

CURRICULUM VITAE

Daren Keith Heyland MD, FRCPC, MSc.

I. PERSONAL INFORMATION

Name: Daren Keith Heyland
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Date of Birth: November 14, 1962
Place of Birth: Edmonton, Alberta

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II. PRESENT ACADEMIC RANK AND POSITION

Full Professor of Medicine, Queen's University (tenured, July 2005)

III. EDUCATION

1987 Bachelor of Medical Science, University of Alberta.
1989 Doctor of Medicine with distinction, University of Alberta.
Licentiate with Medical Council of Canada.
1994 Master's Degree in Health Sciences, Design, Measurement, and Evaluation Program,
McMaster University.

**IV. ROYAL COLLEGE CERTIFICATION, CERTIFICATE OF COMPETENCY, AMERICAN BOARD
CERTIFICATION**

1995 Fellow, Royal College of Physicians and Surgeons of Canada, Internal Medicine.
1996 Royal College of Physicians and Surgeons of Canada Specialty in Critical Care

V. HONORS AND AWARDS

1980,1983-85 Presidential Scholarship, Brigham Young University.
1990 Regional Medical Associates Research Scholarship
1993 E. Garner King Award from Canadian Critical Care Society for Best Young
Investigator.
1994 Internal Medicine Resident's Research Competition- Third Prize.
1994 Regional Medical Associates Research Scholarship
1995 Internal Medicine Resident's Research Competition- First Prize, David L. Sackett
Award.
1996 E. Garner King Award from Canadian Critical Care Society for Best Young
Investigator.
1996.2005 Career Scientist Award, Ministry of Health, Ontario, Canada (a multi-year award that
provides approximately \$60,000/year for salary support)
2005 Excellence in Research Award, Department of Medicine, Queen's University.

VI. PREVIOUS PROFESSIONAL POSITIONS AND APPOINTMENTS

1991-92 Emergency Physician, Med-Emerg Inc., Ontario.
 1991-94 Temporary Staff, Greater Niagara Regional Hospital, Ontario.
 Locums in Family practice.
 1991-96 Critical Care Clinical Assistant, McMaster University Affiliated Hospitals,
 Hamilton, Ontario.
 1996 Staff Physician, Kingston General Hospital, Hotel Dieu, and St. Mary's of the
 Lake Hospital, Kingston, Ontario.
 1996-2001 Assistant Professor, Department of Medicine, Queen's University, Kingston,
 Ontario.
 2001-2005 Associate Professor, Department of Medicine, Queen's University, Kingston, Ontario.
 2005- Full Professor, Department of Medicine, Queen's University, Kingston, Ontario

VII. EDUCATION – TEACHING

Medical School

Taught Critical Appraisal to 2nd year Medical Students, Queen's University.
 Involved 6, 2 hours small group sessions per year.

Graduate School

Teach "Decision Making Near the End of Life" seminars to house staff at Kingston General
 Hospital.

Involves 6, 1 hour small group sessions per year with all the house staff rotating through the ICU

Teach core subjects to ICU Residents, approximately 20/year

Other institutions (prior to current position)

1992-1993 Tutor for "How to teach critical appraisal" workshop at McMaster University.

VIII. EDUCATION – JOURNALS

Scientific Reviewer for the Following Journals:

Journal of the American Medical Association

Chest

American Journal of Respiratory and Critical Care Medicine

Intensive Care Medicine

Critical Care

Journal of Palliative Care

Editorial Board Member of Journal of Critical Care

IX. GRADUATE STUDENT/POSTDOCTORAL FELLOWS WORKING FOR YOU

1. Jim Lavery, 1 year, SSHRC Postdoctoral award
2. Shaun MacDonald, 1 year, Critical Care Research Fellow
3. Frantisek Novak, 1 year, Critical Care Research Fellow
4. Rupinder Dhaliwal, 2 years, Nutrition Research Fellow
5. Dianne Groll, 2 years, CIHR Postdoctoral award
6. Naomi Jones, 2 years, MSc Epidemiology student
7. Jeanette Suurdt, 2 years, Masters of Nursing
8. Naomi Jones, 4 years, PhD

X. INSTITUTIONAL, DEPARTMENTAL, AND DIVISIONAL ADMINISTRATIVE RESPONSIBILITIES, COMMITTEE MEMBERSHIPS AND OTHER ACTIVITIES

1996- Director of Research, Critical Care Program, Kingston General Hospital
 1997-1999 Research and Development Committee, Kingston General Hospital
 1998-2001 Critical Care Medicine Residency Training Committee, KGH
 1999-2001 Pastoral Care Committee, Kingston General Hospital
 1999-2000 Withdrawing and Withholding Life Supports Committee, KGH
 1999-2000 Ad Hoc Committee on Research Overheads and Clinical Trials Unit
 2000- Director of Research, General Internal Medicine Group
 2004- Head, Division of General Internal Medicine
 2005- Member, Research Committee, Department of Medicine

XI. PROFESSIONAL AND SOCIETY MEMBERSHIPS

1993-	Canadian Critical Care Trials Group
1994-	Canadian Critical Care Society
1995-	Society of Critical Care Medicine
1996-2004	American Society of Parenteral and Enteral Nutrition
2002-2004	Canadian Society for Clinical Nutrition

XII. NATIONAL LEADERSHIP

1996	Member of the Executive of Canadian Critical Care Trials Group -Organized End of Life Care Symposium in conjunction with the Critical Care Trials Group Annual meeting, Lake Louise, April 1999.
2001	Member of the Governing Council of Canadian Society of Clinical Nutrition and Chair of Practice Guidelines Committee. -Organized Nutrition Support Research Working Group at the American Society for Parenteral and Enteral Nutrition, Chicago, January 23, 2001. -Organized and Chaired a Multidisciplinary National Research Meeting on Nutrition Support funded by Nestle, Abbott Laboratories and Canadian Institutes of Health Research, Toronto, Oct 16-17, 2001. -Organized and Co-chaired a Multidisciplinary National Meeting to develop guidelines for nutrition support in the ICU. In conjunction with Canadian Society for Clinical Nutrition Annual Meeting, sponsored by Canadian Institutes of Health Research, Toronto, May 1-2, 2002.
2002	Member of the CIHR/Health Canada Palliative Care Research Working Group, member of the steering committee for the Canadian Palliative/End of Life Research Network (CaNPER), and Co-Chair of the Health Canada, National Strategy on End of Life Care, Research Working Group. -Organized National End of Life Care Research Meeting (New Frontiers Program) sponsored by CIHR, Kingston ON, March 27-29, 2003. -Organized and chaired CaNPER protocol development meeting, Toronto, October 28, 2003. -Organized and chaired symposium on Nutrition Support in Critical Care at 2002, 2003, and 2004 National meeting
2004	Member of the CIHR Advisory Committee for the National Research Forum for Young Investigators in Circulatory and Respiratory Health, Winnipeg, MB, May 6-9, 2004.
2004-2008	Reviewer, CIHR Clinical Trials Committee
2005	Invited participant to National Knowledge Translation for Palliative and End of life Care meeting, Ottawa September 14, 2005.
2005	Invited participant to International Palliative and End of life Care Research meeting, Birmingham, United Kingdom, October 5-6, 2005.
2006	Invited by Society of Critical Care Medicine to serve on planning committee for 2007 and 2008 summer conference on nutrition therapy.
2007	Appointed to 2008 Nutrition Conference Task Force for Society of Critical Care Medicine
2008	Organized and Chaired "Nutrition Therapy in ICU" Educational and Research sessions at the 2008 Canadian Society of Clinical Nutrition Annual Scientific Meeting, Toronto, May 29-31, 2008.

XIII. INVITED VISITING PROFESSORSHIPS

Total Visits: 65

"A Systematic Review of Nutrition Support in the Critically Ill Patient: Transferring Research-Based Findings into Practical Hospital Applications." Ajax and Pickering Health Center, November 25, 1998.

"A Randomized Trial of Empiric Broad-Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia." Chest Rounds, London Health Sciences Center, London, Ontario, May 26, 1999.

"A Randomized Trial of Empiric Broad-Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia." Critical Care Rounds, Ottawa Hospitals, Ottawa, Ontario, May 27, 1999.

"Nutrition Support in the Critically Ill Patient: A Systematic Review of the Literature" Kentucky Chapter of American Society of Parenteral and Enteral Nutrition, Louisville, Kentucky, June 18, 1999.

"A Randomized Trial of Empiric Broad-Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia." Critical Care Rounds, Ottawa Hospitals, Ottawa, Ontario, May 28, 2000.

"A Randomized Trial of Empiric Broad-Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia." Critical Care Rounds, St. John Regional Hospital, St. John New Brunswick, Sept 6, 2000.

"A Randomized Trial of Empiric Broad-Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia." Critical Care Rounds, Royal Alexandra Hospitals, Edmonton, Alberta, September 20, 2000.

"A Randomized Trial of Empiric Broad-Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia." Critical Care Rounds, Cook County Hospital, Chicago, Illinois, January 9, 2001.

"A Randomized Trial of Empiric Broad-Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia." Critical Care Rounds, Sunnybrook Hospital, Toronto, April 19, 2001.

"A Randomized Trial of Empiric Broad-Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia." Critical Care Rounds, Oregon Health Sciences University, Portland, Oregon. May 17, 2001.

"A Randomized Trial of Empiric Broad-Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia." Expert Panel, AstraZeneca, Wilmington, Delaware, May 23, 2001.

"Sepsis: New Insights into New Molecules, Mechanisms, Monitoring and Improved outcomes." Duke Medical Center, Durham, North Carolina, November 5, 2001.

"Enhancing Delivery of Enteral Nutrition in the Critically Ill." Grand Rounds, North York General Hospital, November 8, 2001.

"A Randomized Trial of Empiric Broad-Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia." Grand Rounds, Windsor, Ontario, Nov 13, 2001.

"A Randomized Trial of Empiric Broad-Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia." Grand Rounds, St John's General Hospital, St John's, Newfoundland, Nov 20, 2001.

"A Randomized Trial of Empiric Broad-Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia." Grand Rounds, University Hospital, Saskatoon, Saskatchewan, Dec 7, 2001.

"Optimizing Nutrition Support in the Critically Ill/Surgical Patient" Surgical Grand Rounds, University Hospital, Saskatoon, Saskatchewan, Dec 7, 2001.

"Merging Evidence-based Medicine and Nutrition Support Practice for Critically Ill Patients: The (Mis)interpretation of Randomized Trials and Meta-analyses." Nutrition Grand Rounds, University Hospital, Saskatoon, Saskatchewan, Dec 7, 2001.

"Dying in Canada: A Quality Finish?", Chest Rounds, Royal Columbian Hospital, New Westminster, British Columbia, Jan 29, 2002.

"Dying in Canada: A Quality Finish?" Grand Medical Rounds, St. Paul's Hospital, Vancouver, British Columbia, Jan 30, 2002.

"A Randomized Trial of Empiric Broad-Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia." Critical Care Rounds, University of British Columbia, Vancouver, Jan 31, 2002.

"A Randomized Trial of Empiric Broad-Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia." Critical Care Rounds, Sunnybrook Hospital, Toronto, Ontario. March 28, 2002.

"A Randomized Trial of Empiric Broad-Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia." Critical Care Rounds, Foothills Hospital, Calgary, Alberta, April 16, 2002.

"Dying in Canada: A Quality Finish?" Grand Rounds, Foothills Hospital, Calgary, Alberta, April 17, 2002.

