, in part, to the annual PG1/PG2 Resident Research Day at which a number of prominent researchers within the department highlight their research interests and the benefits and drawbacks of a research career in anesthesia.

The number of trainees in the department has grown steadily over the past few years. This has been due to a slight increase in the number of Canadian Medical Graduates as well as an increase in the number of International Medical Graduates. A number of department members have been very involved in the evaluation and education of International Medical Graduates at all levels of training.

We were very happy with the results of the annual CaRMS Match. Two of the 15 available positions were assigned to the Clinician Investigator Program (CIP) Stream. We filled all 15 positions in the regular program with excellent applicants, some of whom had applied to the CIP stream. We also enrolled four Ontario International Medical Graduate Program residents – three at a PG1 level and one at a PG2 level. In addition, one IMG successfully completed the Assessment Program for International Medical Graduates and has entered practice in a community setting.

The Fellowship Program continues to be very active. There were 88 fellows from 24 countries in 2006-2007.
A number of awards were presented at the 2007 Shields Day. They are listed on page 11 of this report.

- The RJ Byrick Award for best Fellows’ research presentation: Dr. Michelle White for her presentation: “Effect Of Anesthetic Agents on Electrically Evoked Auditory Responses in Pediatric Cochlear Implant Surgery.”
- The Hynek Rothbart Award for the best resident paper was awarded to Dr. Dov Weiss for his presentation: “Sleep Deprivation and Anesthesiologists’ Technical Skills.”
- The AC Bryan Award for the best presentation by a graduate student: Albert Tsui (Masters student): nVOS contributes to protective cardiovascular mechanisms during acute hemodilutional anemia in mice.
- The Thomas Donald Hammell Award – in recognition of outstanding contributions to the residency program: Dr. Timothy Welke
- The Dr. John Desmond Award – Undergraduate Teaching: Dr. Robert Chen
- Dr. Naik also received The John Bradley Young Educator award at the Canadian Anesthesiologists’ Society Meeting in Calgary, in June 2007.
- Dr. Dov Weiss was awarded the residents’ prize for best presentation at this meeting.

In addition, Dr. Greg Silverman (PGY3) and Kyle Kirkham (PGY1) were selected by the Canadian Space Agency to participate in one month electives in Aerospace Medicine at NASA.

In 2007, all but one of the residents from our program were successful at the Royal College oral examinations. Congratulations to these residents who are now certified as specialists in anesthesia.

**Program Coordinators:**
- Dr. J. Lai (UHN/Toronto Western Hospital)
- Dr. S. Halpern (Women’s College Hospital)
- Dr. H. Fischer (UHN/Mount Sinai Hospital)
- Dr. H. Lee (Toronto East General Hospital)
- Dr. E. Ng (Hospital for Sick Children)
- Dr. M. Graham (Sunnybrook)
- Dr. R. Kol Dr. K. Dattilo (UHN/Toronto General Hospital)
- Dr. J. Wassermann (St. Michael’s Hospital)

**Anesthesia Simulator:**
- Dr. V. Naik (St. Michael’s Hospital)

**Education Committee UHN:**
- Dr. I. Devito (Mount Sinai Hospital)

**Resident Counselors:**
- Dr. B. Morningstar (Sunnybrook)
- Dr. D. Riegert (Sunnybrook)

**Residents:**
- PG1: Dr. Darlene Weekes
- PG2: Dr. John Hanlon
- PG3: Dr. Collan Simmons
- PG4: Dr. Hance Clarke
- PG5: Drs. Tim Welke and Diana Tamir

In 2007, all but one of the residents from our program were successful at the Royal College oral examinations. Congratulations to these residents who are now certified as specialists in anesthesia.

**Program Coordinators:**
- Dr. J. Lai (UHN/Toronto Western Hospital)
- Dr. S. Halpern (Women’s College Hospital)
- Dr. H. Fischer (UHN/Mount Sinai Hospital)
- Dr. H. Lee (Toronto East General Hospital)
- Dr. E. Ng (Hospital for Sick Children)
- Dr. M. Graham (Sunnybrook)
- Dr. R. Kol Dr. K. Dattilo (UHN/Toronto General Hospital)
- Dr. J. Wassermann (St. Michael’s Hospital)

**Anesthesia Simulator:**
- Dr. V. Naik (St. Michael’s Hospital)

**Education Committee UHN:**
- Dr. I. Devito (Mount Sinai Hospital)

**Resident Counselors:**
- Dr. B. Morningstar (Sunnybrook)
- Dr. D. Riegert (Sunnybrook)

**Residents:**
- PG1: Dr. Darlene Weekes
- PG2: Dr. John Hanlon
- PG3: Dr. Collan Simmons
- PG4: Dr. Hance Clarke
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Continuing Education (CE)
Dr. Peter Slinger, Chair
CE Committee

The Continuing Education Committee for the Department of Anesthesia is comprised of representatives from each of the teaching hospitals as well as directors of CME courses and community hospital representatives. It meets quarterly to discuss, plan and organize a number of continuing education initiatives. The committee endeavors to ensure that most CE activities qualify for University of Toronto sponsorship and are accredited learning activities.

Course Development

Each year the committee supervises the Anesthesia Practice Meeting (under the co-direction of Drs. Martin van der Vyver and Pamela Angle in 2007). This three-day course provides a combination of lectures, workshops and small group sessions for both Fellows and GP Anesthesiologists. Over the past three years, the meeting has been extremely successful with unprecedented numbers of participants.

Course Sponsorship

The CE Committee aids in the development and accreditation of the following ongoing CME courses produced by the Course Sponsorship in unprecedented numbers of participants.

1. Regional Anesthesia and Pain Medicine, September 29-October 1, 2006, Sutton Place Hotel, Toronto (vincent.chan@uhn.on.ca)
2. Toronto Hyperbaric Medicine Symposium, September 29, 2006, University Health Network/Toronto General Hospital (wayne.evans@uhn.on.ca)
3. Toronto Critical Care Symposium, October 25-27, 2006, Metro Toronto Convention Centre (brian.kavanagh@sickkids.ca)
4. Obstetric-Anesthesia, October 28, 2006, Mount Sinai Hospital (jose.cavainho@uhn.on.ca)
5. Perioperative Transesophageal Echocardiography Symposium, November 4-5, 2006, Renaissance Toronto Hotel (julie.nigro@uhn.on.ca)
6. Anesthesia Faculty Development Day, November 10, 2006, St. Michael's Hospital, Toronto (houstonp@smrt.on.ca)
7. Toronto Anesthesia Practice, November 24-26, 2006, Delta Chelsea Hotel (pamela.angie@twc.ca)
8. Emerging Practices in Pain Management, February 27, 2007, University of Toronto (peggy.wood@uhn.on.ca)
9. Tremblant Anesthesia Meeting, February 2007, Fairmont Hotel, Mt. Tremblant (jordan.tarshis@sw.ca)
10. Toronto Anesthesia Symposium, March 31-April 1, 2007, Toronto Marriott Eaton Centre (peter.slinger@uhn.on.ca)
11. 28th Annual Shields Research Day, May 3, 2007, Metro Toronto Convention Centre (guy.petroz@sickkids.ca)
12. Controversies in Perioperative Medicine, May 13-19, 2007, San Martino, Italy (mark.friedlander@ Rogers.com)


Prior to using the simulator the user is required to take a 16-question Bronchoscopy Pre-Quiz. After taking the quiz, the user has unlimited access to the simulator. After using the simulator, the user is asked to take a Bronchoscopy Post-Quiz, following which he or she is given the correct answers and can anonymously compare their results to those of others who have taken the quiz. The simulator and quiz can be accessed on the website www.ThoracicAnesthesia.com.
Our Research Programs

Report from the Vice-Chair, Research
Dr. David Mazer

This past year was another very successful one for the Department of Anesthesia in terms of research. Our department continues to be the leading Anesthesia research department in Canada, and among the top in publicly funded Universities in the world. There were many noteworthy accomplishments and achievements, and several ‘firsts’.

• Dr. Bev Orser’s article entitled “Lifting the Fog around Anesthesia” was one of the cover stories in the June issue of Scientific American. It eloquently outlines the current state of knowledge about how our anesthetic drugs actually work, and the quest to make them better.

• Dr. Frances Chung was the winner of the Canadian Anesthesiologists’ Society Research Recognition Award, the highest honor granted nationally to a senior investigator who has sustained major contributions in anesthesia research in Canada. The award was given in recognition of her outstanding contributions to the knowledge base of our specialty through her research into perioperative care and outcomes in ambulatory anesthesia. This marks the fifth time a University of Toronto researcher has won this award.

• Dr. Duminda Wijeysundera and colleagues from TGH published an article in Journal of the American Medical Association (JAMA) on renal failure in cardiac surgery, and his grant was the highest ranked in his category in the last Heart and Stroke Foundation Grant competition.

• Several members of the department (Dr. Scott Beattie, Mark Crawford, Hwan Joo, Keyvan Karkouli, Pam Morgan, Viren Naik, Dr. Bev Orser, Guy Petroz, Duminda Wijeysundera) had articles published in Anesthesiology, the leading journal of our specialty. The importance of these studies is underscored by the accompanying editorials and the impact they have on our understanding of the mechanisms and approaches to the perioperative management of our patients. The number of high quality publications in peer reviewed journals, and presentations of scientific work at national and international meetings by members of our department is impressive, and competitive with other leading Departments of Anesthesia in North America (please see list starting on page 32).

• Funding support for research remains an academic priority for our department. The total amount of research dollars received by our department remains near its highest level ever, and the wide range of agencies who provide peer-review grants to members of our department is testimony to the strength, breadth and depth of our research endeavor. This support is essential to achieving our goal of creating and disseminating new knowledge related to our specialty. The list of research grants is remarkable, and a few representative examples of recent grants are listed below:

• Dr. Pam Angle received a Physicians Services Incorporated Foundation grant for her study; “Randomized controlled trial examining the impact of large traditional vs. small epidural needles on the incidence of postdural puncture headache in parturients.”

• Dr. Andrew Baker received a grant from the Ontario Neurotrauma Foundation; “Calpain inhibition as a white matter neuroprotective therapy after TBI: Proof of principle for functional, histopathological and behavioral improvements by targeting white matter following traumatic brain injury.”

McIntyre L, Ferguson D, Hutcheson J, Hare GMT, Pagliarello G, Marshall J, Yetisir E, Blachman MJ, Hebert PC. How much should we transfuse patients following moderate to severe head injury? Neurocrit Care. 5: 4-8; 2006


Orser BA. Lifting the fog around anesthesia. (Review) Scientific American, 296: 54-61, 2007

Orser BA, Martin LJ, Cheng YV, Bonin RF. Role of extrasympathetic GABAA receptors in hippocampus. Eur Neuropsychopharmacol, 16: S198-S199, 2006


The following chart demonstrates the distribution of research projects across different areas in 2006-07. Dr. Joe Fisher received a grant from the US Marine Corps for the "Development of a Mobile Critical Care Unit."

Dr. Zeev Friedman received grants from the Education Development Fund for Innovation in Education, the Canadian Anesthesiologists’ Society, the Physicians Services Incorporated Foundation, and the American Society of Regional Anesthesia for his projects on Simulation in Anesthesia.

Dr. Greg Hare was awarded grants from The Society of Cardiovascular Anesthesiologists: 'The threshold hematocrit for cerebral hypoxia is maintained by protective cardiovascular mechanisms: the role for neuronal nitric oxide synthase (nNOS),’ and the Canadian Anesthesiologists’ Society Wynands Research Award: ‘Does beta-1 adrenergic antagonism increase tissue hypoxia following acute hemodilution?’

Dr. Pam Morgan and Jordan Tarshis received a grant from the Canadian Patient Safety Institute to study ‘Determination of the psychometric properties of a behavioral marking system for obstetrical and neonatal anesthesia.

Dr. Haibo Zhang was awarded a grant from the Ontario Thoracic Society for his work on "The role of stem cells in the repair of lung injury.”

The following chart demonstrates the distribution of research projects across different areas in 2006-07.
The Clinician-Scientist Stream

The Department of Anesthesia at the University of Toronto is recognized for its excellent postgraduate clinical training program. The teachers in the department are committed to training residents towards a broad range of career goals in both academic and community practice. These objectives are achieved through the strong commitment to education, excellent research training opportunities and exposure to a wide variety of clinical practice. The education of future academic anesthesiologists is an important mission of the department and the clinician-scientist stream has been established as an opportunity to further this goal in the residency.

Goals

- Provide a small group of residents with fundamental training in research methodology;
- Foster critical thinking in a research environment of the highest quality;
- Prepare anesthesia trainees for careers as independent investigators in academic departments;
- Provide an opportunity for residents to contribute to the expansion of the fundamental understanding of anesthesia; and,
- Attain the above objectives in the context of excellent clinical training.

The clinician-scientist stream is a component of the postgraduate training program in Anesthesia. Potential participants are identified and recruited into the program during their PGY1 or PGY2 years of training. Residents commit at the outset to a minimum of two years of research during their residency. The trainee is registered in the University of Toronto Institute of Medical Sciences (or equivalent) in an MSc or PhD program. One year of this research training counts toward the Royal College requirements in Anesthesia.

The laboratory or area of interest in which the resident will work is selected during the PGY2 clinical year, after discussion with investigators from various disciplines. Residents in the Clinician-Scientist stream can start their research experience with investigators from various disciplines. Residents in the Clinician-Scientist stream can start their research experience after the PGY2 year and complete clinical training following the research period.

Research Programs

Research interests of residents undertaking graduate research can include any of the following:

- Molecular basis of anesthesia
- Clinical pharmacology
- Clinical epidemiology/outcomes research
- Neurophysiology
- Cardiovascular and cardiopulmonary physiology
- Pain research
- Research in education

Application to the Clinician-Scientist Stream

Residents in the anesthesia program who wish to prepare for an academic research career are invited to apply for the Clinician-Scientist stream through the office of the Program Director. Each year funding is available for a maximum of two residents to participate in the Clinician-Scientist stream through the Alan K. Laws Clinician Scientist Fellowship.


