

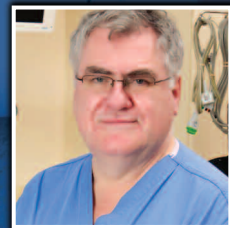
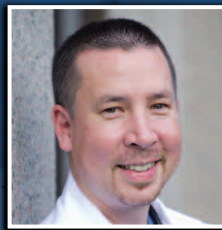
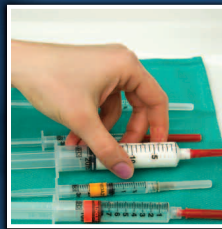
ACCOUNTABILITY REPORT

2013

OFFICE OF RESEARCH

Department of Anesthesia, Pain Management
& Perioperative Medicine

Dalhousie University



**DALHOUSIE
UNIVERSITY**

*Inspiring Minds
Faculty of Medicine*

VISION AND MISSION

Anesthesia, Pain Management and Perioperative Medicine Vision and Mission

Vision

A culture of excellence in anesthesia clinical practice and programs, research and education.

Mission

To deliver anesthesia services through up-to-date clinical care based on the latest evidence (research) and knowledge (education).

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EXECUTIVE SUMMARY

The Department of Anesthesia, Pain Management & Perioperative Medicine **2013 Research Accountability Report** communicates the research-related achievements by research staff with respect to established targets and goals stated in the *Research Accountability Framework*. The information in this report highlights research productivity from January to December 2013 as well as data from previous years for comparative and trending purposes.

As a summary, the areas where targets were met or partially met as well as those targets that were not met in 2013 are outlined below.

AREAS IN WHICH THE DEPARTMENT **MET ITS TARGETS** IN 2013:

- There were 22 *new* research endeavors/projects initiated in 2013.
- The number and value of grants and industry contract funded research are 38 and \$2.1M, respectively (**Figure 1** and **Table 1**).
- One researcher was successfully promoted to associate professor (100% success rate). The proportion of associate and full professors are 50% and 36%, respectively (**Figure 3**).
- Consistent with last year (2012), the proportion of collaborative projects, proposals and manuscripts remains high at 87%.
- The proportion of researchers who serve as members or reviewers on research ethics boards, granting agencies and scientific journals for local, national and international organizations are 79%, 64% and 71%, respectively (**Table 6**).
- Ten researchers were invited to review, organize, chair and offer expert opinion in 2013.
- Eight-eight percent of action items from the 2013 strategic plan were successfully completed (**Table 7**).
- The majority of researchers were involved in initiatives targeted at applying or translating research (86%).
- The total number of publications is 134 in 2013 (**Figure 3**).
- Researchers were invited to present their work at national (26%) and international (51%) forums (**Figure 4**).

AREAS IN WHICH THE DEPARTMENT **PARTIALLY MET ITS TARGETS** IN 2013:

- One recognition award was conferred in 2013 which was less than previous years.

INTRODUCTION

The annual **Research Accountability Report** reports on the research related activities related to pre-determined targets outlined in the Department of Anesthesia, Pain Management & Perioperative Medicine Accountability Framework. The **Research Accountability Report** was subsequently developed by a working group of departmental researchers and administrative staff using a collaborative process. Through it, the department attempted to recognize the value of the full scope of scholarly research activity, from engaging in the process of creativity, to implementing research projects, to communicating the results, and influencing clinical best practice. The **Research Accountability Report** was adopted by the department in December 2008.

THE ACCOUNTABILITY FRAMEWORK HAS FOUR SECTIONS:

- 1. Profile.** In this section, we describe the need for an accountability framework in the context of our office of research and describe our governance structure.
- 2. Results chain.** In this section, we provide a flow chart that ties resources devoted to research to the outcomes through a logical sequence of activities and outputs.
- 3. Measurement and reporting plan.** A key element of the accountability framework is the identification of the most appropriate indicators of research activity and productivity, our current targets, how to measure the indicators and how to report the results (*accountability report*).
- 4. Evaluation strategy.** The purpose of measuring and reporting results is to inform sound performance management and decision-making. The evaluation strategy outlines a cyclical, iterative strategy for ongoing learning from our results and adjusting our strategy as required.