"Waveform Abnormalities of aPTT in Critically Ill Hospitalized Patients: The WATTCH study. John Raddcliffe Hospital, Oxford, UK, Sept 13, 2002.

"A Randomized Trial of Empiric Broad-Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia." Critical Care Rounds, University of Montreal Hospitals (CHUM), St. Luke's Hospital, October 23, 2002.

"A Randomized Trial of Empiric Broad-Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia." Combined Critical Care and Respiratory Rounds, Montreal Jewish General Hospital, October 24, 2002.

"A Randomized Trial of Empiric Broad-Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia." Critical Care Rounds, Hopital Sacre du Couer, Montreal, Quebec, February 4, 2003.

"Nutrition Makes a Difference to Clinical Outcomes!" Critical Care Fellows Rounds. Ottawa General Hospital, Ottawa, ON, May 6, 2003.

"Ventilator-Associated Pneumonia: Optimal Management." University of Laval, Quebec City, Quebec, May 27, 2003.

"Sepsis: New Insights into Mechanisms, Molecules, Monitoring and Maximizing Outcome" Charles Lemoyne Hospital, Montreal, Quebec, May 27, 2003.

"Ventilator-Associated Pneumonia: Optimal Management." McGill University Health, Montreal, Quebec, May 29, 2003.

"A Randomized Trial of Empiric Broad-Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia." Critical Care Rounds, Queen Elizabeth II Hospital, Halifax, Nova Scotia, September 5, 2003.

"Ventilator-Associated Pneumonia: Optimal Management." University of Manitoba, Winnipeg, September 23, 2003.

"Immunonutrition: Separating Fact From Fiction." New York Long Island Society of Parenteral and Enteral Nutrition, Manhasset, New York, November 3, 2003.

"Nutrition Support in the Critically Ill Patient: The way you feed them impacts their outcome". Critical Care Rounds, Hamilton General Hospital, McMaster University, Hamilton, May 3, 2004.

"A Randomized Trial of Empiric Broad-Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia." Critical Care Rounds, Cite de la Sante de Laval, Laval, Quebec, May 4, 2004.

"Nutrition Support in the Critically Ill: If you feed them they will leave (alive!)" Respiratory and Critical Care Conference, University of Washington, Harborview Hospital, Seattle, Washington, July 22, 2004

"Immunonutrition: From old approaches to new paradigms". University of Louisville, Kentucky, September 9, 2004.

"Nutrition support in the critically ill: translating research evidence into practice". University of Louisville, Kentucky, September 9, 2004.

"REducing Deaths from OXidative Stress: A randomized trial of glutamine and antioxidant supplementation in critically ill patients. The REDOXS study." City Wide Critical Care Medicine Rounds, University of Montreal, Montreal, Quebec, April 13, 2005.

"REducing Deaths from OXidative Stress: A randomized trial of glutamine and antioxidant supplementation in critically ill patients. The REDOXS study." Sacre Couer Hospital, University of Montreal, Montreal, Quebec, September 8, 2005.

"REducing Deaths from OXidative Stress: A randomized trial of glutamine and antioxidant supplementation in critically ill patients. The REDOXS study." Vancouver General Hospital, University of British Columbia, October 13, 2005.

"Zap the VAP: A program of research to reduce the burden of illness related to VAP." Geisinger Health Care Systems, Dansville, Pennsylvania, January 26, 2006.

"A Randomized Trial of Empiric Broad-Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia." Critical Care Rounds, University of Toronto, Toronto, Ontario, January 31, 2006.

"Ventilator Associated Pneumonia: Observations and Experiments. The Results of the Canadian VAP Study and more..." Critical Care Rounds, University Of Ottawa, Ottawa, April 11, 2006.

"Developing a Clinical Research Unit: The Clinical Evaluation Research Unit at the Kingston General Hospital." Interdepartmental Research Retreat, University of Toronto, Toronto, July 5, 2006.

"Maximizing the benefits and minimizing the risks of nutrition support in the critically ill: Evidence-based clinical practice guidelines." Sunnybrook Critical Care Rounds, Toronto, September 11, 2006.

"Maximizing the benefits and minimizing the risks of nutrition support in the critically ill: Evidence-based clinical practice guidelines." Postgraduate Medical Research Institute, Chandrigarh, India, February 12, 2007.

"Effective Communication with Patients and Families." William Osler Health Science Center ICU Day: Decision Making at the End of Life. March 9, 2007.

"A Randomized Trial of Empiric Broad-Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia." Critical Care Rounds, CHU University, Leige, Brussels, March 27, 2007.

"End of life care in Canada: A quality finish?" Jane Poulson Visiting Professorship, Grand Medical Rounds, Montreal General Hospital, McGill University, April 3-4, 2007.

"Educating medical residents in end of life care: Results from a recent national survey." Jane Poulson Visiting Professorship, Palliative Care Rounds, Montreal General Hospital, McGill University, April 3-4, 2007.

"Improving end of life care in the ICU." Jane Poulson Visiting Professorship, Critical Care Rounds, Montreal General Hospital, McGill University, April 3-4, 2007.

"End of life care in Canada: A quality finish?" Grand Medical Rounds, Ottawa Hospitals, University of Ottawa, June 20, 2007.

"End of life care in Canada: A quality finish?" Cardiology Rounds, South Lake Regional Hospital, New Market, Ontario, October 17, 2007.

"REducing Deaths from OXidative Stress: A randomized trial of glutamine and antioxidant supplementation in critically ill patients. The REDOXS study." Winnipeg Health Science Center, Winnipeg, Manitoba, November 5, 2007.

"REducing Deaths from OXidative Stress: A randomized trial of glutamine and antioxidant supplementation in critically ill patients. The REDOXS study." Miami Valley Medical Center, Dayton, Ohio, January 14, 2008.

"REducing Deaths from OXidative Stress: A randomized trial of glutamine and antioxidant supplementation in critically ill patients. The REDOXS study." Critical Care Rounds, L'Enfant Jesus Hospital, Quebec City, Quebec, March 13, 2008.

"End of life care in Canada: A quality finish?" Grand Medical Rounds, L'Enfant Jesus Hospital, Quebec City, Quebec, March 13, 2008.

"Nutrition Therapy in the ICU: The clock is ticking!" Critical Care Rounds, Sacre Couer Hospital, Montreal, Quebec, April 24, 2008.

"End of life care in Canada: A quality finish?" Critical Care Rounds, North Humberland Regional Hospital, Coburg, Ontario, April 30, 2008.

"End of life care in Canada: A quality finish?" Grand Medical Rounds, Victoria Hospital, University of Western Ontario, London ON, June 13, 2008.

"Nutrition Therapy in the ICU: The clock is ticking!" Critical Care Rounds, Victoria Hospital, University of Western Ontario, London ON, June 13, 2008.

XIV. **PRESENTATIONS AT NATIONAL MEETINGS**

Total Presentations: 37

"The Effect of Acidified Enteral Feeds on Colonization and Pneumonia in the Critically Ill Patient". Canadian Critical Care Trials Group Meeting, Montreal, Quebec, April 1993.

"Introduction to Evidence-Based Medicine" and "How to Use an Economic Evaluation". Bayer National Sales Representative Meeting, Toronto, May 7, 1998.

"Patient participation in health care decisions near the end of life: A research program." Tranmer, J & Heyland, D. The Canadian Association of Medical Colleges (CAME), Ottawa, Ontario. May 1998.

"The Effect of Antimicrobial Tube Feeds on Nosocomial Infections in the Critically Ill Patient". Canadian Critical Care Trials Group Meeting, Toronto, Ontario, September, 1998.

"A Randomized Trial of Empiric Broad Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia". Canadian Critical Care Trials Group Meeting, Toronto, Ontario, September, 1998.

"Outcomes Research: Linking Clinical Practice with Research Evidence." Combining Evidence-Based Health Care and Utilization Review, Brampton, Ontario, Jan 13, 1999.

"Dying in Canada: Is it an Institutionalized, Technologically Supported Experience? Canadian Critical Care Trials Group End-of-Life Symposium, Lake Louise, Alberta, April 10, 1999.

"End of Life Decision Making". Critical Care Society Resident's Half-Day Symposium on End of Life Issues. Royal College of Physicians and Surgeons Annual Scientific Meeting. Montreal, September 1999.

"Nutrition Support in the Critically Ill Patient: A Systematic Review of the Literature" Critical Care Research Network 2nd Annual Meeting. Mississauga, Ontario; Jan 20, 2000.

"Nutrition Support in the Critically Ill Patient: Current Topics." Postgraduate Course, Canadian Critical Care Society and Canadian Association of General Surgeons, Edmonton, September 21, 2000.

"Ventilator-Associated Pneumonia: Observations and Experiments." Royal College of Physicians and Surgeons of Canada. Edmonton, September 23, 2000.

"A Randomized Trial of Empiric Broad-Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia." Astrazeneca National Sales Meeting, Mississauga, Ontario, April 25, 2001.

"Sepsis: New Insights into Mechanisms, Treatments, and Monitoring" Organon Technika, Durham, North Carolina, May 25, 2001.

"Prevention of Ventilator-associated Pneumonia: Current Practice in Canada." Wyeth-Ayerst Consultants Forum. Mississauga, Ontario, June 16, 2001.

"Tazocin: Clinical Review" Wyeth-Ayerst Consultants Forum. Mississauga, Ontario, June 16, 2001.

"Nutrition Support Research in ICU: A multidisciplinary, national research plan." Multidisciplinary National Research Meeting on Nutrition Support funded by Nestle, Abbott Laboratories and Canadian Institutes of Health Research, Toronto, Oct 16-17, 2001.

"Merits and Limitations of Meta-analyses in Nutrition Support" Western Canada Nutrition Day, Edmonton, Alberta, Oct 26, 2001.

"Nutrition Support: Best Care for the Critically Ill" Canadian Society for Clinical Nutrition Annual Meeting, Toronto, Ontario, May 4, 2002.

"Quality of Life in Survivors of Critical Illness: Moving Beyond Survival" Critical Care Research Network Annual Meeting, Ingersoll, Ontario, May 9, 2002.

"Family Satisfaction with Care in the Critical Care Setting" Critical Care Research Network Annual Meeting, Ingersoll, Ontario, May 9, 2002.

"Dying in ICUs in Canada: A Quality Finish?" Kingston- Ottawa Critical Care Symposium, Ottawa, May 24, 2002.

"Feeding in the ICU: Myths and Misconceptions. What is the Evidence?" Canadian Association of Critical Care Nurses, Niagara Falls, Ontario, October 2, 2002.

"Best Practice in ICU Nutrition Support" Hamilton Health Sciences 6th Annual Nutrition Workshop, Hamilton, Ontario, November 22, 2002.

“Towards Building a National Research Center of Excellence in End of Life/Palliative Care” National Coordinating Council, National Strategy on EOL/Palliative Care, Ottawa, Jan 22-24, 2003.

“Nutrition Support in the Critically Ill Patient” UBC Whistler Critical Care Conference, Whistler BC, April 12, 2003.

“Optimal Management of Ventilator-Associated Pneumonia” UBC Whistler Critical Care Conference, Whistler BC, April 12, 2003.

“Ventilator-Associated Pneumonia: Optimal Management ” 2nd Annual Atlantic Critical Care Conference, Halifax, Nova Scotia, September 5-7, 2003.