Jadad AR. Randomized clinical trials of telepsychiatry through videoconference versus face-to-face conventional psychiatric treatment [Commentary]. Medica Basada en Evidencia, 12: 341-50, 2006


Elpe N, McCartney CJ, Kummer C. Transient neurophysiologic dysfunction following continuous femoral nerve block: should this change our practice? Anesthesiology. 107: 177, 2007


Goldsmith E, Re: Oral multidose caffeine-paracetamol combination is not effective for the prophylaxis of postdural puncture headache. Pain. 18; 259-240, 2006

Hare GMT. At what point does hemodilution harm the brain? Can J Anesth. 53: 1171-1174, 2006


Houston PL, Keaney R, Savoldelli G. The oral examination process – Gold standard or fool’s gold. CJA. 53: 7, 2006


POSTER SESSION A:
A1 Gabapentin within a multimodal analgesic regimen reduces opioid consumption after hip arthroplasty under spinal anesthesia: A randomized, single-blind, placebo-controlled pilot study. Hance Clarke, Sunnybrook Health Sciences Centre
A2 Anesthesia for laparoscopic peritoneal dialysis catheter insertion, Ann Prasad, UHN/Toronto Western Hospital
A3 Probing the identity of GABAα receptors that underlie amnesic properties of anesthetics, Angelina Guzzo, Sunnybrook Health Sciences Centre, Hospital for Sick Children
A4 Study of epidural space depth detected by ultrasonography in parturients undergoing elective Cesarean section: A comparison between sitting and lateral positions, Ahmed Solman, Sunnybrook Health Science Centre, Women's College Hospital
A5 Temperature measurement modalities comparison, Anton Marinov, Sunnybrook Health Sciences Centre
A6 Ultrasound-guided brachial plexus blockade in a patient with multiple glomangiomatosis: A case report, Edel Duggan, UHN/Toronto Western Hospital
A7 Determination of the minimum local anesthetic volume of 0.125% bupivacaine in labor epidurals, Hisham Ibrahim, UHN/ Mount Sinai Hospital
A8 ED50 of phenylephrine to prevent hypotension and nausea/vomiting after spinal anesthesia for Cesarean section, Motoshi Tanaka, UHN/Mount Sinai Hospital
A9 Internal jugular vein and carotid artery anatomic relation as determined by ultrasonography in obstetric patients, Naveed Tahir Siddiqui, UHN/Mount Sinai Hospital
A10 The evolution of ultrasound-guided axillary brachial plexus blockade, UHN/Toronto Western Hospital, Nick Lo, UHN/ Toronto Western Hospitals
A11 A cost analysis study in anesthesia: Drugs, disposables and volatile agents, Naveen Eipe, Sunnybrook Health Sciences Centre
A12 Impact of normothermia and antimicrobial prophylaxis timing on surgical site infections in colorectal surgery Patients: An anesthesia approach, Ewen Chen, Sunnybrook Health Sciences Centre
A13 Sleep deprivation and anesthesiologists' technical skills, Dov Weiss, St. Michael's Anaesthesia Research into Teaching (SMART) Group, St. Michael's Hospital
A14 Can the Tsui test be used to test the placement of epidural catheters following the intrathecal component of a combined (SMART) Group, St. Michael's Hospital
A15 Fiberoptic intubation training: Correlation of simulator performance to clinical performance, Nicholas Crabtree, St. Michael's Hospital

POSTER SESSION B:
B1 Perioperative gabapentin administration decreases morphine consumption and improves active knee flexion using a multimodal analgesic regimen for total knee arthroplasty: A randomized, single blind, placebo-controlled pilot study, Hance Clarke, Sunnybrook Health Sciences Centre
B2 Afferent induced electrophysiographic activation: A promising tool for pre-surgical evaluation of temporal lobe epilepsy (TLE) patients, Andrea Rigamonti, UHN/Toronto Western Hospital
B3 Persistent amnesia induced by a therapeutically-relevant dose of the inhaled anesthetic isoflurane, Bechara J. Saab, Sunnybrook Health Sciences Centre
B4 Systematic review: RCTs examining intravenous remifentanil vs. other pharmacologic modalities for labor analgesia, Ahmed Solman, Women's College Hospital
B5 Continuous cell saver reduces cognitive decline after CABG surgery, Comitateh Srinivas, UHN/Toronto General Hospital
B6 Does the presence of a subarachnoid hemorrhage influence analgesic requirements after treatment with surgical clipping or endovascular coiling in patients with intracranial aneurysms? Dhuleep Sanjay Wijayatilake, UHN/Toronto Western Hospital

Cheng VY, Chiu MW, Newell G, MacDonald JF, Bhamari A, Collinson N, Walford KA, Orser BA. Neurinlin enhances a tonic inhibitory conductance generated by GABA<sub>A</sub> receptors in hippocampal neurons. Anesthesiology, 105: 325-333, 2006
Cooper RM. Complications associated with the use of the glidescope videolaryngoscope. Can J Anaesth. 54: 54-57, 2007

Our Research Programs

Publications

UNIVERSITY OF TORONTO-DEPARTMENT OF ANESTHESIA, 2006-2007 ANNUAL REPORT
Arzola C, Davies S, Rafael A, Carvalho JCA. Ultrasound using the transverse approach to the lumbar spine provides reliable landmarks for labor epidurals. Anesth Analg, 104: 1188-1192, 2007
Body SC, Mazer CD. Apironol has a good efficacy and safety profile relative to other alternatives for prevention of bleeding in cardiac surgery. Anesth Analg, 103: 1354-1359, 2006
B7 A qualitative systematic review of the use of clonidine as an analgesic adjuvant for peripheral nerve blocks, Emma Apatu, UHN/Toronto Western Hospital
B8 A clinical comparison of three designs of bronchial blockers with double-lumen tubes for lung isolation, Manu NarayanaSwamy, UHN/Toronto General Hospital
B9 Learning curve for intubations with the Glidescope, Elizabeth Mathieson, St. Michael’s Hospital
B10 Effect of anesthetic agents on electrically evoked auditory responses in pediatric cochlear implant surgery, Michelle White, Hospital for Sick Children
B11 A system of classification for the clinical uses of capnography, Naveen Eipe, Sunnybrook Health Sciences Centre
B12 Development and validation of the STOP Questionnaire – an Obstructive Sleep Apnea (OSA) screening tool, Pu Liao, UHN/Toronto Western Hospital
B13 Predictive factors for postoperative hypertension in cataract patients, Raman Diddere, UHN/Toronto Western Hospital
B14 Accelerating the washout of inhalational anesthetics from the Dräger Fabius GS Premium anesthetic workstaton, Robert J. Whitty, Hospital for Sick Children

POSTER SESSION C
C1 nNOS contributes to protective cardiovascular mechanisms during acute hemodilutional anemia in mice, Albert Tsui, St. Michael’s Hospital
C2 Storage of autologous rat blood limits cerebral tissue oxygen delivery during acute fluid resuscitation, Andrea Rigamonti, St. Michael’s Hospital
C3 Interventions in the preoperative clinic for long term smoking cessation: Use of a teachable moment, Amna Zaki, UHN/Toronto Western Hospital
C4 Carotid artery angioplasty and stenting: Anesthetic implications, Sucharita Chakravarti, UHN/Toronto Western Hospital
C5 Pre-warming in regional anesthesia, Anton Marinov, Sunnybrook-Health Sciences Centre
C6 A randomized, double-blind controlled study comparing dual endpoint nerve stimulation with ultrasound-guided infraclavicular block for hand surgery, Edel Duggan, UHN/Toronto Western Hospital
C7 An update on the beta blocker meta analysis: Heart rate control reduces post-operative MI, Farhan Husain, UHN/Toronto General Hospital
C8 Postoperative MI after non-cardiac surgery in patients with previous PCI, Finola Naughton, UHN/Toronto General Hospital
C9 Risk factor identification and outcomes of myocardial ischemia associated with pregnancy: A Canadian study, Mita Joshi, UHN/Mount Sinai Hospital
C10 Effect of CPB and anemia on rat renal tissue pO2 and eNOS expression, Peter J. Darby, St. Michael’s Hospital
C11 Wireless monitoring in the perioperative period: A concept for the future?, Naveen Eipe, Sunnybrook Health Sciences Centre
C12 Pre-warming of colorectal and hepatobiliary surgery patients: Pre-operative prevention of hypothermia, Ewen Chen, Sunnybrook Health Sciences Centre
C13 Comparison of three screening tools for Obstructive Sleep Apnea in surgical patients, Ali Khajehdehi, UHN/Toronto Western Hospital
C14 Cell saver use during CPB and transfusion rates after CABG surgery, Nasr Hegazy, UHN/Toronto General Hospital
OPEN FORUM:

“The Transformation Story so Far”
Hugh MacLeod, MA

Mr. Hugh MacLeod joined the Ministry of Health and Long-Term Care in January 2003 as Assistant Deputy Ministry, Acute Services Division. Currently, Hugh is the Assistant Deputy Minister, Accountability and Performance Division. He has considerable experience in the health sector having previously served in several senior executive level positions in the Province of British Columbia.

Mr. MacLeod has a strong connection to leadership development, and has served as Associate Faculty in the Masters of Arts Leadership Program at Royal Roads University, Associate Faculty in the Master of Public Safety Program at the Justice Institute of British Columbia, and Adjunct Professor at the University of British Columbia, Faculty of Medicine.

“Anesthesia Practice in Ontario: Threats and Opportunities”
Stephen Brown, MD, FRCPC

Dr. Brown is the Chief of the Department of Anesthesia at North York General Hospital and the Chair of the Ontario Medical Association Section on Anesthesiology. After his undergraduate degree in Biophysics at the University of Western Ontario, Medical School at McMaster, he completed his Anesthesia Residency at the University of Toronto in 1999. At every level of his training Dr. Brown has served as an advocate and an organizer. As a member of the OMA/MOHLTC Operative Anesthesia Committee and the Co-Chair of the Anesthesia Care Team Implementation Committee, he continues to be actively involved in addressing the Anesthesia resource crisis and engaging the interprofessional care movement.

Mrs. Frances Lang, daughter of Dr. Harry Shields, delivering her talk at Shields Day 2007

University of Toronto Clinical Fellowship Research Seminar Series

The Research Committee places a high priority on research education in the University of Toronto fellowship training program. To this end, a series of graduate level seminars on statistics, research design and research related computer skills were organized. The Research Committee is particularly grateful to the following individuals for teaching the following subjects. The seminars take place on Wednesday evenings at the Hospital for Sick Children.

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</tr>
<tr>
<td>May 23</td>
<td>Writing Successful Research Proposals</td>
<td>Dr. Beverley Orser</td>
</tr>
<tr>
<td>May 30</td>
<td>Relationships with Pharmaceutical Companies</td>
<td>Dr. Robert Byrick</td>
</tr>
<tr>
<td>June 6</td>
<td>Setting up a Research Laboratory</td>
<td>Dr. Daisy Joo</td>
</tr>
</tbody>
</table>


Arora C, Davies S, Roafel A, Carvalho JCA. Ultrasound using the transverse approach to the lumbar spine provides reliable landmarks for labor epidurals. Anesth Analg, 104: 1188-1192, 2007


B7 A qualitative systematic review of the use of clonidine as an analgesic adjuvant for peripheral nerve blocks, Emma Apatu, UHN/Toronto Western Hospital

B8 A clinical comparison of three designs of bronchial blockers with double-lumen tubes for lung isolation, Manu NanayaSwamy, UHN/Toronto General Hospital

B9 Learning curve for intubations with the Glidescope, Elizabeth Mathieson, St. Michael's Hospital

B10 Effect of anesthetic agents on electrically evoked auditory responses in pediatric cochlear implant surgery, Michelle White, Hospital for Sick Children

B11 A system of classification for the clinical uses of capnography, Naveen Eipe, Sunnybrook Health Sciences Centre

B12 Development and validation of the STOP Questionnaire – an Obstructive Sleep Apnea (OSA) screening tool, Pu Liao, UHN/Toronto Western Hospital

B13 Predictive factors for postoperative hypertension in craniotomies for tumor, Raman Diddee, UHN/Toronto Western Hospital

B14 Accelerating the washout of inhalational anesthetics from the Dräger Fabius GS Premium anesthetic workstation, Robert J. Whitty, Hospital for Sick Children

POSTER SESSION C

C1 nNOS contributes to protective cardiovascular mechanisms during acute hemodilutional anemia in mice, Albert Tsui, St. Michael's Hospital

C2 Storage of autologous rat blood limits cerebral tissue oxygen delivery during acute fluid resuscitation, Andrea Rigmonti, St. Michael's Hospital

C3 Interventions in the preoperative clinic for long term smoking cessation: Use of a teachable moment, Amna Zaki, UHN/Toronto Western Hospital

C4 Carotid artery angioplasty and stenting: Anesthetic implications, Suchanita Chakravarti, UHN/Toronto Western Hospital

C5 Pre-warming in regional anesthesia, Anton Marinov, Sunnybrook Health Sciences Centre

C6 A randomized, double-blind controlled study comparing dual endpoint nerve stimulation with ultrasound-guided infraclavicular block for hand surgery, Edel Duggan, UHN/Toronto Western Hospital

C7 An update on the beta blocker meta analysis: Heart rate control reduces post-operative MI, Farhan Husain, UHN/Toronto General Hospital

C8 Postoperative MI after non-cardiac surgery in patients with previous PCI, Finola Naughton, UHN/Toronto General Hospital

C9 Risk factor identification and outcomes of myocardial ischemia associated with pregnancy: A Canadian study, Mita Joshi, UHN/Mount Sinai Hospital

C10 Effect of CPB and anemia on rat renal tissue pO2 and eNOS expression, Peter J. Darby, St. Michael's Hospital

C11 Wireless monitoring in the perioperative period: A concept for the future?, Naveen Eipe, Sunnybrook Health Sciences Centre

C12 Pre-warming of colorectal and hepatobiliary surgery patients: Pre-operative prevention of hypothermia, Ewen Chen, Sunnybrook Health Sciences Centre

C13 Comparison of three screening tools for Obstructive Sleep Apnea in surgical patients, Ali Khajehdehi, UHN/Toronto Western Hospital

C14 Cell saver use during CPB and transfusion rates after CABG surgery, Nasr Hegazy, UHN/Toronto General Hospital
Our Research Programs