This **Research Accountability Report (2013)** covers the time period from January to December 2013. It is the product of the Framework's *Measurement and Reporting Plan* in which key indicators and targets were identified for subsequent measurement and reporting. The results of this report will be used in the implementation of the *Evaluation Strategy*. Consistent with the *Results Chain*, this report reflects the activity of research-oriented clinicians or other professional faculty with protected time (time funded by the department) for research.

The following information reports on the 2013 research-related results for each predetermined target. In addition it provides a comparison to the data from previous years. This is done in graphical and table formats. In addition, currently held research grants/contracts and peer-reviewed publications are listed in *Appendix B* and *C*, respectively.

Engage in process of creativity

INDICATOR: Number of new proposals that are developed into research endeavors

TARGET: At least 3 new research endeavors/projects annually

RESULT: **22 new research endeavors/projects are underway**

Residents have engaged in *six new research endeavors*.

- Residents are expected to fulfill research requirements as part of their five-year residency program. The department has 26 residents (2013/2014).
- In 2013, seven scientific abstracts were presented at national and international conferences; one peer-reviewed paper was published; *six new research projects were initiated* and 14 lectures were presented by residents.

Fellows have engaged in *three new research endeavors*.

- Fellows are expected to fulfill research requirements as part of their one-year fellowship program. The department had three fellows in 2013, one in each of the following programs: pain, women and obstetrics and regional.

Students (undergraduate, graduate and postdoctoral) have engaged in *eight new research endeavors*.

Clinician scientists developed *five additional research projects*.

- The focus of these projects includes pain, cardiovascular, hypoxemia and airway.

SCHOLARLY CURIOSITY

Engage in the process of research

INDICATOR: Number & value (\$) of grants & industry contracts received

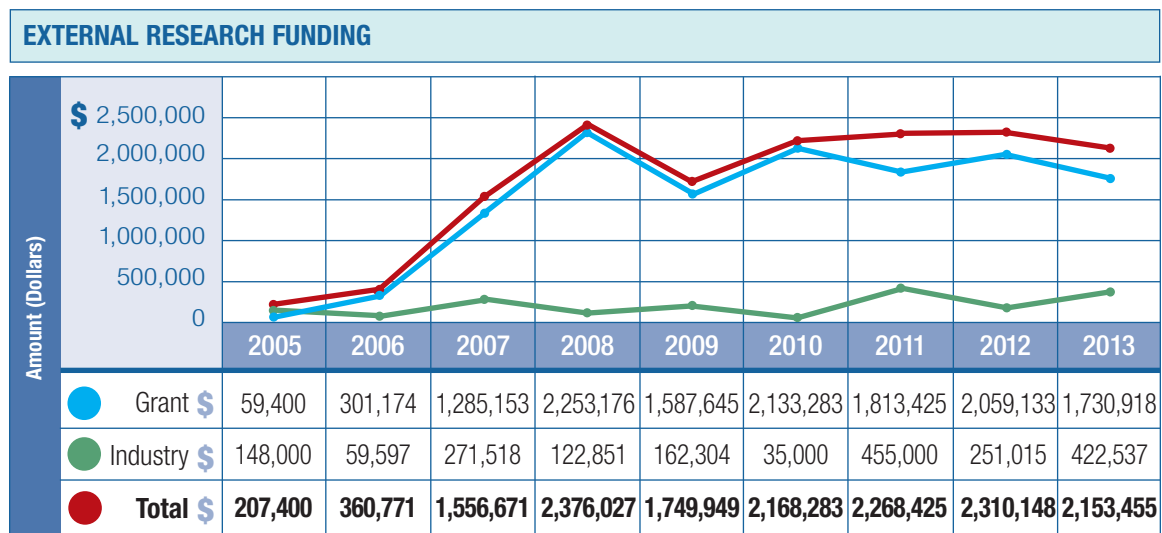
TARGET: Trending reflects maintenance or increase from previous years relative to protected research time

RESULT: **38 externally funded projects totaling over \$2.1M**

The total *amount* and *number* of ongoing grant/industry funded projects remains high since 2010 (**Figure 1** and **Table 1**). Grant funded research accounts for 80% of the external support with the remaining 20% from industry contracts. A major contributor to this success is the consistent support of protected time for research (**Table 2**).