“Nutrition Support in the Critically Ill Patient: Achieving Best Practice.” 2nd Annual Atlantic Critical Care Conference, Halifax, Nova Scotia, September 5-7, 2003.

“Improving the Quality of End of Life Care in Canada: Understanding the Perspectives of Seriously Ill Hospitalized Patients and Their Caregivers.” CaNPER Protocol Development Meeting, October 28, 2003.

“Ventilator-Associated Pneumonia: Getting it right the first time!” Academy of Infection Meeting sponsored by AstraZeneca, Boston, Massachusetts, November 21, 2003.

“REducing Deaths from OXidative Stress: A randomized trial of glutamine and antioxidant supplementation in critically ill patients. The REDOXS study.” Canadian Critical Care Trials Group Annual Scientific Meeting, Lake Louise, Jan 20th, 2004.

“End of Life Care in Canada: A Quality Finish?” CIHR, National Research Forum for Young Investigators. Winnipeg, MB, May 8, 2004.

“ZAP the VAP”, VAP Investigators Meeting, Scottsdale, Arizona, Jan 13-14, 2005.

“A Randomized Trial of Invasive Diagnostic Techniques and Empiric Broad-Spectrum Antibiotics in the Setting of Ventilator-Associated Pneumonia: Preliminary Results.” Quebec Society of Intensive Care Medicine Annual Meeting, Montreal Quebec, May 5, 2005.

“REducing Deaths from OXidative Stress: The REDOXS Study. A randomized trial of glutamine and antioxidant supplementation in critically ill patients. Canadian Critical Care Trials Group Annual Scientific Meeting, Lake Louise, Jan 16-19, 2006.

“End of Life Care in the ICU: Patient Perspectives.” Alberta Intensive Care Society Annual Meeting. Lake Louise, Alberta, January 20, 2006.

“Dying in Canada: A quality finish?” Last Days of Living: Hope, Comfort, and Compassion at the End of Life, Health Care Conferences Canada, Inc. Toronto, ON, April 11, 2008.

XV. **PRESENTATIONS AT INTERNATIONAL MEETINGS** Total Presentations: 139

“The Effect of Cisapride on Gastric Emptying in Critically Ill Patients.” Digestive Diseases Week, San Francisco, California, May 1996.

“The Frequency and Methodological Rigor of Quality of Life Assessments in the Critical Care Literature.” The 7th World Congress of Intensive & Critical Care Medicine, Ottawa, Ontario, July 1997.

The Third Annual Ross Enteral Device Conference, Winston-Salem, NC, September 19-21, 1997. Chaired conference and presented “Making Inferences From Scientific Research” and “The Effect of Acidified Enteral Feeds on Contamination of the Enteral Feeding Delivery System and Subsequent Colonization and Infection in Critically Ill Patients.”

"Nutrition Support in the Critically Ill Patient: A Systematic Review of the Literature. 1997 Toronto Critical Care Medicine Symposium, Toronto, Canada, November, 1997.

"The Effect of Acidified Enteral Feeds on Gastric Colonization and Pneumonia in Critically Ill Patients: Results of a Multicenter Randomized Trial." American Thoracic Society/American Lung Association Annual Meeting, Chicago, April, 1998.

"Gastrointestinal Motility, Enteral Nutrition and Infection in Critical Illness". Expert's Panel sponsored by Janssen Pharmaceutica, Boston, August 26, 1998.

"Morbidity and Mortality Criteria: Are They Relevant to Establish the Efficacy of Nutritional Interventions?" European Society of Parenteral and Enteral Nutrition, Nice, France, September, 1998.

"Nutrition Support in the Critically Ill Patient: A Systematic Review of the Literature" European Society of Parenteral and Enteral Nutrition, Nice, France, September, 1998.

"Ventilator-Associated Pneumonia IS a Clinically Important Entity!" Pro/Con Debate. Toronto International Critical Care Symposium, Toronto, Canada, Oct 31, 1998.

"Clinical and Economic Consequences of ARDS: An international, multi-center pharmaco-economic and quality of life evaluation." Byk-Gulden Investigator's Meeting, Toronto, Ontario, Oct 4-5, 1999.

"Empiric, Broad-Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia". Toronto Critical Care Medicine Symposium, Toronto, Canada, Oct 30, 1999.

"Parenteral Nutrition in the Critically Ill Patient: More Harm than Good?" British Association of American Society of Parenteral and Enteral Nutrition, Bournemouth, UK, December 8-9, 1999.

"Immunonutrition in the Critically Ill Patient: A Meta-analysis" and "The Effect of Acidified Enteral Feeds on Gastric Colonization in the Critically Ill Patient" Expert's Meeting, Novartis, Minnesota; Jan 21, 2000.

"Supplemental Parenteral Nutrition in the Critically Ill Patient: Benefit or Harm?" 29th Educational & Scientific Symposium, Society of Critical Care Medicine, Orlando Florida, February 11-15, 2000.

"Merging Evidence-based Medicine and Nutrition Support Practice for Critically Ill Patients: The (Mis)interpretation of Randomized Trials and Meta-analyses." Evidence-Based Medicine Post-graduate course, 29th Educational & Scientific Symposium, Society of Critical Care Medicine, Orlando Florida, February 11-15, 2000.

"What are the Results? Using Systematic Reviews to Inform Decision Makers." Round Table Conference "Evaluating Critical Care: Using Health Services Research to Improve Quality". Brussels, Belgium, March 19-21, 2000.

"Supplemental Parenteral Nutrition: More Harm than Good? 20th International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium, March 21-24, 2000.

"End of Life Care in the ICU: Round Table Discussion." 20th International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium, March 21-24, 2000.

"Empiric Broad Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia." 20th International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium, March 21-24, 2000.

"Nutrition Support in the Critical Care Setting: An Update" 20th International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium, March 21-24, 2000.

"Immunonutrition in the Critically Ill: Some Evidence-based Medicine Considerations" Immune-enhancing Diet Consensus Conference. San Diego, California, USA. May 25-26.

"In Search of the Magic Nutraceutical: Problems with Current Approaches" Glutamine Symposium, Bermuda, Oct 2-4, 2000.

"The Impossible Nasojejunal tube: Practical Procedures" The 25th Australian and New Zealand Annual Scientific Meeting on Intensive Care. Canberra, Australia, Oct 19-22, 2000.

"What We Have Learned From Multi-center Clinical Trials: The Experience of the Canadian Critical Care Trials Group" The 25th Australian and New Zealand Annual Scientific Meeting on Intensive Care. Canberra, Australia, Oct 19-22, 2000.

"Optimizing the Delivery of Enteral Nutrition in the Critically Ill" The Australasian Parenteral and Enteral Society Annual Scientific Meeting. Lorne, Australia, Oct 26-29, 2000.

"A Systematic Review of Nutrition Support in the Critically Ill" The Australasian Parenteral and Enteral Society Annual Scientific Meeting. Lorne, Australia, Oct 26-29, 2000.

"Nutrition Support in the Critically Ill Patient: Current Topics" Chicago Thoracic Society Annual Meeting, Chicago, Illinois, January 9, 2001.

"Does Nutrition Support Influence Patient Outcome" American Society of Parenteral and Enteral Nutrition, Chicago, Illinois, January 20, 2001.

"Why We Need Multicenter Randomized Clinical Trials: The Experience of the Canadian Critical Care Trials Group." American Society of Parenteral and Enteral Nutrition, Chicago, Illinois, January 23, 2001

"Effect of Glutamine in Critical Illness: A Systematic Review." American Society of Parenteral and Enteral Nutrition, Chicago, Illinois, January 23, 2001.

"Clinical Research Design: Critical Care- Randomized Trials and Meta-analyses" Society of Critical Care Medicine 30th International Educational and Scientific Symposium, San Francisco, February 11-13, 2001.

"Measuring Outcomes in Critical Care: Quality of Life" Society of Critical Care Medicine 30th International Educational and Scientific Symposium, San Francisco, February 11-13, 2001.

"Immunonutrition in the Critically Ill: More Harm than Good?" Society of Critical Care Medicine 30th International Educational and Scientific Symposium, San Francisco, February 11-13, 2001.

"Systematic Reviews as a Research Tool: Strategies for the Underfunded" American Thoracic Society Meeting, Postgraduate Course, San Francisco, May 19, 2001.

"Merits and Limitations of Meta-analysis Illustrated by Examples from Nutrition Support." European Society of Parenteral and Enteral Nutrition, Munich, Germany, Sept 8-12, 2001.

"Immunonutrition: What is the Evidence?" European Society of Parenteral and Enteral Nutrition, Munich, Germany, Sept 8-12, 2001.

"Immunonutrition: Pro-Con Debate" Toronto International Critical Care Symposium, Toronto, Sept 18-21, 2001.

"Diagnosis of Ventilator-Associated Pneumonia" Toronto International Critical Care Symposium, Toronto, Sept 18-21, 2001.

"Sepsis: New Insights into New Molecules, Mechanisms, Monitoring and Improved outcomes." Southeast Association of Clinical Microbiologists, Myrtle Beach, South Carolina, November 7, 2001.

"Does Nutrition Support Influence Outcome? 26th ASPEN Clinical Congress, Nutrition for the Practicing Clinician, San Diego, February 22, 2002.

"Immune Enhancing Formulas: Beneficial or Harmful? 26th ASPEN Clinical Congress, Postgraduate Course, San Diego, February 23, 2002.

"Should Immunonutrition be Routine in the Critically Ill?" 26th ASPEN Clinical Congress, San Diego, February 24, 2002.

"Optimizing the Benefits and Minimizing the Risks of Enteral Nutrition in the Critically Ill: Role of Small Bowel Feeding" Summit on Aspiration Pneumonia, In conjunction with Digestive Diseases Week, San Francisco, May 18,19, 2002.

"Should Immunonutrition be Routine in the Critically Ill?" Digestive Diseases Week, San Francisco, May 18,19, 2002.

"Alternative Methods for Diagnosing Sepsis" American Society of Microbiology Annual Meeting, Salt Lake City, May 21, 2002.

"Waveform Analysis of the aPTT in Critically Ill Hospitalized Patients with Sepsis: The WaTTCH study." International Society on Thrombosis and Haemostasis, Boston, July 18, 2002.

Sepsis: New Insights into Molecules, Mechanisms, Monitoring, and Maximizing Outcomes." Biomerieux, Marcy, France, September 20, 2002.

"Waveform Abnormalities of aPTT in Critically Ill Hospitalized Patients: The WATTCH study." Biomerieux, Marcy, France, September 20, 2002.

"Empiric Antibiotics are Needed. Pro/Con Debate." Toronto Critical Care Medicine Symposium, Toronto, ON, November 1, 2002.

"Quality End of Life Care: The importance of communication." Toronto Critical Care Medicine Symposium, Toronto, ON, November 1, 2002.

"Which Patients Benefit from Immunonutrition?" Nutrition Week, San Antonio, Texas, January 18-22, 2003.

"Minimizing the Risks of Enteral Nutrition in the Critically Ill: Effect of Small Bowel Feedings." Nutrition Week, San Antonio, Texas, January 18-22, 2003.

"Achieving Best Practice: Nutrition Support in the ICU" Canadian Night, Ross- sponsored event at Nutrition Week, San Antonio, Texas, January 18-22, 2003.

"Diagnosis of Ventilator-Associated Pneumonia" 32nd Critical Care Congress, Society of Critical Care Medicine, San Antonio, Texas, Jan 28-Feb 3, 2003.