POSTER SESSION A:
A1 Gabapentin within a multimodal analgesic regimen reduces opioid consumption after hip arthroplasty under spinal anesthesia: A randomized, single-blind, placebo-controlled pilot study, Hance Clarke, Sunnybrook Health Sciences Centre
A2 Anesthesia for laparoscopic peritoneal dialysis catheter insertion, Ann Prasad, UHN/Toronto Western Hospital
A3 Probing the identity of GABAa receptors that underlie amnesic properties of anesthetics, Angelina Guzzo, Sunnybrook Health Sciences Centre, Hospital for Sick Children
A4 Study of epidural space depth detected by ultrasonography in parturients undergoing elective Cesarean section: A comparison between sitting and lateral positions, Ahmed Soliman, Sunnybrook Health Sciences Centre, Women's College Hospital
A5 Temperature measurement modalities comparison, Anton Marinov, Sunnybrook Health Sciences Centre
A6 Ultrasound-guided brachial plexus blockade in a patient with multiple gliomangiomatosi: A case report, Edel Duggan, UHN/Toronto Western Hospital
A7 Determination of the minimum local anesthetic volume of 0.125% bupivacaine in labor epidurals, Hisham Ibrahim, UHN/ Mount Sinai Hospital
A8 ED50 of phenylephrine to prevent hypotension and nausea/vomiting after spinal anesthesia for Cesarean section, Motoshi Tanaka, UHN/ Mount Sinai Hospital
A9 Internal jugular vein and carotid artery anatomic relation as determined by ultrasonography in obstetric patients, Naveed Tahid Siddiqui, UHN/ Mount Sinai Hospital
A11 A cost analysis study in anesthesia: Drugs, disposables and volatile agents, Neaveen Eipe, Sunnybrook Health Sciences Centre
A12 Impact of normothermia and antimicrobial prophylaxis timing on surgical site infections in colorectal surgery Patients: An anesthesia approach, Ewen Chen, Sunnybrook Health Sciences Centre
A13 Sleep deprivation and anesthesiologists’ technical skills, Dov Weiss, St. Michael’s Anesthesia Research into Teaching (SMART) Group, St. Michael’s Hospital
A14 Can the Tsui test be used to test the placement of epidural catheters following the intrathecal component of a combined spinal-epidural technique used for labor analgesia?, Rakhi Khemka, UHN/ Mount Sinai Hospital
A15 Fiberoptic intubation training: Correlation of simulator performance to clinical performance, Nicholas Crabtree, St. Michael’s Hospital

POSTER SESSION B:
B1 Perioperative gabapentin administration decreases morphine consumption and improves active knee flexion using a multimodal analgesic regimen for total knee arthroplasty: A randomized, single blind, placebo-controlled pilot study, Hance Clarke, Sunnybrook Health Sciences Centre
B2 Alfentanil induced electrocorticographic activation: A promising tool for pre-surgical evaluation of temporal lobe epilepsy (TLE) patients, Andréa Rigamonti, UHN/Toronto Western Hospital
B3 Persistent amnesia induced by a therapeutically-relevant dose of the inhaled anesthetic isoflurane, Bechara J. Saab, Sunnybrook Health Sciences Centre
B4 Systematic review: RCTs examining intravenous remifentanil vs. other pharmacologic modalities for labor analgesia, Ahmed Soliman, Women’s College Hospital
B5 Continuous cell saver reduces cognitive decline after CAGB surgery, Coincassore Srinivas, UHN/Toronto General Hospital
B6 Does the presence of a subarachnoid hemorrhage influence analgesic requirements after treatment with surgical clipping or endovascular coiling in patients with intracranial aneurysms? Dhuleep Sanjay Wijayatilake, UHN/Toronto Western Hospital

Cooper RM. Complications associated with the use of the glidescope videolaryngoscope. Can J Anesth. 54: 54-57, 2007
28TH Annual Shields Research Day

The 28th Annual Shields Research-In-Progress Day was held at the Metro Convention Centre on Friday, May 3, 2007. Over 230 clinicians and trainees from the University of Toronto, our affiliated teaching hospitals, and community hospitals attended this very successful event to share ideas, display posters (43) and present research. This year, the Annual Shields lectureship was given by Dr. Daniel Sessler from the Outcomes Research Institute at the University of Louisville on “Outcomes research: Moving from physiology to large-scale outcomes.” Dr. Sessler’s talk was followed by a very stimulating and thought-provoking open forum on anesthesia practice in Toronto, featuring Mr. Hugh MacLeod, Assistant Deputy Minister, Ministry of Health and Long-Term Care and Dr. Stephen Brown from the Ontario Medical Association (Section of Anesthesia). Finally, were very pleased to be joined by Mrs. Frances Lang and her family. Mrs. Lang provided us with some very heartfelt (and entertaining) comments on her father, the late Dr. Harry Shields, the first Chair of the UT Department of Anesthesia. The program highlights for this event are included below.

THE SHIELDS LECTURE:
“OUTCOMES RESEARCH – Moving from Physiology to Large Scale Outcomes”

Daniel L. Sessler, MD, PhD

Dr. Sessler attended medical school at Columbia University, and subsequently completed pediatric and anesthesia residencies at the University of California, Los Angeles. He is currently Chair, Department of OUTCOMES RESEARCH at the Cleveland Clinic Foundation; he is also the Lolita & Samuel Weakley Professor of Anesthesiology and Director of the OUTCOMES RESEARCH Institute at the University of Louisville. Dr. Sessler’s administrative work includes two stints as acting-chair of the Department of Anesthesiology at the University of Louisville. He was also Vice-dean and Associate Vice President for Health Affairs at the University of Louisville, giving him responsibility for research throughout the Health Sciences Campus. During his five years at the University of Louisville, NIH funding to the Schools of Medicine, Dentistry, and Nursing more than quadrupled. The Outcomes Research group, which Dr. Sessler founded, is a collaboration of 75 investigators in ten countries currently involved in more than 90 studies, including half-a-dozen large, multi-centre outcome trials. Dr. Sessler has published a book on therapeutic hypothermia and more than 325 full research papers on various aspects of anesthesia, surgery, and perioperative outcomes; about 140 of his papers are in anesthesiology, and more than half-a-dozen are in Lancet or the New England Journal of Medicine.

Dr. Sessler has trained more than 50 research fellows, four of whom subsequently chaired anesthesia departments. He has given invited lectures at more than 200 institutions and has grant support totaling exceeding $14 million, more than $11 million of which is from NIH and other peer-reviewed sources. Dr. Sessler has received numerous prizes, including the 2002 American Society of Anesthesiology Excellence in Research award.
The Clinician-Scientist Stream

The Department of Anesthesia at the University of Toronto is recognized for its excellent postgraduate clinical training program. The teachers in the department are committed to training residents towards a broad range of career goals in both academic and community practice. These objectives are achieved through the strong commitment to education, excellent research training opportunities and exposure to a wide variety of clinical practice. The education of future academic anesthesists is an important mission of the department and the clinician-scientist stream has been established as an opportunity to further this goal in the residency.

Goals

- Provide a small group of residents with fundamental training in research methodology;
- Foster critical thinking in a research environment of the highest quality;
- Prepare anesthesia trainees for careers as independent investigators in academic departments;
- Provide an opportunity for residents to contribute to the expansion of the fundamental understanding of anesthesia; and,
- Attain the above objectives in the context of excellent clinical training.

The clinician-scientist stream is a component of the postgraduate training program in Anesthesia. Potential participants are identified and recruited into the program during their PGY1 or PGY2 years of training. Residents commit at the outset to a minimum of two years of research during their residency. The trainee is registered in the University of Toronto Institute of Medical Sciences (or equivalent) in an MSc or PhD program. One year of this research training counts toward the Royal College requirements in Anesthesia.

The laboratory or area of interest in which the resident will work is selected during the PGY2 clinical year, after discussion with investigators from various disciplines. Residents in the Clinician-Scientist stream can start their research experience after the PGY2 year and complete clinical training following the research period.

Research Programs

Research interests of residents undertaking graduate research can include any of the following:

- Molecular basis of anesthesia
- Clinical pharmacology
- Clinical epidemiology/outcomes research
- Neurophysiology
- Cardiovascular and cardiopulmonary physiology
- Pain research
- Research in education

Application to the Clinician-Scientist Stream

Residents in the anesthesiology program who wish to prepare for an academic research career are invited to apply for the Clinician-Scientist stream through the office of the Program Director. Each year funding is available for a maximum of two residents to participate in the Clinician-Scientist stream through the Alan K. Laws Clinician Scientist Fellowship.


Jadad AR. Randomized clinical trials of telepsychiatry through videoconference versus face-to-face conventional psychiatric treatment [Commentary]. Mediçina Basada em Evidencia, 12: 341-50, 2006


The following chart demonstrates the distribution of research projects across different areas in 2006-07.

- Dr. Joe Fisher received a grant from the US Marine Corps for the "Development of a Mobile Critical Care Unit."
- Dr. Zeev Friedman received grants from the Education Development Fund for Innovation in Education, the Canadian Anesthesiologists’ Society, the Physicians Services Incorporated Foundation, and the American Society of Regional Anesthesia for his projects on Simulation in Anesthesia.
- Dr. Greg Hare was awarded grants from The Society of Cardiovascular Anesthesiologists: "The threshold hematocrit for cerebral hypoxia is maintained by protective cardiovascular mechanisms: the role for neuronal nitric oxide synthase (nNOS)," and the Canadian Anesthesiologists’ Society Wynands Research Award: "Does beta-1 adrenergic antagonism increase tissue hypoxia following acute hemodilution?"
- Drs. Pam Morgan and Jordan Tarshis received a grant from the Canadian Patient Safety Institute to study "Determination of the psychometric properties of a behavioral marking system for obstetrical team training using high-fidelity simulation."
- Dr. Haibo Zhang was awarded a grant from the Ontario Thoracic Society for his work on "The role of stem cells in the repair of lung injury."

The following chart demonstrates the distribution of research projects across different areas in 2006-07.
Report from the Vice-Chair, Research
Dr. David Mazer

This past year was another very successful one for the Department of Anesthesia in terms of research. Our department continues to be the leading Anesthesia research department in Canada, and among the top in publicly funded Universities in the world. There were many noteworthy accomplishments and achievements, and several ‘firsts’.

• Dr. Bev Orser’s article entitled “Lifting the Fog around Anesthesia” was one of the cover stories in the June issue of Scientific American. It eloquently outlines the current state of knowledge about how our anesthetic drugs actually work, and the quest to make them better.

• Dr. Frances Chung was the winner of the Canadian Anesthesiologists’ Society Research Recognition Award, the highest honor granted nationally to a senior investigator who has sustained major contributions in anesthesia research in Canada. The award was given in recognition of her outstanding contributions to the knowledge base of our specialty through her research into perioperative care and outcomes in ambulatory anesthesia. This marks the fifth time a University of Toronto researcher has won this award.

• Dr. Duminda Wijeysundera and colleagues from TGH published an article in Journal of the American Medical Association (JAMA) on renal failure in cardiac surgery, and his grant was the highest ranked in his category in the last Heart and Stroke Foundation Grant competition.

• Several members of the department (Drs. Scott Beattie, Mark Crawford, Hwan Joo, Keyvan Karkouti, Pam Morgan, Viren Naik, Bev Orser, Guy Petroz, Duminda Wijeysundera) had articles published in Anesthesiology, the leading journal of our specialty. The importance of these studies is underscored by the accompanying editorials and the impact they have on our understanding of the mechanisms and approaches to the perioperative management of our patients.

• The number of high quality publications in peer reviewed journals, and presentations of scientific work at national and international meetings by members of our department is testimony to the strength, breadth and depth of our research endeavor. This received by our department remains near its highest level ever, and the wide range of agencies who provide peer-review of research. Our department continues to be the leading Anesthesia research department in North America (please refer to list starting on page 32).

• Funding support for research remains an academic priority for our department. The total amount of research dollars received by our department remains near its highest level ever, and the wide range of agencies who provide peer-review grants to members of our department is testimony to the strength, breadth and depth of our research endeavor. This support is essential to achieving our goal of creating and disseminating new knowledge related to our specialty. The list of research grants is remarkable, and a few representative examples of recent grants are listed below:

• Dr. Pam Angile received a Physicians Services Incorporated Foundation grant for her study; “Randomized controlled trial examining the impact of large traditional vs. small epidural needles on the incidence of postdural puncture headache in parturients.”

• Dr. Andrew Baker received a grant from the Ontario Neurotrauma Foundation: “Calpain inhibition as a white matter neuroprotective therapy after TBI: Proof of principle for functional, histopathological and behavioral improvements by targeting white matter following traumatic brain injury.”

McIntyre L, Ferguson D, Hutchison J, Hare GMT, Pagliarello G, Marshall J, Yetisir E, Blajchman MJ, Hebert PC. How much should we transfuse patients following moderate to severe head injury? Neurosurgery. 5: 4-8; 2006
Orser BA. Lifting the fog around anesthesia. (Review) Scientific American, 296: 54-61, 2007
Orser BA, Martin LJ, Cheng YY, Bonin RP. Role of extrasynaptic GABAA receptors in hippocampus. Eur Neuropsychopharmacol, 16: S199-S199, 2006
Perlas A. Atrial Brachial Plexus Block: Ultrasonic guided technique. ASRA Newsletter, 6-9, 2006
Page 14
Schultz MJ, Haitma JA, Zhang H, Slutsky AS. Different pathogens at different time points in pneumonia: Do potential antiinflammatory therapies need to be time and species tailored? Crit Care Med. 34: 2510-2511, 2006
Slinger P. Pro: Low tidal volume is indicated for one-lung ventilation. Anesth Analg, 103: 268-270, 2006

City Wide Rounds

City-Wide Webcast Anesthesia Rounds are organized by Dr. Joseph Kay (Sunnybrook Health Sciences Centre).

Web-Based Learning

1. CME Online Anesthesia Rounds: This program, developed by Dr. Sharon Davies (UHN/Mount Sinai Hospital) has been enlarged to ten educational modules. These modules have been accredited by the University of Toronto for MainCert Category I credits and can be accessed through the UT Anesthesia department's website www.anesthesia.utoronto.ca (Education/Continuing Medical Education).