Grant funded research underway in the department in 2013 includes seven projects funded by the Canadian Institutes of Health Research (CIHR) totaling over \$1.0M with another four national grants totaling close to \$400,000 from a variety of agencies. This translates into 80% of the external support coming from national granting agencies. Five projects are funded by Nova Scotia Health Research (NSHRF) approximately \$207,000, with the remaining grants from local and international organizations.

FIGURE 1: The amount (\$) in external research grant and industry contract funding received (2005-2013)



Note that the value of research funding each year includes revenue from all research awards generating funds in that year (for multi-year awards, the revenue is reported in the year it is budgeted). *All research projects in which a department researcher is a team member are included.* Also, the number of grants received reflects the number of grants and contracts generating funds that year (which may be continuing from earlier years).

SCHOLARLY CURIOSITY (CONT'D.)

TABLE 1: Number of grants & industry contracts received

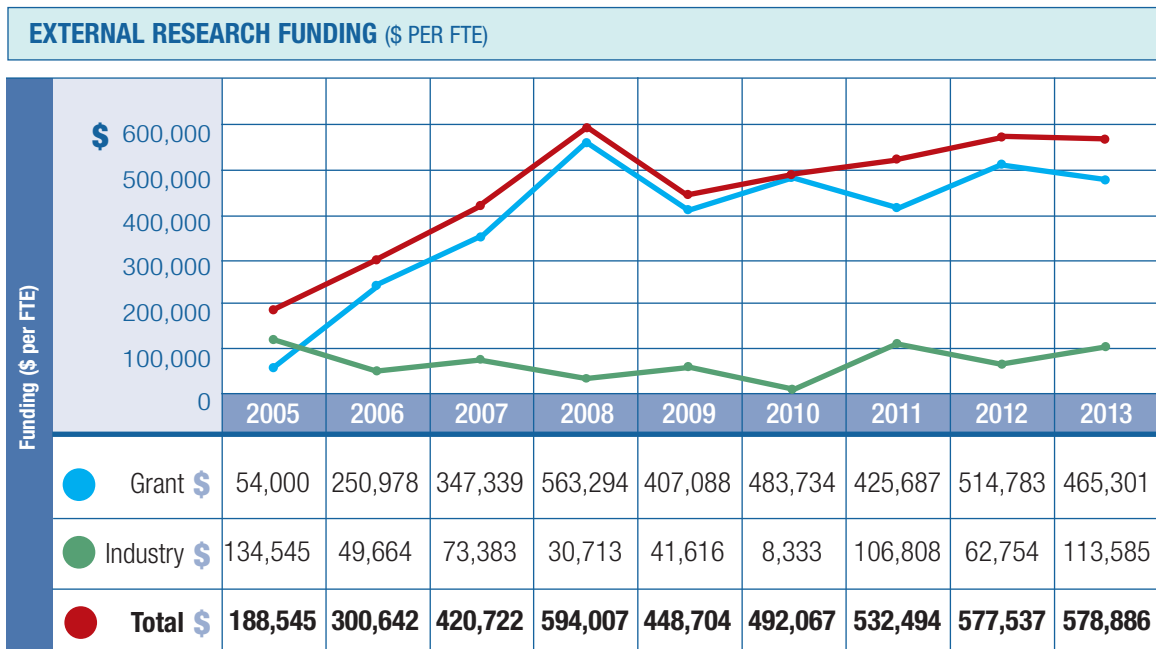
FUNDING GRANTS & INDUSTRY CONTRACTS									
	2005	2006	2007	2008	2009	2010	2011	2012	2013
Grant	2	5	10	23	17	24	27	31	29
Industry	2	3	4	3	2	1	6	7	9
Total	4	8	14	26	19	25	33	38	38