"Dying in Canada: A Quality Finish?" 32nd Critical Care Congress, Society of Critical Care Medicine, San Antonio, Texas, Jan 28-Feb 3, 2003.

"Immunonutrition: Pro/Con Debate" 32nd Critical Care Congress, Society of Critical Care Medicine, San Antonio, Texas, Jan 28-Feb 3, 2003.

"Nutrition Support in the Critically Ill" American Thoracic Society 2003 State of the Art Review Course, San Juan, Puerto Rico, February 27-March 2, 2003.

"Immunonutrition: What is the evidence?" 27th Congress of the Scandinavian Society of Anesthesiology and Intensive Care Medicine, Helsinki, Finland, August 16-20, 2003.

"Dying in Canada: A Quality Finish." Toronto Critical Care Medicine Symposium, Toronto, Ontario, Oct 29-November 1, 2003.

"Diagnosis of Ventilator-Associated Pneumonia: Impact on Outcome" Toronto Critical Care Medicine Symposium, Toronto, Ontario, Oct 29-November 1, 2003.

"Dissemination of the Canadian Clinical Practice Guidelines for Nutrition Support for Mechanically Ventilated Patients." Toronto Critical Care Medicine Symposium, Toronto, Ontario, Oct 29-November 1, 2003.

"Background and Scientific Rationale for Long-term follow up study: VALID study." Investigator's meeting, Altana Pharmaceuticals, Miami Florida January 17, 2004.

"Nutrition Support in the Critically Ill Patient: "Narrowing the GAP!" Experts Roundtable sponsored by Nutricia, Inc. Frankfurt, Germany, Jan 23, 2004.

"Canadian Clinical Practice Guidelines for Nutrition Support in the Critically Ill Patient." Nutrition Week. Las Vegas, Nevada, February 9-12, 2004.

"Enteral Nutrition vs Parenteral Nutrition: Nutrition for the Practicing Clinician." Nutrition Week. Las Vegas, Nevada, February 9-12, 2004.

"Role of Immunonutrition in ICU". Society of Critical Care Medicine. 33rd Critical Care Congress. Orlando, Florida, February 19-25, 2004.

"Immunonutrition – where have we come from and where are we going?" 6th World Congress on Trauma, Shock, Inflammation and Sepsis. Munich, Germany, March 2-6, 2004.

"Optimal regimen of perioperative nutrition – What makes sense?" 6th World Congress on Trauma, Shock, Inflammation and Sepsis. Munich, Germany, March 2-6, 2004.

"REducing Deaths from OXidative Stress: A randomized trial of glutamine and antioxidant supplementation in critically ill patients. The REDOXS study." Canadian Society for Clinical Nutrition 3rd Annual Scientific Meeting. Toronto, Ontario, April 22-24, 2004.

"Nutrition support in the critically ill: evidence-based clinical practice guidelines". European Society of Intensive Care Medicine, 17th Annual Congress, Berlin, Germany, 10-13 October 2004.

"Use of total parenteral nutrition (TPN)". European Society of Intensive Care Medicine, 17th Annual Congress, Berlin, Germany, 10-13 October 2004.

"Ventilator-associated pneumonia: Optimal management." Critical Care Medicine Symposium, Toronto, 21-23 October 2004.

"The patient's and family's perspectives on end of life care in Canada". Critical Care Medicine Symposium, Toronto, 21-23 October 2004.

"Reducing Deaths from Oxidative Stress: The REDOXS study". Critical Care Medicine Symposium, Toronto, 21-23 October 2004.

"Nutrition support in the critically ill: Evidence-based clinical practice guidelines". Critical Care Medicine Symposium, Toronto, 21-23 October 2004.

"End of Life Care in Canada: A Quality Finish?" Society of Critical Care Medicine Annual Scientific Congress, Phoenix, Arizona. Jan 15-19, 2005.

"Immunonutrition: The Canadian Clinical Practice Guidelines for Nutrition Support" Society of Critical Care Medicine Annual Scientific Congress, Phoenix, Arizona. Jan 15-19, 2005.

"Immunonutrition: From old approaches to new paradigms" Japanese Society for Parenteral and Enteral Nutrition Congress, Japan, February 10-20, 2005.

"Sepsis markers. Modified APTT". 25th International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium, March 21-25, 2005.

"Optimal management of VAP". 25th International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium, March 21-25, 2005.

"End of life care". 25th International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium, March 21-25, 2005.

"Optimal nutritional support". 25th International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium, March 21-25, 2005.

"Nutrition and Infection: What is the evidence?" American Thoracic Society Annual Scientific Meeting, San Diego, May 21-25, 2005.

"Patient's Perceptions at the End of Life" Resident's Day, Toronto Critical Care Medicine Symposium, Oct 25, 2005.

"A Randomized Trial of Invasive Diagnostic Techniques and Empiric Broad-Spectrum Antibiotics in the Setting of Ventilator-Associated Pneumonia." Toronto Critical Care Medicine Symposium, Oct 26-28, 2005.

"Preventing oxidant injury". Toronto Critical Care Medicine Symposium, Oct 26-28, 2005.

"REducing Deaths from OXidative Stress: A randomized trial of glutamine and antioxidant supplementation in critically ill patients. The REDOXS study." Toronto Critical Care Medicine Symposium, Oct 26-28, 2005.

Biomarkers in sepsis: Modified APTT. International Sepsis Forum Colloquium on Biomarkers in Sepsis, Mississauga, Ontario, October 28-30, 2005.

"Canadian Clinical Practice Guidelines for Nutrition Support in the Mechanically Ventilated, Critically Ill Patient." 1st Slovenian Conference on Clinical Nutrition and Metabolism. Maribor, Slovenia, November 11-12, 2005.

"Pharmaconutrition: A New Emerging Paradigm." Austrian Intensive Care Society, Salzburg Austria, November 14, 2005.

"Pharmconutrition: Improving the morbidity and mortality of critically ill patients." Groshaber Clinic, Munich University, Munich Germany, November 15, 2005.

"Immunonutrition: From old approaches to new paradigms" British Association of Parenteral and Enteral Nutrition Annual Scientific Meeting, Telford, UK, November 16-17, 2005.

"Canadian Guidelines for Nutrition Support in the Mechanically Ventilated Critically Ill Patient" beFRANC Symposium. Valkenburg, the Netherlands, December 8-9, 2005.

"Nutrition in the ICU" The 2006 ATS State of the Art Course in Pulmonary and Critical Care Medicine. Chicago, March 2, 2006.

"Is it worthwhile to sample the lower respiratory tract to diagnosis VAP? Pro/Con Debate" The Atlanta Summit on VAP, Atlanta Georgia, July 7,8, 2006.

"Pharmaconutrition: A new emerging paradigm." European Society of Intensive Care Medicine Annual Meeting, Barcelona, Spain, September 24-27, 2006.

"A Randomized Trial of Empiric Antibiotics and Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia." European Society of Intensive Care Medicine Annual Meeting, Barcelona, Spain, September 24-27, 2006.

"Pharmaconutrition: A new emerging paradigm." European Society of Enteral and Parenteral Nutrition Annual Meeting, Istanbul, Turkey, October 18-22, 2006.

"Pharmaconutrients: Selected nutrients and their influence on patient outcomes" ACCP Chest Annual Scientific Meeting, Salt Lake City Utah, October 19-25, 2006.

"VAP: The value of invasive diagnostic techniques." Discovering the New World of Hospital Infection. Lisbon, Portugal, Nov 11, 2006.

"Ventilator-Associated Pneumonia: Optimal Management." 13th Annual Scientific Conference of the Indian Society of Critical Care Medicine, Cochin, India, February 7-11, 2007.

"Pharmaconutrition: A New Emerging Paradigm." Keynote Address. 13th Annual Scientific Conference of the Indian Society of Critical Care Medicine, Cochin, India, February 7-11, 2007.

"How Do I Implement Change in my ICU? A Case Study of Nutrition Therapy." 13th Annual Scientific Conference of the Indian Society of Critical Care Medicine, Cochin, India, February 7-11, 2007.

"The Canadian Critical Care Trials Group: A Case Study in Research Networks." 13th Annual Scientific Conference of the Indian Society of Critical Care Medicine, Cochin, India, February 7-11, 2007.

"EN vs PN: Pro Con." 13th Annual Scientific Conference of the Indian Society of Critical Care Medicine, Cochin, India, February 7-11, 2007.

"Pharmaconutrition: A New Emerging Paradigm." Plenary Address. 36th Annual Critical Care Congress, Society of Critical Care Medicine, Orlando Florida, February 17-21, 2007.

"Hypocaloric nutrition in the critically ill." 27th International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium, March 27-30, 2007.

"Arginine and glutamine." 27th International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium, March 27-30, 2007.

"Antioxidants: What is the evidence of benefit?" 27th International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium, March 27-30, 2007.

"Sepsis markers." 27th International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium, March 27-30, 2007.

"Intensive insulin therapy. Pro/Con Debate (CON)." 27th International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium, March 27-30, 2007.

"We do not need protected sampling." 27th International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium, March 27-30, 2007.

"Informing the patient." 27th International Symposium on Intensive Care and Emergency Medicine. Brussels, Belgium, March 27-30, 2007.

"Pharmaconutrition: A New Emerging Paradigm." Plenary Address. 2nd Chilean Critical Care Conference, Santiago, Chile, April 26-28, 2007.

"Maximizing the Benefits and Minimizing the Risk of Nutrition in the Critically Ill." 2nd Chilean Critical Care Conference, Santiago, Chile, April 26-28, 2007.

"Optimal Management of VAP." 2nd Chilean Critical Care Conference, Santiago, Chile, April 26-28, 2007.

"Glutamine: results of meta-analyses and other studies." Fresenius Kabi Advanced Nutrition Course, Bad Homburg, Germany, May 22-25, 2007.

"Update in the management of serious infection." Pathways 2007, Bangalore, India, May 27-28, 2007.

"Permissive underfeeding in the critically ill patient: an "over-rated" approach." 6th Summer Conference in Intensive Care Medicine, Toronto, Canada, June 14-16, 2007.

"Guidelines development process". 6th Summer Conference in Intensive Care Medicine, Toronto, Canada, June 14-16, 2007.

"Critical care nutrition survey: preliminary results". 6th Summer Conference in Intensive Care Medicine, Toronto, Canada, June 14-16, 2007.

"Pharmaconutrition: A New Emerging Paradigm." Plenary Address. Critical Care Congress, Critical Care Society of South Africa, Sun City, August 14th-17th, 2007.

"VAP: Getting it right the first time!" Critical Care Congress, Critical Care Society of South Africa, Sun City, August 14th-17th, 2007.

"The Diagnosis of VAP." Critical Care Congress, Critical Care Society of South Africa, Sun City, August 14th-17th, 2007.

"Maximizing the benefits and minimizing the risks of nutrition therapy in the ICU." Critical Care Congress, Critical Care Society of South Africa, Sun City, August 14th-17th, 2007.

"Maximizing the benefits and minimizing the risks of nutrition therapy in the ICU." Critical Care Symposium sponsored by Fresenius Kabi, University of Stellenbosch, Cape Town, South Africa, August 23, 2007.

"Immunonutrition: New insights?" Critical Care Issues 2007, 6th Symposium on Intensive Care, Brugge, Belgium, Oct 20, 2007.

"End of life- How I communicate, What I say, and How I teach it to others" Critical Care Canada Forum, Toronto Oct 30-Nov 1, 2007.