2. Web-based Bronchoscopy Simulator: The Thoracic Anesthesia group of the University Health Network/Toronto General Hospital has created an online bronchoscopy simulator to improve Anesthesiologists’ skills in providing lung isolation for thoracic anesthesia by learning bronchial anatomy. The simulator operates with real-time video and the user navigates through the tracheo-bronchial tree with mouse clicks on the lighted directional arrows. The user is guided by a simultaneous macro view on the left panel, the “Bronchial Tree Navigational Map” and a micro view on the right panel, the “Bronchoscopic View” (see attached photo of the simulator). Clicking on the alphabetic labels in the bronchoscopic view gives further details of the anatomy (see picture below).

Prior to using the simulator the user is required to take a 16-question Bronchoscopy Pre-Quiz. After taking the quiz, the user has unlimited access to the simulator. After using the simulator, the user is asked to take a Bronchoscopy Post-Quiz, following which he or she is given the correct answers and can anonymously compare their results to those of others who have taken the quiz. The simulator and quiz can be accessed on the website www.ToracicAnesthesia.com.
Continuing Education (CE)
Dr. Peter Slinger, Chair
CE Committee

The Continuing Education Committee for the Department of Anesthesia is comprised of representatives from all of the teaching hospitals as well as directors of CME courses and community hospital representatives. It meets quarterly to discuss, plan and organize a number of continuing education initiatives. The committee endeavors to ensure that most CE activities qualify for University of Toronto sponsorship and are accredited learning activities.

Course Development

Each year the committee supervises the Anesthesia Practice Meeting (under the co-direction of Drs. Martin van der Vyver and Pamela Angle in 2007). This three-day course provides a combination of lectures, workshops and small group sessions for both Fellows and GP Anesthetists. Over the past three years, the meeting has been extremely successful with unprecedented numbers of participants.

Course Sponsorship

The Committee’s efforts in the development and accreditation of the following ongoing CME courses produced by the Department of Anesthesia.

1. Regional Anesthesia and Pain Medicine, September 29-October 1, 2006, Sutton Place Hotel, Toronto (vincent.chan@uhn.on.ca)
2. Toronto Hyperbaric Medicine Symposium, September 29, 2006, University Health Network/Toronto General Hospital (wayne.evans@uhn.on.ca)
3. Toronto Critical Care Symposium, October 25-27, 2006, Metro Toronto Convention Centre (brian.kavanagh@sickkids.ca)
4. Obstetric-Anesthesia, October 28, 2006, Mount Sinai Hospital (jose.carvalho@uhn.on.ca)
5. Perioperative Transesophageal Echocardiography Symposium, November 4-5, 2006, Renaissance Toronto Hotel (julie.nigro@uhn.on.ca)
6. Anesthesia Faculty Development Day, November 10, 2006, St. Michael's Hospital, Toronto (houstonp@smh.toronto.on.ca)
7. Toronto Anesthesia Practice, November 24-26, 2006, Delta Chelsea Hotel (pamela.angie@sw.ca)
8. Emerging Practices in Pain Management, February 27, 2007, University of Toronto (peggy.wood@uhn.on.ca)
9. Trentlamb Anesthesia Meeting, February 2007, Fairmont Hotel, Mt. Tremblant (jordan.tarshis@tsx.ca)
10. Toronto Anesthesia Symposium, March 3-4, 2007, Toronto Marriott Eaton Centre (peter.slinger@uhn.on.ca)
11. 28th Annual Shields Research Day, May 3, 2007, Metro Toronto Convention Centre (guy.petroz@sickkids.ca)
12. Controversies in Perioperative Medicine, May 13-19, 2007, San Martino, Italy (mark.friedlander@rogers.com)


CHAPTERS IN BOOKS


McGrath PA and Ruskin D. Ethical Challenges in Caring for Children with Chronic Pain. Schatman M (ed). Taylor and Francis, 63-78, 2006


A number of awards were presented at the 2007 Shields Day. They are listed on page 11 of this report.

- The RJ Byntick Award for best Fellows’ research presentation: Dr. Michelle White for her presentation: “Effect Of Anesthetic Agents on Electrically Evoked Auditory Responses in Pediatric Cochlear Implant Surgery.”
- The Hynek Rothbart Award for the best resident paper was awarded to Dr. Dov Weiss for his presentation: “Sleep Deprivation and Anesthesiologists’ Technical Skills.”
- The AC Bryan Award for the best presentation by a graduate student: Albert Tsui (Masters student): nVOS contributes to protective cardiovascular mechanisms during acute hemorrhage in mice
- The Thomas Donald Hammell Award – in recognition of outstanding contributions to the residency program: Dr. Timothy Welke
- The Dr. John Desmond Award – Undergraduate Teaching: Dr. Robert Chen
- Dr. Naik also received ‘The John Bradley Young Educator award at the Canadian Anesthesiologists’ Society Meeting in Calgary, in June 2007.
- Dr. Dov Weiss was awarded the residents’ prize for best presentation at this meeting.

In addition, Dr. Greg Silverman (PGY3) and Kyle Kirkham (PGY1) were selected by the Canadian Space Agency to participate in one month electives in Aerospace Medicine at NASA.

In 2007, all but one of the residents from our program were successful at the Royal College oral examinations. Congratulations to these residents who are now certified as specialists in anesthesia.

Program Coordinators:
Dr. J. Lai
Dr. S. Halpern
Dr. H. Fischer
Dr. H. Lee
Dr. E. Ng
Dr. R. Ko
Dr. J. Wassermann
Dr. V. Naik
Dr. I. Devito
Dr. B. Morningstar
Dr. D. Riegert

Anesthesia Simulator:
Dr. Robert Chen

Education Committee UHN:

Resident Counselors:
Dr. B. Morningstar
Dr. D. Riegert

Residents:
PG1: Dr. Darlene Weekes
PG2: Dr. John Hanlon
PG3: Dr. Collan Simmons
PG4: Dr. Hance Clarke
PG5: Dr. Tim Welke and Diana Tamir
Postgraduate Education
Dr. Mark Levine, Director
Postgraduate Education Program

The Department of Anesthesia at the University of Toronto is the largest and most productive academic department in Canada. Our residents rotate through 7 different hospital sites and are therefore exposed to every aspect of clinical anesthesia, having the opportunity to work with over 230 faculty members. The experience that residents obtain, with respect to volume and variety of clinical material and complexity of patients and procedures, is unparalleled. Regional anesthesia has become a major focus at a number of sites. All residents now have the opportunity to complete a one-month rotation in regional anesthesia and many opportunities exist for research in this field – particularly in the area of ultrasound guided regional anesthesia.

The Postgraduate Education Committee of the Department of Anesthesia is composed of the Chair of the Department, Program Coordinators in charge of the teaching program at each hospital, Resident Counselors, the Director of Education from the University Health Network, Chair of the Education Committee, the Director of the simulator centre, Chair of the Research Committee, one resident member from each of the PG year levels (elected by peers) and the Program Assistant. The committee is chaired by the Program Director, and meets monthly to oversee all aspects of the training program in anesthesia. Its responsibilities include selection, evaluation, and promotion of residents, and the design, operation, and evaluation of the teaching program.

The past academic year has been particularly busy for the Postgraduate Education Committee. The Postgraduate Training Program underwent a Royal College Survey in April 2007 and received full approval. A number of strengths were identified – these included use of the high-fidelity anesthesia simulator both to teach various CanMEDS roles to residents and to enhance their abilities to teach medical students and the regional anesthesia program. It was also noted that awareness of research opportunities has become heightened amongst the residents and there has been an increase in the number of residents participating in research projects. This is due, in part, to the annual PG1/PG2 Resident Research Day at which a number of prominent researchers within the department highlight their research interests and the benefits and drawbacks of a research career in anesthesia.

The number of trainees in the department has grown steadily over the past few years. This has been due to a slight increase in the number of Canadian Medical Graduates as well as an increase in the number of International Medical Graduates. A number of department members have been very involved in the evaluation and education of International Medical Graduates at all levels of training.

We were very happy with the results of the annual CaRMS Match. Two of the 15 available positions were assigned to the Clinician Investigator Program (CIP) Stream. We filled all 15 positions in the regular program with excellent applicants, some of whom had applied to the CIP stream. We also enrolled four Ontario International Medical Graduate Program residents – three at a PG1 level and one at a PG2 level. In addition, one IMG successfully completed the Assessment Program for International Medical Graduates and has entered practice in a community setting.

The Fellowship Program continues to be very active. There were 88 fellows from 24 countries in 2006-2007.

Publications


Angle, P
Canadian Anesthesiologist’s Society Meeting, “Evidence-based Management of PDPH.” Calgary, Alberta, June 2007

Baker, AJ
William Osler Health Centre ICU Day: Decision making at the end of life, “Donation in 2007 and donation after cardiac death (DCD).” Peel Memorial Hospital, Brampton, Ontario, March 2007

Balki, M

Brown, SC
European Society of Anesthesiology, “Effectiveness of a new paediatric sedation device.” Munich, Germany, June 2007
Canadian Broadcasting Corporation – G Binks, Interview for program on headaches in pediatrics. Toronto, Ontario, July 2007
Peripheral Nerve, Obstetric and Pediatric Ultrasound-Guided Blocks (POP), sponsored by Sonosite (Lecturer and Workshop Instructor), “Ultrasound facilitated spinalis and epidurals in obstetrics.” Chicago, Illinois, June 2007

Chen YY

Cooper, RM
Columbia University Medical Center, Visiting Professor. New York, New York, July 2006
Society for Airway Management, Annual Scientific Meeting, “Managing the unanticipated difficult intubation,” and “Airway Workshop: Extubation of the high-risk airway.” La Jolla, California, September 2006

The Toronto Airway Symposium, Airway Workshop, “Is direct laryngoscopy obsolete?” University of Toronto, Toronto, April 2007
European Society of Anesthesiology Annual Scientific Meeting, Euraesthesia 2007, “Visualized vs. blind intubation techniques in the difficult airway: what makes the difference?” Munich, Germany, June 2007

Crawford, MW
Anesthesia Practice 2006, Pearls of Practice, “Current concerns with Propofol in the pediatric patient.” Delta Chelsea Hotel, Toronto, November 2006,
University of Toronto, Department of Pediatric Laboratory Medicine, City-wide Clinical Biochemistry Rounds, “Propofol infusion syndrome.” Toronto, Ontario, April 2007

Davallou, M
Canadian Anesthesiologists’ Society Annual Meeting, “Pediatric publications that have changed my practice.” Calgary, Alberta, June 2007

Davies, S
Ontario Medical Association, Department of Anesthesia, “When your epidural doesn’t work.” Toronto, September 2006

University of Toronto, Anesthetic Practice, “The bleeding parturient.” Toronto, Ontario, November 2006
Trillium Health Center, “Management of post partum hemorrhage.” June 2007

A University of Toronto Medical Student Textbook is presently in progress, with faculty from all hospitals contributing to this project. The support that this project received from all departments demonstrates the tremendous commitment of our faculty to Undergraduate Education. The textbook was announced at the ACUDA meeting, June 2007 and many undergraduate departments across Canada are awaiting its publication.

Our focus for the next academic year is the development of instructional videos for intravenous cannulation and airway management, that can be accessed through our website. As well, the development of web-based educational tools will be a priority, focusing on pre-operative evaluation skills, resuscitation, pain management, technical skills, team centered care and other essential skills necessary for all physicians.

We are pleased to have the following faculty members participate in the Undergraduate Education Program, and thank them for their numerous and ongoing contributions to the program and the University:

UGE Chair and Clerkship Course Director:
Dr. Pamela Morgan Sunnybrook/Women’s College Hospital
(June – December 2006)

Interim UGE Chair and Pre-Clerkship Coordinator:
Dr. Isabella Devito UHN/Mount Sinai Hospital
(January – June 2007)

Undergraduate Education Committee Members:
Dr. D. Chandra St. Michael’s Hospital
Dr. I. Devito (Chair) UHN/Mount Sinai Hospital
Dr. H. El-Beheiry UHN/Toronto Western Hospital
Dr. P. Houston Vice-Chair, Education, UT Department of Anesthesia/SMH
Dr. D. Irwin UHN/Mount Sinai Hospital
Dr. G. Kanellakos UHN/Toronto General Hospital
Dr. B. Kavanagh Chair, UT Department of Anesthesia/Hospital for Sick Children
Dr. R. Mai St. Michael’s Hospital
Dr. P. Mark Toronto East General
Dr. P. Morgan Sunnybrook/Women’s College Hospital
Mr. I. Randall Student Representative, Year 4
Dr. J. Robertson Hospital for Sick Children: Electives Committee Representative
Dr. A. Sarmah Sunnybrook
Mr. R. Sunder Student Representative, Year 3
Dr. M. van der Vyver Women’s College Hospital
Simulator Training Sessions

Pre-Clerkship
Members of each hospital department are involved in teaching courses in first and second year. We also thank them for their on-going contributions and excellence.