TABLE 2: Protected time for research activities (2005-2013)

FTE PROTECTED TIME									
	2005	2006	2007	2008	2009	2010	2011	2012	2013
Protected Time	1.4	1.5	3.8	4.2	4.2	4.2	4.26	4.0	3.7

In **Figure 2**, the value of grants and industry contracts received relative to FTE (**Table 2**) of protected time for research is illustrated. While the protected time for research has slightly decreased for 2013 compared to the previous four years, the total dollar amount relative to the FTE have increased, indicating that researchers have remained successful in obtaining funding despite the reduced amount of protected time.

FIGURE 2: Number of grants received relative to FTE of protected time for research



SCHOLARLY CURIOSITY (CONT'D.)

INDICATOR: Number of associate and full professors

TARGET: 50% of researchers will be at professor level, 30% at associate level; with 60% of research related promotion applications being successful.

RESULT: **50% at professor level, 36% at associate level; and 100% applications successful**

TABLE 3: Number and percentage of appointments in department

NUMBER AND PERCENTAGE OF APPOINTMENTS		
Rank	Number (#)	Percent %
Professor	7	50%
Associate Professor	5	36%
Assistant Professor	3	21%

There was one successful promotion to associate professor (P. MacDougall) in 2013 indicating a 100% success rate in the 2013 promotion applications.

In general, the proportion of researchers at the various ranks is consistent with their academic profile and status (e.g. seniority, terms of appointment).

INDICATOR: Number of recognition awards

TARGET: Trending reflects maintenance or increase from previous years relative to protected research time

RESULT: **1 recognition award**

One recognition award for achievements in 2013 was conferred (**Tables 4 and 5**). Congratulations to **Jill Chorney, Ph.D.**, for receiving the *Progress Women of Excellence Award* (Education and Research), a prestigious award that celebrates achievements which have made a powerful impact on the community.

TABLE 4: Number of recognition awards (2005-2013)

AWARDS									
	2005	2006	2007	2008	2009	2010	2011	2012	2013
No. of Awards	7	6	7	3	7	3	3	3	1

TABLE 5: Number of recognition awards relative to FTE of protected time for research (2005-2012)

RECOGNITION AWARDS RELATIVE OF FTE PROTECTED TIME									
	2005	2006	2007	2008	2009	2010	2011	2012	2013
Recognition Awards	5.0	4.0	1.9	0.7	1.7	0.7	0.7	0.8	0.3

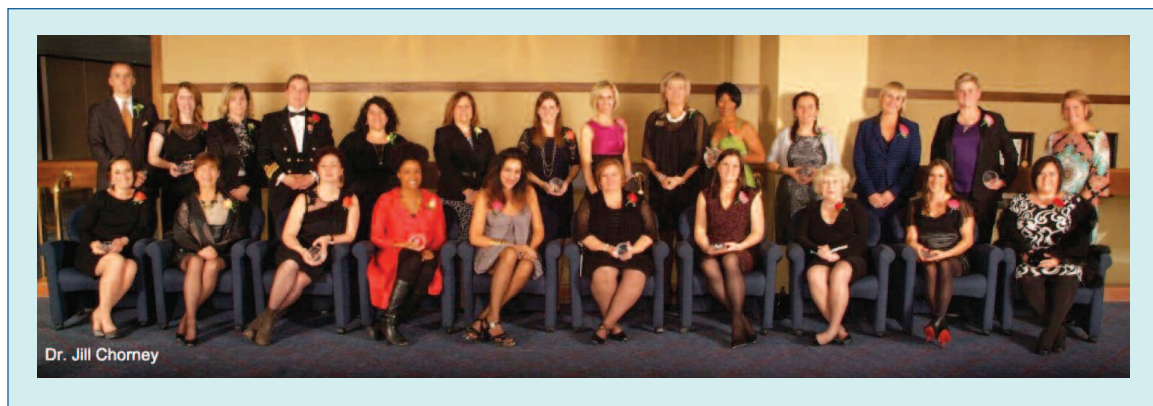


Illustration 1: The 25th annual Progress Women of Excellence Award winners – November 19, 2014 World Trade and Convention Center, Halifax NS.