"Pharmaconutrients for Severe Sepsis" Critical Care Canada Forum, Toronto Oct 30-Nov 1, 2007.

"Implementation of Clinical Practice Guidelines for Nutrition in the Critical Care Setting: The time to act is NOW!" Society for Critical Care Medicine Annual Scientific Conference, Honolulu, Hawaii, February 2-6, 2008.

"Selenium: The new magic bullet?" Society for Critical Care Medicine Annual Scientific Conference, Honolulu, Hawaii, February 2-6, 2008.

"The Canadian Clinical Practice Guidelines for Nutrition Support in the Mechanically Ventilated, Critically Ill Patient." Abbott Nutrition Workshop at Society for Critical Care Medicine Annual Scientific Conference, Honolulu, Hawaii, February 2-6, 2008.

"Pharmaconutrition: A New Emerging Paradigm." Pediatric Refresher course at Society for Critical Care Medicine Annual Scientific Conference, Honolulu, Hawaii, February 2-6, 2008.

"Tight Glycemic Control is NOT the Standard of Care: Pro/Con debate." 1st Intensive Therapy Forum, Vienna, Austria, February 28-29, 2008.

"Quantitative cultures are NOT necessary for the diagnosis of VAP: Pro/Con debate." 1st Intensive Therapy Forum, Vienna, Austria, February 28-29, 2008.

"Implementation of Clinical Practice Guidelines for Nutrition in the Critical Care Setting: Time to act is now!" Spanish Society of Parenteral and Enteral Nutrition, Valencia, Spain, May 16, 2008.

"End of Life Care for Advanced Heart Failure" 11th Annual Toronto International Heart Failure Summit, Toronto, ON, June 14, 2008.

"Implementation of Clinical Practice Guidelines for Nutrition in the Critical Care Setting: Time to act is now!" Nutrition Therapy in the ICU- Saving Lives Safely, Society of Critical Care Medicine Summer Academy, Chicago, Illinois, Aug 3-5, 2008.

"Nutrition Therapy is a Critical Care Emergency!" Nutrition Therapy in the ICU- Saving Lives Safely, Society of Critical Care Medicine Summer Academy, Chicago, Illinois, Aug 3-5, 2008.

XVI. INTRAMURAL PRESENTATIONS

Total Presentations: 29

"Effect of Acidified Enteral Feeds on Gastric Colonization". Regional Critical Care Research Rounds, Hamilton Ontario, Feb 1991.

"Enteral Nutrition: Past, Present and Future Research Directions". Regional Critical Care Research Rounds, Hamilton, Ontario, May 1993.

"Gastrointestinal Dysfunction, Enteral Nutrition and Infection in Critical Illness". Regional Critical Care Rounds, Hamilton, Ontario, Feb 1996.

"Is the High Cost of Intensive Care Worthwhile?" Department of Medicine Rounds, Queen's University, Kingston, Ontario, May 1996.

"A Randomized Trial of Empiric Broad Spectrum Antibiotics and Invasive Bronchoscopy in the Setting of Ventilator-Associated Pneumonia". Critical Care Rounds, Kingston, Ontario, September, 1998.

"The Attributable Morbidity and Mortality of Ventilator-Associated Pneumonia in the Critically Ill Patient". Critical Care Rounds, Kingston, Ontario, October, 1998.

"Decision Making Near the End of Life", Internal Medicine Resident's Academic Half Day, Kingston, Ontario, Jan 20, 1999.

"Systematic Reviews of the Literature: Problems or Panacea?" Department of Medicine Grand Rounds, Kingston, Ontario, Jan 21, 1999.

"A Randomized Trial of Empiric Broad-Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia." Critical Care Rounds, Kingston General Hospital, Ontario, September 7, 1999.

"End of Life Care In Canada: A Quality Finish?" Department of Medicine Grand Rounds, Kingston, Ontario, Nov 25, 1999.

"Dying In Canada: A Quality Finish?" Critical Care Rounds, Kingston General Hospital, Kingston, Ontario, Dec 7, 2000.

"Dying In Canada: A Quality Finish?" Ethics for Lunch Rounds, Kingston General Hospital, Kingston, Ontario, January 18th, 2001.

"Evidence-Based Medicine" Radiology Rounds, Kingston General Hospital, May 30, 2001.

“Gastrointestinal (Dys)function in Critical Illness”. Research in progress rounds, Division of Gastroenterology, Hotel Dieu Hospital, Oct 23, 2001.

“The Potential of Proteomics” Department of Medicine Research Rounds, Kingston General Hospital, April 26, 2002.

“Is Reading an Economic Evaluation an Efficient Use of Your Time?” Critical Care Medicine Journal Club, November 14, 2002.

“Clinical Evaluation Research Unit” KGH Research Advisory Committee Board Meeting, December 5, 2002.

“Dying in Canada: A Quality Finish?” Department of Family Medicine Rounds, Queen’s University, June 12, 2003.

“REducing Deaths from OXidative Stress: A randomized trial of glutamine and antioxidant supplementation in critically ill patients. The REDOXS study.” Critical Care Rounds, Queen’s University, September 22, 2003.

“REducing Deaths from OXidative Stress: A randomized trial of glutamine and antioxidant supplementation in critically ill patients. The REDOXS study.” Gastrointestinal Diseases Research Unit Research in Progress, Queen’s University, September 23, 2003.

“Communication and Decision Making at the End of Life: Patients’ and Families’ Perspectives.” Palliative Care Rounds, Queen’s University, January 28, 2005.

“Dying in Canada: A Quality Finish?” Medicine Grand Rounds, Queen’s University, February 03, 2005.

“Systematic Reviews: Problems or Panacea? Clinical Research Centre Seminar Series, Queen’s University, March 30, 2005.

“REducing Deaths from OXidative Stress: A randomized trial of glutamine and antioxidant supplementation in critically ill patients. The REDOXS study.” Critical Care Medicine Rounds, Queen’s University, April 4, 2005.

“Optimizing the Dose of Glutamine Dipeptides and Antioxidants in Critically Ill Patients: A phase 1 dose finding study of glutamine and antioxidant supplementation in critical illness.” GIDRU Research In Progress Rounds, April 5, 2005.

“Optimizing the Dose of Glutamine Dipeptides and Antioxidants in Critically Ill Patients: A phase 1 dose finding study of glutamine and antioxidant supplementation in critical illness.” Kingston-Ottawa Symposium. Kingston, ON, April 29, 2005.

“A Randomized Trial of Invasive Diagnostic Techniques and Empiric Broad-Spectrum Antibiotics in the Setting of Ventilator-Associated Pneumonia: Preliminary Results.” Critical Care Rounds, Kingston General Hospital, Kingston, Ontario, May 9, 2005.

“**R**ealities, **E**xpectations and **A**ttitudes related to **L**ife **S**upport **T**echnologies in **I**ntensive **C**are for Octogenarians: The REALISTIC 80 Study.” Critical Care Rounds, Kingston General Hospital, February 21, 2008.

“Critical Care Nutrition Applied to Enhanced Care Unit: Some principles and practices” Internal Medicine Continuing Medical Education, Kingston General Hospital, Mar 28, 2008.

XVII. **BIBLIOGRAPHY**

Publications—Journals

Total= 139

- 1) Heyland DK, Sauve M. A case of Neuroleptic Malignant Syndrome with out the use of neuroleptics. *Can Med Assoc J* 1991;145(7):817-819.
- 2) Heyland DK, Mandell LA. Gastric colonization and Nosocomial Pneumonia: Evidence for causation. *Chest* 1992;101:187-93.
- 3) Heyland DK, Bradley C, Mandell LA. Effect of Acidified Enteral Feeds on Gastric Colonization in the Critically Ill Patient. *Crit Care Med*, 1992;20:1388-1394.
- 4) Heyland DK, Cook DJ, Guyatt G. Enteral Nutrition in the Critically Ill Patient: A Review. *Int Care Med*, 1993;19:435-442.
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- 17) Naylor CD, Guyatt GH, Heyland DK for the Evidence-Based Medicine Working Group. User's Guides to the medical literature. IX. How to use an article about a clinical utilization review. JAMA 1996;275:1435-1439.
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- 169) Jones NE, Suurdt J, Ouellette-Kuntz H, Heyland DK. Understanding adherence to clinical practice guidelines in the intensive care unit: A comprehensive and integrated framework. Guidelines International Network (GIN) Conference, Toronto, August 22-25, 2007.
- 170) Homer S, Allan DE, Rocker G, Dodek P, Heyland DK. Discussing prognosis with patients at the end of life and their families: Impact on satisfaction with end of life care. Canadian Hospice Palliative Care Association, Toronto, ON, November, 2007.
- 171) Stajduhar KI, Allan DE, Cohen SR, Pichora D, Heyland DK. Preferences for location of death: Perspectives from Canadian patients and their family caregivers. Canadian Hospice Palliative Care Association, Toronto, ON, November 2007.
- 172) Minor S, Heyland DK, Schroder C. Making a better ICU end-of-life palliative care curriculum: Recommendations based on an educational audit. Critical Care Canada Forum, Toronto, October 30-November 1, 2007.
- 173) Jones NE, Dhaliwal R, Suurdt J, Ouellette-Kuntz H, Heyland DK. What are the most effective strategies to implement nutrition guidelines in the intensive care unit? Opinions of key stakeholders. 29th European Society of Parenteral and Enteral Nutrition Congress, Prague, 8-11 September 2007.
- 174) Zytaruk N, Yeo C, Heyland DK et al. Informed consent to randomize patients in a thromboprophylaxis trial. SCCM, Honolulu, Hawaii, February 2-6, 2008.
- 175) Jones NE, Dhaliwal R, Suurdt J, Ouellette-Kuntz H, Heyland DK. ICU culture: the key to successfully feeding our critically ill patients? Clinical Nutrition Week, Chicago, February 10-13, 2008. Nutr Clin Pract 2008;23:237.