Pre-Clerkship Lectures
Dr. S. Belo Sunnybrook
Dr. D. Chandra St. Michael’s Hospital
Dr. R. Chen St. Michael’s Hospital
Dr. A. Ho St. Michael’s Hospital
Dr. J. Wasserman St. Michael’s Hospital

ASCM I Tutors
Dr. D. Chandra St. Michael’s Hospital
Dr. E. Goldszmidt UHN/Mount Sinai Hospital
Dr. V. Hughes St. Michael’s Hospital
Dr. L. Mathieson St. Michael’s Hospital
Dr. A. van Rensburg UHN/Toronto General Hospital
Dr. E. You-Ten UHN/Mount Sinai Hospital

ASCM II Tutors
Dr. M. Chochinov Sunnybrook
Dr. M. Jariani UHN/Toronto General Hospital
Dr. G. Kanelias UHN/Toronto General Hospital

DOCH II (Determinants of Community Health II)
Dr. S. Brown Hospital for Sick Children

Problem Based Learning Tutors, Year 1: Metabolism and Nutrition
Dr. M. van der Vyver Women’s College Hospital

Problem Based Learning Tutors, Year 2: Foundations of Medical Practice
Dr. S. Abrahamsen St. Michael’s Hospital
Dr. R. Barlow Hospital for Sick Children
Dr. R. Crago UHN/Toronto Western Hospital
Dr. K. Lin St. Michael’s Hospital
Dr. W. Middleton UHN/Toronto Western Hospital
Dr. J. Robertson Hospital for Sick Children
Dr. J. Rucker UHN/Mount Sinai Hospital

Problem Based Learning Tutors: Brain and Behavior
Dr. A. Prabhu UHN/Toronto Western Hospital
Dr. L. V. Raghavan UHN/Toronto Western Hospital

Foundations of Medical Practice Seminar Leaders, Year 2
Dr. D. Chandra St. Michael’s Hospital

Carvalho, J
XXXIV Jornadas Aniversario Dr. Gerardo Hernandez Munoz, “Patient-controlled analgesia in labor: Regional and intravenous.” Caracas, Venezuela, July 2006

Mount Sinai Hospital Obstetric Anesthesia Conference, “Accelerated recovery post-caesarean section.” Toronto, Ontario, October 2006
53rd Brazilian Congress of Anesthesiology (Moderator, Panel), “Anesthesia for special situations in Obstetrics.” Rio de Janeiro, Brazil, November 2006
53rd Brazilian Congress of Anesthesiology Pro-Con Debate, “Best anesthesia for cesarean section is spinal.” Rio de Janeiro, Brazil, November 2006
53rd Brazilian Congress of Anesthesiology Panel, “Anesthesia for special situations in obstetric anesthesia, pre- eclampsia.” Rio de Janeiro, Brazil, November 2006
53rd Brazilian Congress of Anesthesiology, “New perspectives in regional anesthesia for obstetrics.” Rio de Janeiro, Brazil, November 2006

Academic Day for Materno-Fetal Medicine, Cardiology and Obstetric Anesthesia Fellows, Cardiology and Obstetric Anesthesia Fellows, “Anesthetic issues in women with heart disease.” Toronto General Hospital, Toronto, Ontario, February 2007

Toronto Medical Center, Wayne State University, “Ultrasound-facilitated spinals and epidurals.” Detroit, Michigan, June 2007
Detroit Medical Center, Wayne State University, “Pharmacology of spinal and epidural analgesics: reshaping our practice based on minimum local anesthetic concentration studies.” Detroit, Michigan, June 2007

Our Education Mission

Dr. Isabella Devito, Director

Undergraduate Education Program

The strength of the Undergraduate program continues to be the dedication of the faculty of the Department of Anesthesia. Our faculty are involved in all years of the medical curriculum. Our involvement begins with the selection of the medical school class and ends with the graduation ceremonies.

In Years 1 and 2, the faculty are involved in teaching ASCM (Art and Science of Clinical Medicine) and II. DOCH (Determinants of Community Health) II. Metabolism and Nutrition, Foundations of Medical Practice and Brain and Behavior. They are highly evaluated and their commitment to excellence is greatly appreciated.

This year, Roderick Cheung, one of our second year medical students at the University of Toronto placed second in the CAS Medical Student Essay Contest for his essay entitled, “High-Fidelity Patient Simulation: Future of Anesthesia Education.”

The Department of Anesthesia’s elective program continues to be an extremely popular program. Our elective program accepts local, national and international students in their third or fourth year of medicine. We continue to have record numbers of students requesting rotations in Toronto. Our rotations are in such high demand, that we unfortunately had to turn away students. To remedy this, we will be encouraging Community Hospitals with faculty who have an interest in teaching to partner with us. This will be a tremendous support to our already established program.

Our faculty’s most intensive contribution to undergraduate teaching is the fourth year Anesthesia rotation. This is comprised of a two-week rotation for the first two blocks, and a seven to eight day rotation for the last three blocks. The shortened rotation is necessary to accommodate the CaRMS interviews. The students in the shortened blocks continue to ask for a longer rotation. The major objectives of the rotation are to understand the implications of pre-existing disease for patients undergoing anesthesia, to learn the principles and practices of acute resuscitation, and pain management.

As part of their two-week rotation, all fourth year students participate in the Simulator Education Day. The Department of Anesthesia at the University of Toronto was the first in Canada to incorporate simulation into the curriculum. The simulation day includes instruction on airway management, intravenous cannulation and clinical scenarios involving resuscitation. This educational day is highly evaluated by our students. Our senior residents contribute immensely to the success of this day.

At the end of 2006, Dr. Pamela Morgan stepped down as Chair of Undergraduate Education. Dr. Morgan was the Anesthesia Clerkship Course Director since 1996 and became Chair of Undergraduate Education in 2002. Under her leadership, the Anesthesia Simulator Education Day for undergraduate students was developed.

With increasing enrollment in Medicine, one of our biggest challenges is incorporating the increased numbers while still providing an excellent educational experience. Over 200 students were enrolled in Year 4 during the 2006-2007 academic year. The Toronto East General Hospital has been added to the Wightman-Berris Anesthesia rotation to assist with the increase in student numbers. The feedback from all sites has been excellent.

Invited Lectures

Devito, I

Anesthetic Practice, Obstetrical Trouble Rounds, “Cardiac arrest in pregnancy.” University of Toronto, Toronto, Ontario, November 2006

El-Beheiry, H
63rd Annual Meeting of the Canadian Anesthesiologists’ Society (Co-Chair), “Neuroanesthesia poster discussion session.” Calgary, Alberta, June 2007

63rd Annual Meeting of the Canadian Anesthesiologists’ Society (Speaker, Case Discussion), “Cerebral hyperperfusion syndrome following carotid end arterectomy.” Calgary, Alberta, June 2007


Fisher, J
University of Colorado High Altitude Research Center, “Precise end tidal gas control to elicit R-R interval power spectra during acute hypoxic stress.” Aurora, Colorado, July 2006

Presbyterian Hospital of Dallas Institute for Exercise and Environmental Medicine, “Precise end tidal gas control.” Dallas, Texas, September 2006

University of Nottingham, Peter Mansfield Magnetic Imaging Center, “Precise end tidal gas control for MRI imaging.” Nottingham, United Kingdom, November 2006


Gardner-Nix, J


Women’s Clubs of Canada, “Using the mind to heal the body.” London, Ontario, October 2006

Canadian Hemophilia Society’s National Workshop for Adults with an Inhibitor, “Dealing with pain: Using the mind to heal the body.” Toronto, Ontario, November 2006


Baycrest Centre for Geriatric Care, Aging Well Starts Now Forum, “Getting past the pain.” Toronto, Ontario, November 2006


Pharmacy Rounds, St Michael’s Hospital, “What’s new in chronic pain management?” Toronto, Ontario, April 2007

Sunnybrook Health Sciences Centre Changing the Face of Pain Conference, Plenary, “I can’t take the pain anymore: using the mind to help heal the body: Mindfulness-based ‘Medication’ therapy.” Toronto, Ontario, May 2007

Report from the Vice-Chair, Education

Dr. Patricia Houston

The Department of Anesthesia provides exemplary educational programs across the spectrum of undergraduate, graduate and continuing medical education and professional development. This is accomplished due to the commitment and dedication of our excellent teachers and the recognition of the value of their contribution to the academic achievements of our department. We are teachers of perioperative medicine and include in our curriculum and evaluation processes the Canadian Medical Education Directions for Specialists (CanMEDS) competencies. Anesthetists are recognized by the other departments and faculties as experts at teaching resuscitation and team-centered skills both in the clinical setting and in simulation centers.

The Undergraduate program continues to meet the challenge of teaching an increasing number of undergraduate students from the University of Toronto and elective students from Canada and abroad. Dr. Pam Morgan stepped down this year from the position of Chair of Undergraduate Education after eleven years of dedication to the undergraduate portfolio. She is noted for the development of a Simulator Education Day which has been emulated by many other departments in Canada since its inception. Dr. Isabella Devito has taken on this important position as of July 1, 2007 and is leading the development of the University of Toronto Medical Student Textbook. Dr. Devito and the Undergraduate Committee will also be exploring the increased use of simulation and web-enabled learning in the undergraduate program.

The Postgraduate program led by Dr. Mark Levine underwent a very successful Royal College of Physicians and Surgeons of Canada accreditation review this year. The program was noted for its use of simulation in the curriculum and the opportunities provided to residents for developing research skills and participating in scholarly activities. Dr. Viren Naik, a member of the Postgraduate Committee, who is internationally known for his teaching and research activities in simulation, was awarded the John Bradley Young Educator Award at the Canadian Anesthesiologists Society meeting. A resident from the program, Dr. Dov Weiss, won the resident research prize at this year’s CAS for a research project he completed with Dr. Naik. The number of international Fellows seeking further post-residency training at our university continues to grow exponentially. Currently, there are 88 Fellows training in sub-specialty anesthesia from 24 different countries at the University of Toronto.

Dr. Peter Slinger chairs the Continuing Education Committee. The CE committee expanded its mandate this year to include professional development as one of its core roles. The committee is responsible for fourteen different courses as well as a University-wide Grand Rounds webinar and online CME modules on the University website. These programs are nationally recognized for their excellence and are very well attended by local faculty and community hospital physicians, as well as academic physicians from across Canada. The Committee plans to undertake a needs assessment of the faculty in the upcoming year to better formulate educational objectives for our continuing education and professional development programs, and to support the design of curriculum and evaluation tools to meet these needs.

As the educational programs in the department continue to grow, it is clear that additional educational expertise and support will be required to maintain and improve the quality of our programs. To this end, the UT department has initiated the recruitment of a full-time professional educator who will work collaboratively with the Vice-Chair Education, Education Directors, and other education leaders to enhance the educational experience for both teachers and trainees across the continuum of anesthesia education.
This pilot project is a very constructive approach to the anesthesia care team issue. All professions undergo significant changes over time—we are hopeful that this will be good for the profession, good for standards, good for cost-benefit, and most importantly, good for patients. We must celebrate the accomplishments of 2006-07 (and before), by making sure that we are open to continued development and excellence in 2007-08 (and beyond).

**Hospital Statistics**

The following table records anesthesia-related clinical data obtained from the UT affiliated local teaching hospitals for the period July 1, 2006 to June 30, 2007:

<table>
<thead>
<tr>
<th></th>
<th>TGH</th>
<th>TWH</th>
<th>Mount Sinai</th>
<th>Women's</th>
<th>Sunnybrook</th>
<th>St. Mike's</th>
<th>Sick Children's</th>
<th>TOTAL - ALL SITES</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Anesthetics:</td>
<td>9,461</td>
<td>7,030</td>
<td>9,295</td>
<td>4,041</td>
<td>11,600</td>
<td>14,800</td>
<td>18,000</td>
<td>74,227</td>
</tr>
<tr>
<td>Regional Anesthetics:</td>
<td>200</td>
<td>3,600</td>
<td>5,684</td>
<td>73</td>
<td>2,500</td>
<td>1,210</td>
<td>1,000</td>
<td>14,267</td>
</tr>
<tr>
<td>Deliveries:</td>
<td>na*</td>
<td>na*</td>
<td>6,385</td>
<td>3,642</td>
<td>na*</td>
<td>2,825</td>
<td>na*</td>
<td>12,852</td>
</tr>
<tr>
<td>Epidurals/spinals:</td>
<td>704</td>
<td>1,200</td>
<td>5,351</td>
<td>2,051</td>
<td>1,220</td>
<td>2,120</td>
<td>300</td>
<td>12,926</td>
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<tr>
<td>Caisarian sections:</td>
<td>na*</td>
<td>na*</td>
<td>2,170</td>
<td>1,248</td>
<td>na*</td>
<td>832</td>
<td>na*</td>
<td>4,250</td>
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<tr>
<td>Caisarian section rate:</td>
<td>na*</td>
<td>na*</td>
<td>34%</td>
<td>34%</td>
<td>na*</td>
<td>29%</td>
<td>na*</td>
<td></td>
</tr>
<tr>
<td>Pain clinic cases:</td>
<td>na*</td>
<td>205</td>
<td>1,589</td>
<td>202</td>
<td>2,750</td>
<td>1,797</td>
<td>367</td>
<td>6,910</td>
</tr>
<tr>
<td>Acute pain service:</td>
<td>3,082</td>
<td>2,472</td>
<td>2,601</td>
<td>252</td>
<td>7,000</td>
<td>500</td>
<td>860</td>
<td>16,767</td>
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<tr>
<td>ICU beds:</td>
<td>60</td>
<td>23</td>
<td>16</td>
<td>2</td>
<td>65</td>
<td>56</td>
<td>25</td>
<td>247</td>
</tr>
</tbody>
</table>

* This service is not provided at this hospital

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**Clinical Practice**

Sunnybrook Health Sciences Centre, Lecture to Internal Medicine Residents, “Appropriate use of life support.” Toronto, Ontario, 2007


**Invited Lectures**

Halpern, S


Canadian Society of Anesthesiologists Annual Meeting (Chairman), “Poster-Discussion Obstetrical Anaesthesia Research.” Calgary, Alberta, June 2006

Women’s College Hospital, Department of Family Medicine Consultant Rounds, “Preoperative assessment.” Toronto, Ontario, November 2006


Hayes, J

Canadian Pediatric Anesthesia Society, “Rapid sequence induction is contraindicated in children.” Vancouver, British Columbia, November 2006

Holby, H


Congenital Cardiac Anesthesia Society Pediatric Cardiac Anesthesia Conference at Pediatric Anesthesia (CCAS/SPA), Moderator and Presenter of a session on pulmonary hypertension, “Dangerous times in out-of-the-way places: MRI and pulmonary hypertension.” Phoenix, Arizona, February 2007

Cardiovascular Rounds Texas Children’s Hospital, “Physiological Considerations for the Hybrid Procedure for HLHS.” Houston, Texas, September 2005

Houston, P

Canadian Anesthesiologist Society Meeting, “Community vs. academic anesthesia – Career choices for anesthesia residents.” Calgary, Alberta, June 2007
Report from the Vice-Chair, Clinical Practice

Dr. Gerald O’Leary

Anesthesia care teams – the ‘made in Ontario’ response to personnel concerns and a desire to permit the development of meaningful inter-professional, team-based practice – are now being piloted throughout the province. This is the most significant issue in clinical practice that occurred in 2006-07.