Actively seek out collaborative opportunities with interdisciplinary colleagues

INDICATOR: Number of collaborative projects, proposals and manuscripts

TARGET: 80% of all projects are collaborative

RESULT: **87% of all projects and publications are collaborative**

Of 134 publications, 124 have co-authors (93%). Of 38 funded grants and industry contracts, 25 have co-investigators (66%). Therefore, 149 out of 172 projects and publications are collaborative (87%).

Members of scientific organizing committees

INDICATOR: Number of researchers who serve as members or reviewers for research ethics boards, editorial boards, professional associations, granting agencies, scientific journals

TARGET: 40% of researchers are reviewers/members locally, 30% nationally, 10% internationally

RESULT: **79% of researchers are reviewers/members locally, 64% nationally, 71% internationally**

TABLE 6: Number and percentage of participating researchers in the department

PARTICIPATING RESEARCHERS		
	Number of Researchers	Percent
Local	11 / 14	79%
National	9 / 14	64%
International	10 / 14	71%

INDICATOR: Number of researchers invited to review, organize, chair and offer expert opinion

TARGET: 50% of researchers invited to review, organize, chair and offer expert opinion

RESULT: **71% review, organize, chair and offer expert opinion**

Ten out of 14 researchers were invited to review, organize or chair (71%).

Engage in the administrative process

INDICATOR: Engage in planning activities to advance the research mission

TARGET: 80% of action items completed from research strategic plan each year

RESULT: **88% of action items completed from the 2013 research strategic plan**

The strategic plan is reported based on the academic year (September 2012 to August 2013).

TABLE 7: Status of action items for the 2013 Research Strategic Plan

STATUS OF ACTIONS			
Status	# Action Items	% Acted Upon	
Completed	9	18%	88%
Ongoing (never completely done)	23	45%	
Progress underway	13	25%	
No progress	6	12%	12%
TOTAL	51		

The Office of Research updated its strategic plan on September 11, 2013. Five priority actions were identified:

1. Support trainee programs involving research projects
2. Establish a Dalhousie University Pain Institute and Endowed Chair for Pain
3. Support the Perioperative Anesthesia Clinical Trials (PACT) initiative
4. Assist current human resource planning to recruit clinician scientists (Priority Action)
5. Advocate for a flexible scheduling environment to facilitate research planning

SCHOLARLY TRANSLATION

Link theory to practice activities

INDICATOR: Number of initiatives (presentations) targeted at applying or translating research

TARGET: 30% of researchers are engaged in knowledge translation activities

RESULT: **86% engaged in knowledge translation activities**

Twelve out of 14 researchers engaged in knowledge translation activities (86%).

SCHOLARLY COMMUNICATIONS

Write and publish

INDICATOR: Number of submitted and accepted publications (peer reviewed & non-peer reviewed)

TARGET: Trending reflects maintenance or increase from previous years relative to protected research time

RESULT: **134 publications have been submitted and accepted (peer-reviewed & non peer-reviewed)**

There total number of publications and the number of publications relative to FTE of protected time for research increased compared to the previous year (**Figure 3**). Of note, the total number of 'other' publications in 2013 doubled from last year and includes mostly clinical editorials and reports. **Table 9** shows that relative to protected time researchers achieved an all time high in the total number of publications.