- 176) Gramlich LM, Alberda C, Jones N, Jeejeebhoy K, Stoklossa CJ, Duerksen D, Drover J, Tremblay A, Dhaliwal R, Heyland DK. Nutrition support in the critically ill adult: a comparison across body mass index. *Clinical Nutrition Week, Chicago, February 10-13, 2008. JPEN 2008;32:331.*
- 177) Shorr AF, Cook D, Jiang X, Muscedere J, Heyland DK for the Canadian Critical Care Trials Group. Correlates of clinical failure in ventilator-associated pneumonia. American Thoracic Society, Toronto, May 16-21, 2008.
- 178) Young J, Allan D, Heyland DK, Simpson A, Rocker G. What matters to family carers of patients with advanced COPD. American Thoracic Society International Conference, Toronto, May 16-21, 2008.
- 179) Rocker G, Dodek P, Schroder C, Heyland DK, Paul N. Assessing educational needs of internal medicine residents in end-of-life care: a national survey. American Thoracic Society International Conference, Toronto, May 16-21, 2008.
- 180) Shorr AF, Cook D, Jiang X, Muscedere J, Heyland DK for the Canadian Critical Care Trials Group. Correlates of clinical failure in ventilator-associated pneumonia. American Thoracic Society, Toronto, May 16-21, 2008.
- 181) Caldwell P, Ross H, Heyland DK. Perceptions about EOL issues in patients hospitalized with advanced HF. Heart Failure Association of the ESC, Milan, Italy, June 14-17, 2008.
- 182) Frank C, Pichora D, Suurdt J, Heyland DK. Development and use of a decision aid for communication with hospitalized patients about cardiopulmonary resuscitation preference. *Canadian Journal of Geriatrics 2008;11(1):40-41.*
- 183) Gramlich L, Wilkinson D, Townshend R, Heyland DK et al. Nutrition education in Canadian medical schools. Canadian Society for Clinical Nutrition Annual Meeting 2008. *Applied Physiology, Nutrition and Metabolism 2008;33(3):615.*
- 184) Jones N, Dhaliwal R, Heyland DK. Clinical practice guidelines for nutrition in the ICU: opinions of physicians and dietitians. Canadian Society for Clinical Nutrition Annual Meeting 2008. *Applied Physiology, Nutrition and Metabolism 2008;33(3):619.*
- 185) Jones N, Dhaliwal R, Wang M, Heyland DK. Feeding critically ill patients: what is happening in Canadian ICUs? Canadian Society for Clinical Nutrition Annual Meeting 2008. *Applied Physiology, Nutrition and Metabolism 2008;33(3):619.*
- 186) Jones NE, Gramlich L, Alberda C, Drover J, Wang M, Day A, Heyland DK. The relationship between calories received and clinical outcomes in critically ill patients: Results of an international multicenter observation study. *Clinical Nutrition 2008 (in press).*
- 187) Jones NE, Gramlich I, Alberda C, Jeejeebhoy K, Johnson Stoklossa R, Duerksen D, Drover J, Tremblay A, Dhaliwal R, Heyland DK. In pursuit of the magic prescription: How are the energy requirements of critically ill patients being determined? *Clin Nutrition 2008 (in press).*
- 188) Muscedere JM, Drover J, Jiang X, Day A, Heyland DK. Persistent organ dysfunction score (PODS) plus death: A novel, composite outcome measure for critical care nutrition studies. *Clin Nutrition 2008 (in press).*
- 189) Jones NE, Dhaliwal R, Heyland DK. Zinc supplementation in critically ill patients: A key pharmaconutrient? *Clin Nutrition 2008 (in press).*

- 190)Narasimhan S, Jones N, Dhaliwal R, Heyland DK. Attitudes of physicians and dietitians towards the Canadian Nutrition Support Clinical Practice Guidelines: An international survey. Clin Nutrition 2008 (in press).
- 191)Martin CM, Priestap F, Heyland DK, Longo CJ, Fowler RA, Keenan SP, Fisher H. Treatment and mortality of severe sepsis: results of a Canadian multicentre prospective observational study. Intensive Care 2008 (in press).
- 192)Paul N, Suurdt J, Heyland J, Frank C, Wattam P, Heyland DK. Family caregivers of seriously ill hospitalized patients: Assessing their satisfaction with end-of-life care. CSIM Annual Scientific Meeting, October 15-18, 2008, Montreal, Quebec. (in press)
- 193)Suurdt J, Paul N, Heyland J, Frank C, Wattam P. Heyland DK. Seriously ill hospitalized patients: Assessing their satisfaction with end-of-life care. CSIM Annual Scientific Meeting, October 15-18, 2008, Montreal, Quebec. (in press)
- 194)Wenzel H, Cunningham M, Chidwick P, Lazar N, Makowsky D, Markwell H, Heyland DK. Common challenges to providing end of life care (eolc) in the ICU – the Ontario EOLC coaching team’s experience. Intensive Care 2008. (in press)

Abstracts Submitted

Caldwell PH, Ross H, Rocker GM, Dodek P, Heyland DK. Opportunity knocks: family caregivers’ priorities for improving EOL care for patients with HF.

Published Letters

Soskolne C, Heyland DK, Phillips E. Human T Lymphotropic virus: Exposure and Prognosis. Can Med Assoc J. 1986;134:575-577.

Heyland DK, Drover J, Aitken S for the Kingston ICU Journal Club. The effectiveness of right heart catheterization in seriously ill patients. JAMA 1997;277:108-13.

Heyland DK, Drover J. A prospective randomized, double-blind, controlled clinical trial of immunonutrition. Crit Care Med 2000;28:906.

Heyland DK, Drover J, Dhaliwal R for the Canadian Clinical Practice Guidelines Committee. Does the addition of glutamine to enteral feeds affect patient mortality? Crit Care Med 2006;July;34(7):2031-2.

Thomson A, McClave SA, Heyland DK. Nutrition therapy in acute pancreatitis. JPEN J Parenter Enteral Nutri 2006;Nov-Dec;30(6):536-538.

Editorials, Commentaries, etc.

Heyland DK, Cook DJ. Commentary on “Elevation of systemic oxygen delivery in the treatment of critically ill patients”. ACP J Club 1994 Nov/Dec;121:63.

Martin C, Heyland DK. In search of the “Magic” nutraceutical. Crit Care Med 1999;27:251-2.

Heyland DK, Kutsogiannis DJ. Quality of life following critical care: Moving beyond survival. Intensive Care Med 2000;26:1172-1175.

Heyland DK, Novak F. Commentary on “Enteral immunonutrition reduced infection risk, days on ventilator, and hospital stay in critically ill patients.” ACP J Club 2000;133:9.

Heyland DK, "Pro/con clinical debate: The use of a protected specimen brush in the diagnosis of ventilator-associated pneumonia. Crit Care 2002;6:117-120.

Heyland DK, Paterson WG. Fluid restriction for post-operative patients? Lancet 2002;359(9320):1792-1793.

Heyland DK, Samis A. Does immunonutrition in patients with sepsis do more harm than good? Intensive Care Med 2003;29(May):669-671.

Rocker GM, Heyland DK. New research initiatives in Canada for end-of-life and palliative care. CMAJ 2003; 169(4):300-301.

Heyland DK, Dhaliwal R, Drover JW. Nutrition support in mechanically ventilated, critically ill adult patients: Are we ready for evidence-based clinical practice guidelines? Nutr Clin Pract 2004; 19(June):193-200.

Heyland DK. Specialized nutrition support in pancreatitis: use the GUT! Med Prakt 2004;163(9):131-132.

Heyland DK, Dhaliwal R. Early enteral nutrition vs. early parenteral nutrition: An irrelevant question for the critically ill? Crit Care Med 2005;Jan;33(1) 260-261.

Heyland DK, Dhaliwal R. Immunonutrition in the critically ill: from old approaches to new paradigms. Intensive Care Med 2005;Apr;31(4):501-3.

Heyland DK. The definitive position on early nutritional support is yet to be established. Crit Care Med 2005;June;33(6):1473.

Heyland DK. Selenium supplementation in critically ill patients: Can too much of a good thing be a bad thing? Crit Care 2007;11(4):153.

Book Chapters

Schoenfeld PS, Heyland DK, Cook DJ. Prokinetic use to facilitate enteral feeding. Intensive Care Year in Review. Springer Verlag. 1996; 241-249.

Heyland DK. Nutritional Support in the Critically Ill Patient: A Systematic Review of the Literature. Critical Care Clinics. WB Saunders; Philadelphia. 1998;423-440.

Heyland DK. A Review of Gut-Specific Strategies to Reduce ICU-Acquired Infections. Current Opinion in Critical Care. Lippincott-Raven; Philadelphia. 1999;5:132-135.

Heyland DK, Koretz R. Merging Evidence-based Medicine and Nutrition Support Practice for Critically Ill Patients: The (Mis)interpretation of Randomized Trials and Meta-analyses. In: Pichard C and Kudsk KA, editors. From Nutrition Support to Pharmacologic Nutrition in the ICU. Springer Verlag:Berlin Heidelberg, Germany 2000;34:461-471.

Heyland DK. Using systematic reviews to inform decision makers. In: Evaluating Critical Care: Using Health Services Research to Improve Quality. Springer Verlag:Berlin Heidelberg, Germany 2000;35:198-208.

Guyatt G, Cook DJ, Devereaux PJ, Meade M, Straus S, Heyland DK. Therapy. In: User's Guides to the Medical Literature: A manual for evidence-based clinical practice. AMA press, Chicago, 2002;55-80.

Guyatt G, Naylor D, Juniper E, Heyland DK, Jaeschke R, Cook DJ. Therapy and Understanding the Results: Quality of Life. In: User's Guides to the Medical Literature: A manual for evidence-based clinical practice. AMA press, Chicago, 2002;309-327.

O'Brien B, Drummond M, Richardson WS, Levine M, Heyland DK, Guyatt G. Moving from Evidence to Action: Economic Analysis. In: User's Guides to the Medical Literature: A manual for evidence-based

clinical practice. AMA press, Chicago, 2002;621-644.

Heyland DK, Lukan JK, McClave SA. The role of nutritional support in sepsis. The Sepsis Text, Kluwer Academic Publishers, Boston, 2002; 479-490.

Keenan S, Heyland DK, Jacka M, Cook DJ, Dodek P. Ventilator-Associated Pneumonia: prevention, diagnosis and therapy. Critical Care Clinics 2002;18:107-125.

Heyland DK, Dhaliwal R, Suchner U. Immunonutrition. In: Clinical Nutrition: Enteral and tube feeding. Eds: R.H Rolandelli, R. Bankhead, J.I. Boullata, C.W. Compher. Elsevier Saunders, Philadelphia, 2004; 224-242.

Heyland DK and McClave SA. Nutrition in the Critically Ill. In: Principles of Critical Care. Eds: JB Hall, GA Schmitt, LDH Wood. The McGraw-Hill Companies, 2005; 117-130.

McClave SA and Heyland DK. Critical Care Nutrition. In: Textbook of Critical Care. Eds: M Fink, E Abraham, JL Vincent, PM Kochanek. Elsevier Saunders, Philadelphia, 2005;939-950.

Drover JD, Iliescu E, Heyland DK. Nutrition in the ICU. In: Intensive Care in Nephrology. Eds: P Murray, J Hall, and H Brady. Taylor & Francis, United Kingdom, 2005.

Stapleton RD, Heyland DK. Glycemic Control and Intensive Insulin Therapy in the Critical Illness? 2008. on line at www.uptodate.com

Heyland DK, Dhaliwal R, McClave S. Commentary. If You Don't Connect the Dots, You May not see the Whole Picture! JPEN J Parenter Enteral Nutr 2008;32(4):486-488.