Last fall, the MOHLTC funded a $10M, 2-year project led by Keith Rose across nine hospitals to evaluate the integration of anesthesia care teams into anesthesia practice. This was a competitive process, wherein all hospitals in the province were invited to propose how they would develop an anesthesia care team in their institution. Each institution provided a business plan and a vision for anesthesia care, and all proposals were signed off by the CEO Anesthetist-in-Chief. The departments of anesthesia in all the province’s hospitals were invited to compete for inclusion in the anesthesia care team pilot project, and most did. The successful institutions were: Halton Healthcare; Kingston General Hospital; London Health Sciences Centre; Royal Victoria Hospital; Sault Area Hospital; Sunnybrook Health Sciences Centre; the Ottawa Hospital; Toronto East General Hospital; and the University Health Network. The diversity in geographic location was as great as the diversity in the depth of previous experience of working with anesthesia care teams. Moreover, similar diversity was found in the range of scope of proposed practice across the continuum of perioperative anesthesia; this feature suggests that the care teams will explore the full and evolving range of perioperative care that characterizes the practice of the modern anesthesiologist. The leader of this project, Dr. Keith Rose, is Associate Professor of Anesthesia at the University of Toronto and formerly anesthetist-in-chief at St. Michael’s Hospital, is currently VP Medical Affairs at the North York General Hospital.

In preparation for this province-wide initiative, two committees are busy at work. First, the ACT advisory committee, co-chaired by Dr. Stephen Brown and Ms. Sue Bead, reviewed the candidate applications and continue to advise on the implementation specifics. Several members of this committee meet on a regular basis with local site leaders and refine elements of the proposed teams’ functions. So far so good. At the UHN we have at this stage extensive experience with anesthesia care teams. Our sense is that the team approach is superior. Indeed, our faculty value the prospect immensely, and contribute extensively to the education of anesthesia assistants (respiratory therapists and nurses training at the Michener Institute), in order that the team members will be taught by those best qualified to do so. I am a strong proponent of the ACT model. I simply see no viable, palatable alternative to address our personnel resource issue. I equally firmly believe that there are areas of care that can be safely delegated and supervised. I think we need to proactively discuss how we integrate them and their skill set safely, effectively and openly into our practice at each of our hospitals. However, the introduction of any system can bring problems as well as benefits.

Hence, the second committee involved in the Anesthesia Care Team project. Chaired by Dr. Brian Kavanagh, this committee is charged with evaluating the effectiveness of the anesthesia care teams, and has a broad membership including the chairs of all the provincial medical schools. Dr. Keyvan Karkouri, a member of this committee, has the responsibility of designing and overseeing the research methodology that will demonstrate whether – and why – the teams have had a favorable impact on the safety, quality, and volume of anesthesia services, as well as the cost, compared with previous practice.
The Richard Knill Research Competition: **Gregory Hare** (Associate Professor, St. Michael’s Hospital)

The Bristol Myers Squibb Canada-CAS Career Scientist Award in Anesthesia and Peri-Operative Medicine: **Keyvan Karkouti** (Associate Professor, University Health Network, TGH)

The Baxter Corporation Canadian Research Award in Anesthesia: **Richard Brull** (Assistant Professor, University Health Network, TWH)

The Smiths Medical Canada Ltd Canadian Research Award in Pain Research and/or Regional Anesthesia: **Joseph Kay** (Assistant Professor, Sunnybrook Health Sciences Centre)

The Abbott Laboratories Ltd/CAS Fellowship in Anesthesia: **Meredith Ford** (PG5)

The Resident’s Competition: **Dov Weiss** (PG4)

The following awards were also bestowed in 2006-2007:

- **Pamela Morgan** (Professor, Women’s College Hospital), received the Best Paper in Anesthesia Education and Simulation award at the Canadian Anesthesiologists’ Society Annual Meeting in June 2007
- **Beverley Orser’s** (Professor, Sunnybrook Health Sciences Centre) research was profiled in Scientific America in June 2007. She also received the Research Recognition award from the Canadian Anesthetists’ Society in June 2006
- **Marianne Graham** (Assistant Professor, Sunnybrook Health Sciences Centre) received the Bob Mackenzie Clinical Teachers Award in December 2006, Sunnybrook Anesthesia Department
- **Alejandro Jadad** (Professor, University Health Network, TGH) gave the Gary Hermance Lecture at the Association for Excellence in Communication and received the Chief Scientist’s Distinguished Lecturer Award from Health Canada in 2006

18th Conference of the Canadian Bioethics Society Conference and 3rd International Conference of Clinical Ethics and Consultation, “Toward a person-centered health system in the age of humanodes and demographic tsunamis.” Toronto, Ontario, June 2007


**John, J**
The Children’s Hospital at St. Peters University Hospital, Pediatric Grand Rounds Lecture, “Pediatric pain management.” New Brunswick, New Jersey, October 2006

**Kavanagh, B**

European Society of intensive Care Medicine (Invited Speaker), “Permissive and therapeutic hypercapnia.” Barcelona, Spain, September 2006


7th Mexican National Pediatric Intensive Care Congress (Invited Speaker), “Mechanisms of Ventilator-Induced Lung injury.” Ixtapa, Mexico, November 2006

**Loke, J**

Toronto General Hospital, Lecture to Operating Room Nurses, “Malignant hyperthermia In-service.” Toronto, Ontario, February 2007


**Macarthur, A**
Society for Obstetric Anesthesia and Perinatology and Obstetric Anaesthetists’ Association (SOAP-OAA) Joint Meeting, “What’s new in the management of postpartum hemorrhage?” Dublin, Ireland, August 2006


Mazer, CD


University of Manitoba Department of Anesthesia, Visiting Professor, “Cardiovascular Anesthesia Research: Have all the questions already been answered?” Winnipeg, Manitoba, November 2006


McCluskey, SA

Toronto Western Hospital, “Perioperative blood conservation for total joint arthroplasty and spine surgery: Current statistics and future plans.” Toronto, Ontario, November 2006


University Health Network, Department of Urology Grand Rounds, “Current issues in transfusion medicine for urology.” Toronto, Ontario, March 2007


McGrath, PA
Conference on Chronic Abdominal Pain in Children (Keynote Speaker), “Children with chronic pain – vulnerability factors that affect onset and treatment.” Massachusetts General Hospital, Boston, Massachusetts, October 2006


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Selected Chairs, Honors and Awards

We are pleased to announce the recipients of our departmental awards in 2007. The following awards were presented to the awardees at our 28th Annual Shields Research Day, 2007:

- The Dr. John Desmond Award recognizes excellence in clinical teaching of undergraduate students: **Robert Chen** (Assistant Professor, St. Michael’s Hospital)
- The Dr. Gerald Edelist Award is awarded to a faculty member in recognition of excellence as a clinical teacher of residents in anesthesia: **Viren Naik** (Assistant Professor, St. Michael’s Hospital)
- The David Fear Award is awarded for outstanding contributions to continuing medical education and continuing professional development in the Department of Anesthesia: **Sharon Davies** (Assistant Professor, University Health Network, Mount Sinai Hospital)
- The UT Anesthesia Faculty Research Award is awarded in recognition of contributions to research in anesthesia: **Joel Katz** (Professor, University Health Network, TGH)
- The RJ Byrick Award recognizes the best Fellow’s research paper presented at the Annual Shields Research Day: **Michelle White** (Clinical Fellow, The Hospital for Sick Children)
- The AC Bryan Award is awarded to a graduate student judged to have presented the best research project at the Annual Shields Research Day: **Albert Tsui** (Graduate Student, St. Michael’s Hospital)
- The Dr. Hynek Rothbart Award is awarded to the best paper presented by a resident at the Annual Shields Research Day: **Dov Weiss** (PG4)
- The Thomas Donald Hammell Memorial Award in Anesthesia recognizes outstanding contributions to the Residency Program (as chosen by other residents): **Timothy Welke** (PG5)
- The Dr. Evelyn Bateman Award is awarded in recognition of excellence in anesthesia at the undergraduate level: **Ian Randall** (OT7)
- The Alan Laws Travel Fellowships are awarded to support academic and research interests/projects in anesthesia: **Angelina Guzzo** (Clinical Fellow, Sunnybrook Health Sciences Centre) and **Paul McHardy** (PG5)

We are also pleased to announce that members of the Department of Anesthesia at the University of Toronto were the recipients of numerous prestigious awards at the Canadian Anesthesiologists’ Society (CAS) meeting in Calgary, AB. Please join us in congratulating the following individuals:

- The Dr. John Bradley Young Educator Award: **Viren Naik** (Assistant Professor, St. Michael’s Hospital)
- The CAS Research Recognition Award: **Frances Chung** (Professor, University Health Network, TWH)
- The CAS Research Award in Anesthesia: **Zeev Friedman** (Assistant Professor, University Health Network, Mount Sinai Hospital)
- The Dr. RA Gordon Patient Safety Research Award: **Pamela Angle** (Assistant Professor, Women’s College Hospital)
- The Dr. Earl Wynnards Research Award in Cardiovascular Anesthesia and/or Peri-Operative Blood Conservation: **Gregory Hare** (Associate Professor, St. Michael’s Hospital)
Who Are We?

Women’s College Hospital

Chinnapa, Vinod
India

Shah, Bhadresh
India

Sridhar, Jami
India

Gislason, Rachel
Canada

Soliman, Ahmed
Egypt

Residents 2006-2007

PG5:

Ali Asghar Abbass
Nasser Al-Kemyani
Rashad Alqasim

Michael Bloom
David Chang
Meredith Ford

Jonathan Kong
Rahit Kumar
Hoi Kwan Lee

Paul McKardy
Diana Tamir
Anna Topchicheva

Timothy Weike

PG4:

Raed Alali
Yasser Alsayegh
Steven Bernstein

Jennifer Brunton
Liza Chelico
Hance Clarke

Rosemin Darani
Peter Darby
Josef Hrdina

Catherine Kim
Alyssa Li
Anton Marinov

Jasvir Marwaha
Daniella Samuel
Kathryn Simms

Dov Weiss

PG3:

Richard Ahn
Elizabeth Au-Yeung
Avin Chang

Chris Coutinho
Thomas Donnelly
Ockert Fourie

Danny Grossi
Mohammed Hussein
Mital Joshi

Nisha Kanani
Nick Lo
Ihab Louis

Magid Morgan
Sheila Razvi
Katharine Ryans

Collan Simmons
Greg Silverman

PG2:

Maria Carmen Angeles
Jay Banerjee
Andrew Borden

Jasmine Cheung
Stephan Choi
Maneesh Deshpande

Jerod Gollant
Ahmed Hamdy
John Hanlon

Megan Hayter
Michael Hiscox
Rob Kizzi

Alison Ling
Rachel Martin
Philip Perna

Lisa Roberts
Hala Sunbul
Hamid Yarkandi

Hany Youseff

PG1:

Abdi Abdurahim
Tim Aaran
Karen Caputo

Monica Chuang
Abelina D’Costa
Catherine Delbridge

Ben Ari Fried
Diana Hayward
Terence Ip

Han Kim
Kyle Kirkham
Bobby Mehta

Rachel Meyer
Rachael Seib
Uma Shastrti

Amy Trang
Darlene Weekes
Mohammad Yaseen

Invited Lectures

McKnight, D
University of Toronto, Teaching the Teachers Bioethics, “Royal College accreditation of bioethics in residency: What do they expect? What can we
do?” Toronto, Ontario, December 2006


University of Toronto Anesthesia Faculty Development Day, “Incorporating ethics into your teaching program.” Toronto, Ontario, November 2007

Meineri, M
Stellenbosch University’s First Hands-on perioperative TEE course, Visiting Professor. Cape Town, Republic of South Africa, September/October 2006

University of Toronto Department of Anesthesia Departmental Round, “Update on Cardiac Anesthesia: Fast track Cardiac anesthesia, can we make it
faster?” Italy, June 2007

Morgan, P
Women’s College Hospital Department Rounds. “Medication safety.” Toronto, Ontario, January 2007

Canadian Anesthesiologists’ Society Annual Meeting, “Simulation based education: What it can and can’t do.” Calgary, Alberta, June 2007

Continuing Medical Education lecture to William Osler Department of Anesthesia, “Anesthesia for cesarean section.” Toronto, Ontario, June 2007

Women’s College Hospital Combined Obstetrics/Anesthesia/Nursing Rounds, “Turning a team of OB experts into an expert OB team.” Toronto,
Ontario, June 2007

Murphy, P
Annual Meeting of American Society of Anesthesiologists, “Factor VIIa is not ready for routine use in bleeding after cardiac surgery.” Chicago, Illinois,
October 2006

Alberta Society of Intensive Care Physicians, “Journey to the bottom of the world, testing physiologic limits in Antarctica.” Lake Louise, Alberta,
January 2007

Making Your Mark, National Anesthesia Review Course, “Thoracic anasthesia” and “Non-cardiac applications of TEE.” Banff, Alberta, February 2007

Visiting Professor of the Royal College of Physicians and Surgeons of Canada, Continuing Medical Education Program, University of Calgary,
“Journey to the bottom of the world, testing physiologic limits in Antarctica.” Calgary, Alberta, March 2007

Society of Cardiovascular Anesthesiologists Annual Update in Cardiopulmonary Bypass, “Protecting organ function during cardiopulmonary bypass,”

Society of Cardiovascular Anesthesiologists Plenary Session, “Functional anatomy and surgically relevant echocardiographic assessment of the
aortic valve and root.” Montreal, Quebec, April 2007

Memorial University Department of Anesthesia, Annual Anesthesia Residents Research Day (Keynote Speaker), “Journey to the bottom of the world,
testing physiologic limits in Antarctica.” St. John, Newfoundland, May 2007

Canadan Anesthesiologists’ Society Annual Meeting, Cardiovascular Thoracic Section Echo Symposium, “Tricuspid valve, new insights on repair
and replacement.” Toronto, Ontario, June 2007

Naik, V
Bruce Tovee Memorial Medical Council of Canada Qualifying Examination (MCCQE) Lecture Series, “Anesthesia and perioperative medicine.”
Toronto, Ontario, March 2007

Invited Lectures


Canadian Anesthesiologists’ Society Annual Meeting, “Update from the Royal College – changes to the written exam.” Calgary, Alberta, June 2007

O’Leary, G

University Health Network, Surgical Services Planning Session, “Anesthesia where are we going and who cares?” Toronto, Ontario, May 2007


Orser, B


Australan Anesthesia Society National Scientific Congress (Keynote Address), “Unraveling the mysteries of anesthetics: From molecular substrates to behavior.” Coolum, Australia, October 2006


Australan Anesthesia Society Scientific Congress, “Growth your own: Strategies to develop anesthesia researchers.” Coolum, Australia, October 2006

Royal Darwin Hospital, “Mechanisms of anesthetics.” Darwin Australia, October 2006

Royal Darwin Hospital, “Anesthesia patient safety.” Darwin Australia, October 2006

University of Alberta Department of Pharmacology, “Anesthesics and memory.” Edmonton, Alberta, January 2007

Queen’s University Whistler Anesthesia Meeting, “New insights into how anesthetics work: Implications for clinicians.” Whistler, British Columbia, February 2007

Queen’s University, Whistler Anesthesia Meeting, “Improving drug safety in your anesthetic practice.” British Columbia, February 2007

Scientific Day Department of Anesthesia, Royal College Lecturer. Queen’s University, Kingston, Ontario, March 2007

Sunnybrook Health Sciences Centre
“Organizations and postoperative cognitive dysfunction.” Toronto, Ontario, April 2007


St. Michael’s Hospital
“Mechanisms of anesthetics.” Darwin Australia, October 2006

University Health Network, Surgical Services Planning Session, “Anesthesia where are we going and who cares?” Toronto, Ontario, May 2007


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Queen’s University, Whistler Anesthesia Meeting, “Improving drug safety in your anesthetic practice.” British Columbia, February 2007

Scientific Day Department of Anesthesia, Royal College Lecturer. Queen’s University, Kingston, Ontario, March 2007

Sunnybrook Health Sciences Centre
“Organizations and postoperative cognitive dysfunction.” Toronto, Ontario, April 2007


Anesthesiology Fellows 2006-2007

The Hospital for Sick Children

Adudu, Philomena
Nigeria
Al Atassi, Abdululeen
Saudi Arabia

Der, Tara
Canada
Flowerdew, James
US

Hull, Rebecca
England
Ilavajady, Srinivasan
UK

Lopez, Alejandra
Colombia
Szabo, Elod
Canada

Taguchi, Nobuko
Japan
Thalayasignam, Priya
Australia

White, Michelle
UK
Whitty, Robert
Ireland

Witherell, Heidi
US
Wong, Gail
Australia

Mount Sinai Hospital

Hamed, Hala
Egypt
Haque, Shamim
Pakistan

Ibrahim, Hisham
Egypt
Iqbal, Mirza
Pakistan

Khemka, Rakhi
India
Lee, Yung
Brazil

Li, Victor
China
Rofael, Ayman
Egypt

Siddiqui, Mughina
Pakistan
Siddiqui, Naveed
Pakistan

Sujith, Dandina
Ireland
Tanaka, Motoshi
Japan

Terblande, Nicolaas
South Africa

St. Michael’s Hospital

Alam, Syed
Canada
Bould, Dylan
England

Carmona, Paula
Spain
Crabtree, Nick
New Zealand

Desmet, Matthias
Belgium
Frampton, Claire
New Zealand

Honorato, Cristina
Spain
Hultzer, Michelle
Canada

Joa-Macaisa, Perilta
Philippines
Tellez, Juan
Colombia

Sunnybrook Health Sciences Centre

Anns, Jonathan
UK
Eipe, Naveen
India

Evangelista, Raymond
Philippines
Goldstaub, Valeri
Israel

Guzzo, Angelina
Canada
Kapitolski, Boris
Israel

Li, Yong
China
Lim, Teddy
Canada

Kummer Mendes, Carmen
Brazil
Restrepo, Carlos
Colombia

Sinclair, Colin
UK

UHN/Toronto General Hospital

Barbosa, Rubens
Brazil
Biswas, Rahul
India

Dochev, Atanas
Canada
Hegazy, Nasr
Egypt

Hussain, Farhan
UK
MacDougal, Peter
Canada

Moosavi, Mansour
Iran
Mukherjee, Ciropt
Germany

Narayanswamy, Manu
Australia
Naughton, Finola
Ireland

O’Croinin, Donall
Ireland
Pandurangan, Amanan
UK

Smynian, Adam
South Africa
Srinivas, Coibantore
UK

Zhang, Huan
China
Zhu, Tao
China

UHN/Toronto Western Hospital

Apichatibutra, Narisa
Thailand
Chakravarti, Sucharita
India

Diddee, Raman
UK
Duggan, Edel
Ireland

Hamming, Jeremy
Canada
Lobo, Giovanni
Brazil

Manickam, Baskar
UK
Moraes, Euardo
Columbia

Nair, Gopakumar
India
Pandurangan, Amanan
UK

Rigamonti, Andrea
Italy
Shah, Bhadresh
India

Siddiqui, Mughina
Pakistan
Soares, Luiz
Brazil

Wijayatilake, Dulleep
UK

Who Are We?
Who Are We?

Smith, Terry, Sunnybrook Health Sciences
Solaric, Bojana, University Health Network
Srebrija, M, Women’s College Hospital
Tanner, Keith, Sunnybrook Health Sciences
Tarshis, Jordan, Sunnybrook Health Sciences
Taylor, Katherine, Hospital for Sick Children
Teresi, James, Mount Sinai Hospital
Thamaratam, Uma, Mount Sinai Hospital
Tousignant, Claude, St. Michael’s Hospital
Tumber, Paul, University Health Network
Urbach, Gordon, Mount Sinai Hospital
Urbanikiewicz, Les, Toronto East General Hospital
Van der Vyver, M, Women’s College Hospital
Van Rensburg, Adrian, University Health Network
Vega, Annette, University Health Network
Venkat Raghavan, L, University Health Network
Wasowicz, Marcin, University Health Network
Wassermann, Jeffrey, St. Michael’s Hospital
Wong, Jean, University Health Network
Wong, Sophia, Sunnybrook Health Sciences
Yee, Doreen, Sunnybrook Health Sciences
You-Ten, Eric, Mount Sinai Hospital
Zaour, Christian, Hospital for Sick Children

Invited Lectures

Brown, Stephen D, North York General
Choi, Mabel, Sunnybrook Health Sciences
Dickson, Jeffrey, St. Michael’s Hospital
Gourlay, Douglas, Mount Sinai Hospital
Ho, Peter, Mount Sinai Hospital
Hussain, Kamal, Women’s College Hospital
Jarani, Marjan, University Health Network
Kanellakos, George, University Health Network
Kashin, Brian, North York General Hospital
Kemp, Sheila L, Hospital for Sick Children
Ko, Raynauld, University Health Network
Kulchyk, James, Toronto East General Hospital
Lin, Ken, St. Michael’s Hospital
Loke, Julian, University Health Network
Mosher, Emily, Toronto East General Hospital
Pelowski, Arie, Hospital for Sick Children
Rucker, Joshua, Mount Sinai Hospital
Salman, Aliya, Mount Sinai Hospital
Singh, Davindra, St. Michael’s Hospital


Tarshis, J
University of Toronto Department of Anesthesia Faculty Development Day. Small Group Session, “Teaching and evaluating professionalism: fantasy or reality?” November 2006

Zhang, H
Federation of Clinical Immunology Societies Annual Meeting, “Molecular mechanisms of α-defensins in immune modulation.” San Francisco, California, July 2006
International Meeting on pathological mechanisms of H5N1 influenza and viral-induced respiratory human diseases, “Mechanisms of acute lung injury and ARDS.” Hong Kong, July 2006
Hong Kong University Department of Microbiology, Visiting Professors. Hong Kong, July 2006
21st Annual Meeting of the International Symposium on Critical Care Medicine, “Molecular biology and genetics in respiratory system.” Venice, Italy, November 2006
University of Toronto Department of Physiologic, “Lung defense.” Toronto, Ontario February 2007

Grants

PEER-REVIEWED GRANTS

Angela P. "Randomized controlled trial examining the impact of large traditional vs. small epidural needles on the incidence of postdural puncture headache in parturients." (PI). Halpern S, Kronberg J, Kiss A, Gassel M (Co-investigators). Physician Services Incorporated Foundation Grant. $149,500, 2007


Balki, M "Impact of uterotonics agents on isolated human myometrium." (Co-investigators) Kangal J, Canvallo J. University of Toronto Dean's Fund Research Award. $10,000, 2007-2012

Briet, F "Development of a new non-invasive nutritional assessment test based on gene expression." Innovation foundation NSERC IPM Research Award. $10,000, 2007-2008

"Impact of cardiopulmonary bypass and cardiac surgery on lymphocyte energetics and immune function in patients with non insulin dependent diabetes mellitus." (Principal Investigator) Society of Cardiovascular Anesthesiologists Young Investigator Support Award. Co-applicants: Keith M, Errett L, Mazer D. $50,000 per year, 2005-2007


De Lacy, John, Sunnybrook Health Sciences Devito, Isabella, Mount Sinai Hospital Dodgson, Bruce, Hospital for Sick Children Edmonds, John, Hospital for Sick Children El-Beheiry, Hossam, University Health Network Faciller, Gil, Sunnybrook Health Sciences Fischer, Howard, Mount Sinai Hospital Foster, Ryan, Sunnybrook Health Sciences Gagliese, Lucia, University Health Network Gofeld, Michael, Sunnybrook Health Sciences Goldsarnid, Eric, Mount Sinai Hospital Grant, Carol, Hospital for Sick Children Guest, Cameron, Sunnybrook Health Sciences Haggie, Jane, University Health Network Hughes, Vincent, St. Michael's Hospital Isaac, Lisa, Hospital for Sick Children John, Elizabeth, University Health Network Joo, Hwan, St. Michael’s Hospital Katz, Abraham, St. Michael’s Hospital Kay, Joseph, Sunnybrook Health Sciences Knox, Bruce, St. Michael’s Hospital Kurrek, Matt, The Scarborough Hospital Lai, Jacob, University Health Network Lee, Henderson, Toronto East General Hospital Levene, Richard, St. Michael’s Hospital Lupinbuehl, Igar, Hospital for Sick Children Macpherson, Bruce, Hospital for Sick Children Mallon, Joseph, Sunnybrook Health Sciences Markwell, Hazel, St. Michael’s Hospital McDonnell, Conor, Hospital for Sick Children McGuire, Glenn, University Health Network McLean, John, St. Michael’s Hospital McNama, Pat, University Health Network Meineri, Massimiliano, University Health Network Michel, Ernest, Mount Sinai Hospital Minkovich, Leonid, University Health Network Morgan, Pamela, Women’s College Hospital Naik, Viren, St. Michael’s Hospital Ng, Elaine, Hospital for Sick Children O'Leary, Gerald, University Health Network Peng, Philip, University Health Network Petroz, Guy, Hospital for Sick Children Prabhut, Atul, University Health Network Riegert, Daniel, Sunnybrook Health Sciences Robertson, James, Hospital for Sick Children Samahin, Ashmal, Toronto East General Shumka, David, University Health Network de Ruiter, Joost, Hospital for Sick Children Djordjevic, Dragan, Women’s College Hospital Dosch, Elizabeth, University Health Network Eisen, Leonard, Mount Sinai Hospital Evans, Wayne, University Health Network Fedorko, Lukiw, University Health Network Fleming, Ivor, Mount Sinai Hospital Friedman, Zeev, Mount Sinai Hospital Gardner-Nix, J, Sunnybrook Health Sciences Goldenson, Gordon, Sunnybrook Health Sciences Graham, Marianne, Sunnybrook Health Sciences Grise, Ann, University Health Network Hayes, Jason, Hospital for Sick Children Holby, Helen, Hospital for Sick Children Idestrup, Christopher, Sunnybrook Health Sciences John, Justin, Hospital for Sick Children Joo, Daisy, Hospital for Sick Children Karsli, Cengiz, Hospital for Sick Children Katznelson, Rita, University Health Network Kettles, Jane, Toronto East General Hospital Kolton, Michael, St. Michael’s Hospital Lamamme, Claude, Sunnybrook Health Sciences Lambert, Stephane, St. Michael’s Hospital Leung, Peter, St. Michael’s Hospital Levine, Mark, Hospital for Sick Children Mackenzie, Tesence, St. Michael’s Hospital Mak, Peter, Scarborough General Hospital Mark, Patrick, Toronto East General Hospital McKinley, Stuart, University Health Network McEwen, Irene, Sunnybrook Health Sciences McKenzie, Robert, Sunnybrook Health Sciences McLeod, Elizabeth, Hospital for Sick Children McRae, Karen, University Health Network Meschino, Alfie, Toronto East General Hospital Middleton, William, University Health Network Morgan, Anwar, Women’s College Hospital Morningstar, Beverly, Sunnybrook Health Sciences Naser, Bassem, Hospital for Sick Children O'Driscoll, Martha, Sunnybrook Health Sciences Onahia, Manharlal, Sunnybrook Health Sciences Perlas, Anahi, University Health Network Pillar, Bryan, St. Michael’s Hospital Rieger, John, Mount Sinai Hospital Roberts, Martyn, University Health Network Safa, Behnam, Sunnybrook Health Sciences Sarmah, Anita, Sunnybrook Health Sciences Sinclair, Lesley, Sunnybrook Health Sciences

Who Are We?