XVIII. RESEARCH GRANTS AWARDED

Investigator-Initiated Research Activities Total Grants to date: \$ 22,017,125

- 1990 -1991 "Effect of acidified enteral feeds on gastric colonization in the critically ill patient."
Principal Investigator: DK. Heyland
Co-investigators: L. Mandell, C. Bradley
Funding: \$7,500 from Clintec Nutritional Inc. and Regional Medical Associates.
- 1992-1998 "Protected Brush Catheter: Evaluation of a Diagnostic Technology."
Principal Investigators: DK.Heyland, D.J. Cook.
Funding: \$1,500 from Boston Scientific Company
- 1992-1995 "Effect of Cisapride on gastric emptying in the Critically Ill Patient."
Principal Investigator: DK.Heyland
Funding: \$100,000 from Janssen Pharmaceuticals
- 1993-1997 "Effect of Acidified Enteral Feeds on Colonization and Pneumonia in the Critically Ill Patient: A Multicenter Randomized Trial."
Principal Investigator: DK. Heyland
In collaboration with The Canadian Critical Care Trials Group
Funding: \$172,750 from Ross Division, Abbott Laboratories
- 1994-1996 "Economic evaluations in the critical care literature: Do they help us solve the problem?"
Principal Investigator: DK.Heyland
Co-investigators: D.J. Cook, A. Gafni, P. Kernerman.
Funding: \$1,850 from Upjohn
- 1994 "Economic evaluation of stress ulcer prophylaxis in the critically ill.
Principal Investigator: DK.Heyland
Co-investigators: D.J. Cook, A. Gafni.
Funding: \$1,500 from Regional Medical Associates
- 1996-1998 "The Impact of Invasive Diagnostic Techniques in Critically Ill Patients with a Clinical Suspicion of Pneumonia: A Prospective Cohort Study."
Principal Investigators: DK. Heyland, D.J. Cook.
In collaboration with The Canadian Critical Care Trials Group
Funding: \$4,800.00 from Ontario Lung Association and Boston Scientific Corporation
- 1996-1998 "Comparison of Option One and a Polymeric Enteral Feeding: Effect on Length of Stay and Clinical and Immune Parameters."
Co-Investigator: DK. Heyland
Funding: \$77,563.00 from Ross Division, Abbott Laboratories.
- 1996-1998 "Assessment of Patient Preferences and Public Willingness to Pay for Critical Care Services."
Principal Investigators: DK. Heyland, A. Gafni.
Co-Investigators: J. Tranmer, S. Taylor.
Funding: \$20,000 from Department of Medicine, Queen's University
- 1997-1999 "Clinical Decision Making Around End of Life Issues: The Patient's, Nurse's, and Physician's Perspective."
Principal Investigators: DK. Heyland, S. Squires, J. Tranmer, A. Gafni.
Funding: \$10,000 from Oncology Nursing Foundation.
- 1997-1999 The Incidence of Pulmonary Aspiration of Enteral Feeds: A Randomized Trial of Gastric vs. Small Bowel Feeding."

- Principal Investigators: DK. Heyland, J. Drover, S MacDonald.
Funding: \$15,000 from Physicians Services Inc.
- 1997-2001 "Decisional Responsibility and Information Needs of Seriously Ill Hospitalized Patients."
Principal Investigators: DK. Heyland
Co-Investigators: J. Tranmer, D. Dudgeon, S. Taylor, E. Kauffmann, M. Brundage, D. Feldman-Stewart, H. Munby
Funding: Social Sciences and Humanities Research Council Post-Doctoral Fellowship.
- 1997-1998 "Non-Invasive Positive Pressure Ventilation: A Clinical Outcomes Monitoring Project."
Principal Investigators: DK. Heyland.
Co-Investigators: W. Haddara, R. Wigle, A. Leach, C. Phillips
Funding: \$5,000 from Puritan Bennet.
- 1997-1999 "Long-term Health-related Quality of Life in Survivors of Sepsis."
Principal Investigators: DK. Heyland.
Co-Investigators: W. Hopman, A. Miranda, J. Tranmer, M. McColl.
Funding: \$15,000 from Knoll Pharmaceuticals
- 1998-2008 A Randomized Trial of Empiric Broad-Spectrum Antibiotics and Invasive Diagnostic Techniques in the Setting of Ventilator-Associated Pneumonia."
Principal Investigator: D. Heyland.
Co-Investigators: from the Canadian Critical Care Trials Group.
Funding: \$75,000 from Bayer Pharmaceuticals, \$96,000.00 from PSI \$100,000 AstraZeneca and \$2,006,436 from Canadian Institutes of Health Research.
- 1998-2001 "The Relationship Between Symptom Distress, Fatigue and Decisional Responsibility in Seriously ill Hospitalized Patients Near the End of Life: A Prospective, Longitudinal Study."
Principal Investigator: JE Tranmer, DK Heyland.
Co-Investigators: Coulson, K., Squires-Graham, M.
Funding: \$10,000 Canadian Nurses Foundation, \$5,300 from Clare Nelson Bequest Fund
- 1998-2000 "Epidemiology of Dying in Ontario: A Starting Place for Reform."
Principal Investigator: DK Heyland.
Co-Investigators: Tranmer J, Lavery J, Shortt S.
Funding: \$17,800 from Physician Services Inc.
- 1998-2000 "The Effect of Antibiotic-Coated Catheters on the Ecology of an Intensive Care Unit: A Prospective Study."
Principal Investigator: DK Heyland, D Zoutman.
Co-Investigators: Drover J, Wright F.
Funding: \$12,000 from Cook Canada.
- 1999-2001 "Satisfaction with Care in the Intensive Care Unit: An Assessment of the Family's Perspective."
Principal Investigator: DK Heyland.
Co-Investigators: Peters S, Cook D, Rucker G, Dodek, P.
Funding: \$20,000 from Canadian Intensive Care Foundation.
\$11,333.00 from QEII Research Foundation
- 1999-2000 "Confirmation of Feeding Tube Placement in ICU Patients using Capnography."
Principal Investigator: Kindopp S.
Co-Investigators: Heyland DK, Drover J.
Funding: \$3,500 KGH Foundation.
- 2000-2008 "Improving the Quality of End of Life Care in Canada."
Principal Investigator: DK Heyland.

- Co-Investigators: Tranmer J, Taylor S, Shortt S, Lam M, Gafni A, Kutsigiannis J, Dodek P, Rocker G, Feldman-Stewart D, Lazar N.
Funding: \$266,441.00 from NHRDP
- 2001-2002 “Current Nutrition Support Practice in the Critical Care Setting Across Canada”
Principal Investigator: DK Heyland.
Co-Investigators: Drover J, Keefe L.
Funding: \$50,000.00 from Nestle Corporation, \$10,000.00 from BYK
- 2001- “Waveform Abnormalities of the aPTT in Critically ill Hospitalized patients (WATTCH Study)”
Principal Investigator: Heyland DK, Rapson D.
Co-Investigators: Howes D, Lord J.
Funding: \$1,356,800.00 from bioMerieux
- 2001-2002 “A Proposal to Develop a Multidisciplinary National Research Agenda Related to Nutrition Support in the Adult Critical Care Setting”
Principal Investigator: Heyland DK.
Funding: \$15,000.00 from Nestle, \$15,000.00 from Abbott Laboratories and \$20,000.00 from Canadian Institutes of Health Research
- 2001-2002 “Burden of illness in thromboembolism (BITEC) study “
Principal Investigator: DJ Cook
Co-Investigators: M Meade, G Guyatt, R Hodder, DK Heyland, C Martin, J Marshall, R Patel, G Mehta, D Mazer, J Granton, D Mazer
Funding: \$20,000 from Pharmacia, Inc, \$4500 from Ontario Thoracic Society (Queen’s University), \$4,458 from Ontario Thoracic Society (McMaster University), \$8,420 from Capital Health Research Fund, and \$10,200 from PSI.
- 2002- “Long-term Follow Up of Survivors of Sepsis “
Principal Investigator: DK Heyland
Funding: \$159,480.00 from Eli Lilly Canada, Inc.
- 2002- “Improving the Quality of End of Life Care in Canada: A Longitudinal Follow-Up Study”
Principal Investigator: DK Heyland.
Co-Investigators: Tranmer J, Frank C, Groll D, Pichora D
Funding: \$167,584 from Physician Services Inc.
- 2002- “A Multidisciplinary Research Training Program in Digestive Sciences”
Principal Investigator: W. Patterson
Co-Investigators: DK Heyland, B Depew, S Vanner, H MacDonald, M Szewczuk, N Martin, LR DeCosta, C Hill, J Morris, C Barajas-Lopez, M Blennerhassett
Funding: \$1.8 million from Canadian Institutes of Health Research
- 2002-2005 “Developing an Integrated, Team Approach to Hospice Palliative Care”
Principal Investigator: M. Anderson, K. Parent.
Co-Investigators: DK Heyland, J Napper, S Donaldson.
Funding: \$141,000 from Canadian Health Services Research Foundation
- 2002- “The Relationship between insulin resistance, coagulation, inflammation and clinical outcomes in critically ill patients”
Principal Investigator: DK Heyland
Co-Investigators: Farzad Saberi, Dilys Rapson and Khusheed Jeejeebhoy
Funding: \$20,000 from Canadian Intensive Care Foundation
- 2002-2005 “A randomized trial of a multifaceted strategy to implement nutrition support practice guidelines in the ICU setting.”
Principal Investigator: Minto Jain

- Co-Investigators: DK Heyland, John Drover, Rupinder Dhaliwal
Funding: \$18,000 SEAMO, Queen's University and \$24,000 from Canadian Intensive Care Foundation
- 2002 "End of Life/Palliative Care: Planning for a Quality Finish. A Multidisciplinary National Research Workshop."
Principal Investigator: DK Heyland
Co-Investigator: G Rocker
Funding: \$50,000 from Canadian Institutes of Health Research. 1 yr
- 2003-2007 "Primary Care Management/Action Plans for Advanced Chronic Diseases (The RoadMAP Project)."
Principal Investigator: Marshall Godwin and Joan Tranmer
Co-Investigators: DK Heyland, and others
Funding: \$460,000.00 from Primary Health Care Transition Fund, Ministry of Ontario.
- 2003-2006 "A Prospective Randomized Trial Comparing the Effectiveness of Post-pyloric Placement of a Standard Enteral Feeding Tube (Entriflex) Versus a Frictional Feeding Tube (Tiger Tube) in an ICU Setting."
Principal Investigators: DK Heyland, A Samis, J Drover
Co-Investigators: C D'Arsigny, M Jain
Funding: \$14,250.00 from Clinical Teacher's Association at Queen's Endowment fund
- 2003-2006 "Optimizing the dose of glutamine dipeptides in critically ill patients. A phase I dose finding study of glutamine supplementation in critically ill patients."
Principal Investigator: DK Heyland
Co-Investigators: J Drover, M Jain
Funding: \$58,000 from Fresenius-Kabi
- 2004- "Understanding and improving communication and decision-making at the end of life."
Principal Investigator: DK Heyland
Co-Investigators: DJ Cook, A Gafni, MK Giacomini, DR Kuhl, JE Tranmer
Funding: \$1,325,640 from Canadian Institutes of Health Research & Heart & Stroke, NET
- 2004-2007 "Clinical Practice Guidelines in the Intensive Care Unit: A Canadian Survey"
Principal Investigator: T Sinuff
Co-Investigators: D Cook, M Meade, D Heyland, P Dodek, S Keenan, G Rocker, J Hutchison, G Ellrodt
Funding: \$24,907 from Hamilton Health Sciences New Investigator Fund Grant, Canadian Intensive Care Foundation.
- 2004- "Family caregiving in palliative and end-of-life care: A new emerging team"
Principal Investigator: KI Stajduhar, SR Cohen
Co-Investigators: NL Chappell, DK Heyland, PM Koop, AM Williams
Funding: \$1,346,620 from Canadian Institutes of Health Research. 5 yr
- 2004-Reducing deaths due to oxidative stress. The REDOXS© Study. A randomized trial of glutamine and antioxidant supplementation in critically ill patients.
Principal Investigator: DK Heyland
Funding: \$370,000 from Fresenius-Kabi; \$10,000 from the Clinical Teachers Association of Queens, and \$4,798,496 from Canadian Institutes of Health Research.
- 2004-A randomized controlled trial comparing jejunal and gastric nutritional support in critically ill patients.
Principal Investigator: AR Davies
Co-Investigators: R Bellomo, DJ Cooper, GS Doig, SR Finfer, DK Heyland
Funding: \$138,859 CDN from Australian and New Zealand Intensive Care Foundation
- 2004-Long term follow up health-outcomes evaluation of venticute in patients with pneumonia or aspiration

of gastric contents leading to intubation, mechanical ventilation, and severe oxygenation impairment (VALID Study).