7
Faculty Members

Professors Emeritus
Bevan, David, Emeritus Professor

Professors
Baker, Andrew, St. Michael's Hospital
Bohn, Desmond J, Hospital for Sick Children
Chan, Vincent, University Health Network
Cooper, Richard M, University Health Network
Fisher, Joseph, University Health Network
Halpern, Stephen, Women's College Hospital
Jadad, Alejandro, University Health Network
Kavanagh, Brian, Hospital for Sick Children
McGrath, Patricia, Hospital for Sick Children
Slinger, Peter, University Health Network
Tweed, Arnold, University Health Network

Associate Professors
Beattie, W Scott, University Health Network
Carvalho, Jose, Mount Sinai Hospital
Crawford, Mark, Hospital for Sick Children
Hare, Gregory, St. Michael's Hospital
Karkouti, Keyvan, University Health Network
Kronberg, Jean, Women's College Hospital
Macarthur, Alison, Mount Sinai Hospital
McCarty, Colin, Sunnybrook Health Sciences
Mullen, Brendan, Mount Sinai Hospital
Roy, Lawrence, Hospital for Sick Children
Stoyka, William, St. Michael's Hospital
Tao, Zhenhui, University Health Network

Assistant Professors
Abrahamson, Simon, St. Michael's Hospital
Angle, Pamela J, Women's College Hospital
Awad, Imad, Sunnybrook Health Sciences
Baker, James, St. Michael's Hospital
Barlow, Ross, Hospital for Sick Children
Bercovici, Mark, Sunnybrook Health Sciences
Bertram, Susan, Sunnybrook Health Sciences
Bradwell, John, University Health Network
Bruil, Richard, University Health Network
Cassar-Demajo, W, University Health Network
Chan, Herman, Sunnybrook Health Sciences
Chapman, Martin, Sunnybrook Health Sciences
Cooke, Mary Ellen, Mount Sinai Hospital
Cybulski, Karen, Hospital for Sick Children
Davallou, Moghan, Women's College Hospital

Friedman, Z
"Teaching emergency life-saving skills through simulation - high-fidelity simulation vs. traditional bench models for teaching residents cricothyrotomy." Co-investigators: Naik V, You-Ten E, Education Development Fund for Innovation in Education. $35,220, 2007-2008


Hare, G
"Mechanisms of cerebral protection and injury during acute hemodilutional anemia; Bristol-Myers Squibb-CAS Career Scientist Award in Anesthesia and Perioperative Medicine. $90,000 per year, 2005-2008

"The threshold hematocrit for cerebral hypoxia is maintained by protective cardiovascular mechanisms: The role for neuronal nitric oxide synthase (nNOS). The Society of Cardiovascular Anesthesiologists (Principal Investigator). $20,000 per year, 2007-2009

"Does beta-1 adrenergic antagonist increase tissue hypoxia following acute hemodilution?" Canadian Anesthesiologists' Society Wynands Research Award (Principal Investigator). $30,000, 2007

Joo, H
"High fidelity simulation versus traditional didactic seminars for teaching trainees Separation from cardiopulmonary bypass." Physician's Services Incorporated Foundation Grant, Principal Investigator: Joo HS, Co-Investigators: Naik VN, Savoldelli GL, LeBlanc VR, Latter DA, Mazer CD. $55,000 per year, 2006-2007

Kavanagh, B
"Lung development," CIHR Group Grant, co-applicant with AK Tansey (PI). $1,260,000, 2004-2009

"Investigation of communication modalities for pediatric patients during transient voicelessness," co-applicant with Lau T (PI), NSERC. $112,000, 2003-2006

"Neural assisted ventilation in pre-term infants," NIH, Co-Applicant with Snider C (PI). $150,000, 2003-2006


"Mechanisms of cerebral protection and injury during acute hemodilutional anemia," Bristol-Myers Squibb-CAS Career Scientist Award in Anesthesia and Perioperative Medicine. $90,000 per year, 2005-2008

"Threshold hematocrit for cerebral hypoxia is maintained by protective cardiovascular mechanisms: The role for neuronal nitric oxide synthase (nNOS). The Society of Cardiovascular Anesthesiologists (Principal Investigator). $20,000 per year, 2007-2009

"Does beta-1 adrenergic antagonist increase tissue hypoxia following acute hemodilution?" Canadian Anesthesiologists' Society Wynands Research Award (Principal Investigator). $30,000, 2007

Mazer, CD
"Computer program to evaluate patients with emergencies in the fluid, electrolyte and acid-base area." (Co-investigator) Keenan Collaborative Research Award. St. Michael's Hospital, Toronto, Canada. $25,000, 2006-2007

"High fidelity simulation versus traditional didactic seminars for teaching trainees separation from cardiopulmonary bypass." (Co-investigator) Physicians Services Inc. $56,869 per year, 2006-2007

"Renal gene expression following cardiopulmonary bypass and anemia in the rat." (Supervisor/Co-investigator), Canadian Anesthesiologists Society. $5,000, 2006-2007

"Unraveling the black box of adverse events in cardiac surgery." (Co-investigator) Heart and Stroke Foundation of Ontario. $271,050, 2006-2009


McGrath, P
“Understanding chronic pain following surgery in women,” Operating Grant. CIHR. Van Denkhhof EG, Goldstein, DH, Harrison, M, Hepman, W, Lam, Y, Tawheed, Y, Wilson, R, McGrath, PA $100,000 per year ($342,029 total), 2006-2009

Morgan, P
“The effect of high-fidelity simulation debriefing on the non-technical skills of practicing Anesthesiologists,” Morgan PJ, Bertram S, Tarsis J. Continuing Education Research Award, University of Toronto. $5,000, 2007

Naik, V
“Teaching emergency life-saving skills through simulation – high-fidelity simulation vs. traditional bench models for teaching residents cardiac arrest physiology,” Friedman Z, Naik VN, You-Ten. Educational Development Fund for Innovation in Education. $40,000, 2007

Jadad, A
“Journey to our good health: A youth leadership program to promote healthy eating living in the age of the Internet,” Rural Economic Development Fund, Ontario Ministry of Agriculture and Agricultural Adaptation Council of Canada. $124,000, 2007

“The impact of Web 2.0 on credibility indicators in health care,” Co-Pi with O’Grady L. CIHR Interdisciplinary Capacity Enhancement Sub-grant. $8,000, 2007

“Ethics and pandemic planning: Engaging the voices of the public,” with Upshur R. CIHR. $75,000, 2007

Orser, B
“The role of GABAA receptors in anesthetic-induced impairment of memory and consciousness,” CIHR (P). $219,179, 2006-2011

“Canada Research Chair in Anesthesia, Tier 2. Anesthetic Drugs from Molecular Mechanisms to Patient Safety.” $500,000 per year, 2003-2008

“A multi-institutional evaluation of a checklist intervention to structure communication and promote patient safety in the operating room,” CIHR (Collaborator), $65,247 per year, 2004-2010


Tarsis, J


“Determination of the psychometric properties of a behavioral marking system for obstetrical team training using high-fidelity simulation,” CIHR. $119,179, 2006-2011

“Ethics and pandemic planning: Engaging the voices of the public,” with Upshur R. CIHR. $75,000, 2007

Vegas, A

Departmental Committees

<table>
<thead>
<tr>
<th>Members</th>
<th>Terms of Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. Kanavanagh (Chair), G. Faclier, P. Houston, J. Kronberg, W. Kubaik, M. Levine, G. O’Leary, D. Mazer, L. Roy</td>
<td>Makes operational and policy-related decisions on basis of Chair’s strategic direction including the financial, administrative, educational and research-related issues of the Department.</td>
</tr>
<tr>
<td>B. Kanavanagh (Chair), S. Beattie, S. Belo, I. Devito, G. Faclier, G. Fox, P. Houston, J. Kronberg, W. Kubaik, W. Middleton, D. Mazer, E. Mosher, G. O’Leary, L. Roy, M. Levine, P. Slinger</td>
<td>Provides the Chair with guidance on strategic issues; harmonizes goals and operations of the Department with other UT institutions and affiliated hospitals.</td>
</tr>
<tr>
<td>D. McKnight (Chair), R. Crago, S. Halpern, W. Kubaik (secretary), M. O’Driscoll, J. Wasserman</td>
<td>Ensures consistent and appropriate appointment processes for the department; conducts performance reviews of full-time and part-time appointees in accordance with the Procedures Manual for the Policy for Clinical Faculty as revised from time to time.</td>
</tr>
<tr>
<td>G. Fox (Chair), B. Bissinnette, V. Chan, I. Devito, P. Houston, J. Katz, B. Kavagnah (ex-officio), W. Kubaik (secretary), D. Mazer, C. McCartney, P. Morgan, B. Orser, H. Zhang</td>
<td>Reviews faculty applications for promotions; provides recommendations to Chair on promotions.</td>
</tr>
<tr>
<td>I. Devito (Chair), D. Chandra, H. El-Behery, P. Houston, D. Irvin, G. Kannellakos, B. Kavagnah, K. Lin, P. Mark, I. Randall, J. Robertson, A. Saram, R. Stander, M. Vandervyver, D. Cavanagh (secretary)</td>
<td>Promotes excellence in undergraduate education throughout all years of Medicine, specifically promoting excellence in teaching perioperative medicine (including preoperative evaluation skills; resuscitation; pain management; technical skills; team centered care). Develops and implements innovative teaching through simulation and web-based educational tools.</td>
</tr>
<tr>
<td>M. Levine (Chair), I. Devito, H. Fischer, S. Halpern, P. Houston, B. Kavagnah, H. Lee, I. McChes, D. Middleton, B. Morningstar, P. Murphy, V. Nahi, E. Ng, D. Riegel, J. Wasserman</td>
<td>Develops and revises postgraduate academic program; evaluates residents, teachers and rotations; participates in a fair, open and transparent selection process for new residents; enforces program adherence to the Standards of Accreditation of the RCPSC; reviews residents in difficulty and makes recommendations to Program Director.</td>
</tr>
<tr>
<td>P. Slinger (Chair), P. Angle, S. Davies, L. Eisen, P. Houston, B. Kavagnah, J. Kay, C. Knap, D. Loefman, J. Tarsis, M. van der Vyer, L. Verkhaskahven, J. Wong</td>
<td>Develops, plans, implements and reviews various continuing education initiatives within the department including web-based learning.</td>
</tr>
<tr>
<td>D. Mazer (Chair), P. Angle, B. Kavagnah, A. Baker, S. Beattie, M. Crawford, A. Macarthur, P. Mak, D. McKnight, B. Orser, G. Petroz</td>
<td>Defines priorities, provides advice, and implements new initiatives that promote and support current and future research activities in the department; provides protocol review service and assistance for departmental faculty applying for grants; promotes linkages to foster departmental research activities.</td>
</tr>
<tr>
<td>G. Petroz (Chair), B. Kavagnah, W. Kubaik, S.L. Loo</td>
<td>Organizes the scientific program including theme, speakers, and overall program. Implements program and logistical details.</td>
</tr>
</tbody>
</table>
Who Are We?

Administrative Team

Dr. Brian Kavanagh  
Chair

Dr. Gerald O’Leary  
Vice-Chair, Clinical Affairs

Dr. Patricia Houston  
Vice-Chair, Education

Dr. David Mazer  
Vice-Chair, Research

Ms. Wendy Kubasik  
Business Manager

Dr. Mark Levine  
Director, Postgraduate Education Program

Dr. Isabella Devito  
Director, Undergraduate Education Program

Ms. Jennifer Morris  
Assistant, Graduate Program

Mr. Danny Cavanagh  
Departmental Assistant

Ms. Kathryn Bailey  
Assistant, Graduate Program (on leave)

Grants

Zhang, H

“LPS internalization and ICAM-1 signaling in the pathogenesis of sepsis,” CIHR Operating Grant. $530,600, 2005-2010

“Targeting ICAM-1/LFA-1 interaction in reducing sepsis-induced lung injury,” Premier’s Research Excellence Award. $159,000, 2005-2010

“Human neutrophil peptides in lung inflammation,” CIHR New Investigator Award. 275,000, 2005-2007


“Human neutrophil peptides in lung inflammation,” CIHR Operating Grant. $553,615, 2004-2009

NON-PEER REVIEWED GRANTS

Balki M
“Impact of uterotonic agents on isolated human myometrium” Co-investigators: Kingdom J, Carvalho J. Department of Obstetrics and Gynecology, University of Toronto and Department of Anesthesia. $10,000, 2007-2008

Morgan, P and Tarshis, J
Who Are We?

Organizational Chart
As of February 2007
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Chair’s Introduction

This is my first introduction to the annual report of the Department of Anesthesia at the University of Toronto. As I read the report several things are apparent.

First, the department is successful: our faculty members provide anesthetic care to approximately 100,000 patients during surgery or childbirth, in addition to caring for thousands of adults and children in intensive care, undergoing treatment for chronic pain, or requiring assistance during palliative care. All of this adds up to a lot of service, which is just fine, as this service is our primary aim, and what defines us as clinicians. Providing state-of-the-art service really is the hallmark of the outstanding clinician. Of course, we know all too well that ‘state-of-the-art’ only has meaning when it is driven by clinical experience, research and education of the very best caliber.

Second, the department is additionally successful in that it scores consistently in the pivotal areas of research and education. We are fortunate to be in a leadership position among departments across the country in many of the metrics of academic success: this is a feature of our size, of our being a member of the University of Toronto community, of our students and faculty, and of our patients who allow us to treat them and who provide us with provoking challenges, and who need practice-changing solutions.

Third, what does this annual report represent? Is it bragging – in the written word – about our operating grants, prizes, publications, invited talks, and awards as metrics of academic performance? It is indeed all of those things, but it is much more. Our whole mission is ultimately about looking after patients better, and our annual report is a check-up on how that enterprise has gone over the previous year.

We recognize that because our clinical outcomes – in anesthesia – are so good, some believe that there is little room, or need, for further improvements in the care that is available. But we also realize that targeting the ‘average’ patient will never adequately serve the many ‘outliers’ whom we have the privilege to treat on a daily basis. Beyond that, targeting only the ‘average’ patient will stifle our imagination and innovation. Ultrasound in regional anesthesia was developed not because ‘on average’ regional anesthesia worked adequately; it was developed because regional anesthesia did not reach an ‘excellent’ grade in every patient. Now, with the assistance of research, education and expertise in ultrasound, regional anesthesia is close to ‘excellent’ in almost every patient. This is a marvelous illustration of how things that appear to be reasonable can be made far better. Additional examples of progress in this report include research in mechanisms of anesthesia, ‘e-health’, perioperative blood product use, critical care medicine and trauma, and development of the anesthesia care team.

Please enjoy this report, share it with your friends and colleagues, and contact us if you wish to learn more about the department or the profession more broadly. Read it and realize the commitment of the many in the department towards the goal of improving the profession. Read this report and recognize that research – the discovery of new knowledge – is our only way forward, and education is how we learn about it. While we look back with pride on this year’s successes in the clinical, education and research realms, we look forward with humility, enthusiasm and determination to find out more, to teach and learn from each other, and to provide ever better care for our primary responsibilities – our patients.

On behalf of all the readers of this report, I thank those whose contributions made it possible.

Brian Kavanagh