Principal Investigator: DK Heyland
Funding: \$812,610.00 from ALTANA Pharma

2004-2007 "Reasoning in Ethics: Surveying Perspectives in EOL among Canadian Trainees (RESPECT study)"

Principal Investigator: Yoanna Skrobik
Co-Investigators: DK Heyland, D Cook, G Rocker, T Gorman, S Ahern
Funding: \$50,000 from CARENET

2005.2007 Facilitating guideline adherence in the intensive care unit.

Principal Investigator: Sinuff T
Co-Investigators: D Cook, D Heyland, P Dodek, M Giacomini
Funding: \$36,000 from PSI

2005 The Canadian Critical Care Trials Group. Re-engineering for the next decade.

Principal Investigator: Cook D
Co-Investigators: J Marshall, P Hebert, DK Heyland, M Meade, J Hutchison, K Menon, G Rocker, P Dodek, C Doig, R Ward, B Winston
Funding: \$50,000 from CIHR (New Frontiers Program Development Grant)

2005 Assessment of a Glycemic Control Protocol and a Continuous Glucose Monitoring System in Critically Ill Patients

Principal Investigator: I Paula Newman
Co investigators: J Drover, D Heyland, R Houlden, J Muscedere

2005- Intensive Care Unit Patient Safety Team.

Principal Investigators: P Dodek, N Ayas
Co-Investigators: D Chittock, S Keenan, D Heyland, S Sheps, M Fitzgerald, S Robinson
Funding: \$497,160 from Michael Smith Foundation

2005- The relationship between organizational culture and family satisfaction in critical care

Principal Investigator: P Dodek
Co investigators: DK Heyland, D Cook, G Rocker, J Kutsogiannis
Funding: \$197,428 from Canadian Institutes of Health Research

2005-2007 Evaluation of the Associated Medical Services Fellowship in End of Life Care.

Principal Investigator: DK Heyland
Co investigators: C. Schroder.
Funding: Associated Medical Services \$275,000; CARENET \$50,000.

2005- Measuring the Quality of End of Life Care Provided in Inpatient Health Care Settings

Principal Investigator: KI Stajduhar
Co investigators: H Cook, DE Allan, DK Heyland, D Bidgood.
Funding: \$113,306.00 from Michael Smith Foundation for Health Research

2005- Active Observational Study of the Adoption and Transfer of Clinical Practice Guidelines through Education, for Ventilator Associate Pneumonia (ABATE) VAP Study

Principal Investigator: J Muscedere
Co investigators: T Sinuff, P Dodek, DK Heyland, D Cook, R Bouali, Z Punja, B Morgan, K Eva, L Hand
Funding: \$360,000 from CIHR, \$80,000 received from Bayer, \$200,000 from Astra Zeneca

2005- Survival Using Glucose Algorithm Regulation (SUGAR)

Principal Investigator: D Chittock
Co investigators: J Ronco, B Henderson, D Cook, P Hebert, DK Heyland, S Finfer S, Myburgh J, Norton R, McArthur C

Funding: \$3,038,414 from Canadian Institutes of Health Research

2006 Knowledge Transfer in the ICU Through a Behaviour Change Strategy for Ventilator Associated Pneumonia

Principal Investigator: J Muscedere

Co investigators: P Dodek, T Sinuff, M Squires, D Reeleder, DK Heyland, D Cook

Funding: CIHR approved, funding refused due to overlap with ABATE grant

2006 Evaluation of family satisfaction, organizational culture and quality of care in the step down units and enhanced care unit

Principal Investigator: J Muscedere

Co investigators: DK Heyland, C McColl, M Squires, J Drover

Funding: \$20,000 Queen's Department of Medicine

2007 Critical Care Nutrition Goes Global

Principal Investigator: DK Heyland

Funding: \$150,000 from Abbott Laboratories, \$150,000 from Nestle, \$63,000 from Fresenius Kabi, 75,000 from Queen's University, \$150,000 from Ontario Ministry of Research and Innovation

2007-2008 Determining the Validity of a Novel Questionnaire to Measure Satisfaction with End of Life Care in Canada

Principal Investigator: DK Heyland

Co investigators: D Cook, P Dodek, J Kutsogiannis, G Rocker, Y Skrobik

Funding: \$162,352 from Canadian Researchers at the End of Life Network (CARENET)

2007.2008 Optimizing Nutrition Therapy in the Intensive Care Unit: Development of a Screening Questionnaire and an Education Toolkit

Principal Investigator: R Dhaliwal

Co investigators: N Jones, DK Heyland

Funding: \$15,000 Canadian Foundation of Dietetic Research (CFDR)

2007.2012 The Canadian Critical Care Trials Group, Emerging Team Grant and National Clinical Research Initiative, A Proposed Approach.

Principal Investigator: DJ Cook, J Marshall

Co investigators: P Hebert, DK Heyland, M Meade et al.

Funding: \$10,000,000 submitted to CIHR

2008.2011 Realities, Expectations and Attitudes to Life Support Technologies in Intensive Care for Octogenarians: The REALISTIC 80

Principal Investigator: DK Heyland

Co investigators: D Cook, P Dodek, Rocker G et al.

Funding: \$894,627 submitted to CIHR

2008.2009 Knowledge Synthesis of Implementation Strategies for Critically Ill Patients (The KRITICAL Study)

Principal Investigator: T Sinuff, A Garland, J Muscedere

Co investigators: D Cook, DK Heyland, P Dodek, et al.

Funding: \$99,500 submitted to CIHR

Site Investigator for the following multicenter trials:

1. A multicenter, randomized, controlled trial of transfusion requirements in critical care. 1997.
Funding: \$ 25,250.00
2. A centrally randomized, multicenter open trial of intravenous alatrofloxacin followed by oral trovafloxacin, compared with intravenous ceftriaxone to oral cefuroxime axetil with optional intravenous erythromycin to oral clarithromycin and/or intravenous to oral metronidazole or clindamycin for the treatment of community-acquired pneumonia in subjects requiring hospitalization and initial intravenous treatment.
Funding: \$ 23,968.00
3. A randomized, placebo-controlled trial of MAK195F (monoclonal antibody against tumour necrosis factor) in sepsis with hyperinflammatory responses. 1996-1999
Funding: \$ 420,000.00
4. A multicenter, double-blind, randomized, placebo-controlled study of filigastim in the treatment of patients with pneumonia and severe sepsis. 1998-1999
Funding: \$ 98,084.27
5. A randomized, double-blind, multicenter study comparing the efficacy and safety of piperacillin/tazobactam and imipenem/cilistatin administered intravenously every 6 hours to treat nosocomial pneumonia in hospitalized patients. 1999-2000
Funding: \$42,977.12
6. A phase III study to determine the efficacy and safety for recombinant human activated protein C (rhAPC) in severe sepsis. 2000
Funding: \$67,187.75
7. Venticute (rSP-C Surfactant) for the treatment of Acute Respiratory Distress Syndrome (ARDS): A randomized, multinational, multicenter, parallel group, double blind, controlled study. 2000-2001
Funding: \$55,500.00
8. Multicenter, Double blind, Placebo controlled, Randomized, Phase 3 study of tifacogin (Recombinant Tissue Factor Pathway Inhibitor) in Severe Sepsis. 2001
Funding: \$205,540.90
9. A Phase 3 Study to Demonstrate the Safety and Efficacy of Recombinant Platelet-Activating Factor Acetylhydrolase (rPAF-AH, Pafase) for Reducing 28 Day All Cause Mortality in Patients with Severe Sepsis. 2001-2003
Funding: \$53,557.78
10. Recombinant Human Activated Protein C Protocol (FIK-MC-EVBF): An Open-label Study of Recombinant Activated Protein C in Severe Sepsis. 2001-2003
Funding: \$18,318.00
11. Efficacy and safety of drotrecogin alfa (activated) in adult patients with early severe sepsis. 2002-2003
Funding: \$18,228.00
12. Multicenter, double-blind, study of the efficacy and safety of GAR-936 compared to Imipenem/Cilastatin to treat complicated intra-abdominal infections in hospitalized patients. 2003-2004
Funding: \$29,073.60
13. Three Dosages in ALI/ARDS versus Standard Therapy (HL10). 2003-2004
Funding: \$ 25,500

14. Fujisawa Canada Inc. Canadian ICU Infection Survey MYC-001. 2004:
Funding: \$ 11,000.00
15. A phase 3 multicenter, randomized, placebo-controlled, double blind, three-arm study to evaluate the safety and efficacy of tifacogin (CHIRON CAP). 2004-
Funding: \$ 33,005.94
16. (VALID) Venticute rSP-C surfactant in patients with pneumonia or aspiration of gastric contents leading to intubation, mechanical ventilation and severe oxygenation impairment (ALTANA). 2004-
Funding: \$57,238.20
17. A Phase 3, multicenter, randomized, double-blind, comparative study of the efficacy and safety of tigecycline vs imipenem/cilastatin for the treatment of subjects with nosocomial pneumonia: (Wyeth HAP) 3074A1-311-WW 2005-
Funding: \$ 64,122.00
18. A Phase 3, randomized, Double-Blind, Parallel-Group, Multinational Trial of Intravenous Telavancin Versus Vancomycin for Treatment of Hospital-Acquired Pneumonia with a Focus on Patients with Infections Due to Methicillin-Resistant Staphylococcus aureus. (Theravance) 2006-2007
Funding: \$ 3620.60

Total funding from Industry-sponsored research activities: \$1,337,955.42

XIX. RESEARCH INTERESTS

Nutrition support, gastrointestinal motility, stress ulcer prophylaxis, and gastrointestinal structure and function in the context of critical illness

Pneumonia, sepsis, and other infections in the critically ill patient.

Randomized trials, systematic reviews and meta-analysis, outcomes assessments, economic evaluations, quality of life assessments, quality of care, satisfaction with care, and health service research.

Evidence-based medicine, patient preferences, end of life care, and clinical decision-making.

XX. CLINICAL PRACTICE, INTERESTS AND ACCOMPLISHMENTS

Participant in the Evidence Based Medicine working group at McMaster University.

Participant in Evidence Based Medicine in Critical Care working group.

Member of the Adjudication Committee for the Sucralfate vs. Ranitidine multicenter randomized trial.

Consultant, BYK Canada. (Consultant on pharmacoeconomic study)

Consultant, Ross Division, Abbott Laboratories, Columbus, Ohio. (Consultant on trial design and implementation related to nutrition studies)

Attended "Awareness 98" sponsored by Health Evidence Application and Linkage Network (by invitation only), Toronto, Dec 7, 1998.

Member of Advisory Panel, Critical Care Research Network, London Health Sciences Center.

Member of Practice Guidelines Committee, Canadian Critical Care Society

Organized and Chaired ICU Consultants Forum sponsored by Wyeth-Ayerst, Mississauga, ON, June 15-17, 2001.

Attended a by-invitation only conference on "Nutrition in Critical Care" sponsored by Nestle, Inc. Paris, France, September 15-18, 2002.

Attended a by-invitation only "Critical Care Advisory Panel Meeting" sponsored by Ross Products, Abbott Laboratories, Columbus, Ohio, December 8-10, 2002.

XXI. COMMUNITY ACTIVITIES

Coach, Pacers Basketball League

Coach, Cataraqui Clippers Soccer League

President, Church of Jesus Christ of Latter Day Saints, Greater Kingston Area