FIGURE 3: Number of submitted and accepted publications (peer reviewed & non-peer reviewed)

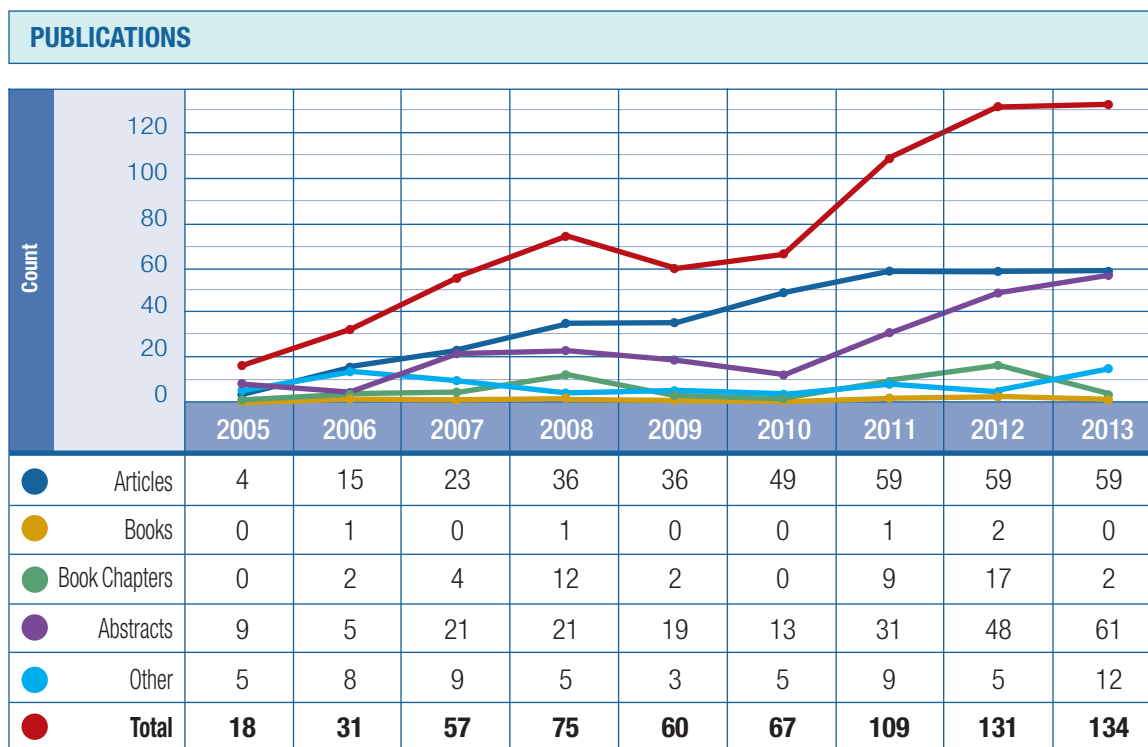


TABLE 9: Number of submitted and accepted publications (peer reviewed & non-peer reviewed) relative to FTE of protected time for research

PUBLICATIONS PER FTE PROTECTED RESEARCH TIME									
	2005	2006	2007	2008	2009	2010	2011	2012	2013
Articles	4	13	6	9	9	11	14	13	16
Books	0	1	0	0	0	0	0	0	0
Book Chapters	0	2	1	3	1	0	2	4	1
Abstracts	8	4	6	5	5	3	7	11	16
Other	5	7	2	1	1	1	2	1	3
Total	17	27	15	18	16	15	26	30	36

Prepare and deliver presentations

- INDICATOR:** Number of presentations (local, national, international)
- TARGET:** Trending reflects maintenance or increase from previous years relative to protected research time
- RESULT:** **22 local, 20 national and 43 international invited presentations**

The total number of presentations by researchers has remained high and relatively consistent (**Figure 4**). The number of international presentations made by the researchers continues to be almost double of either local or national presentations. Also, the total number of presentations relative to protected time for research has also remained consistently high (**Table 10**).

FIGURE 4: Presentations (count) for local, national and international audiences

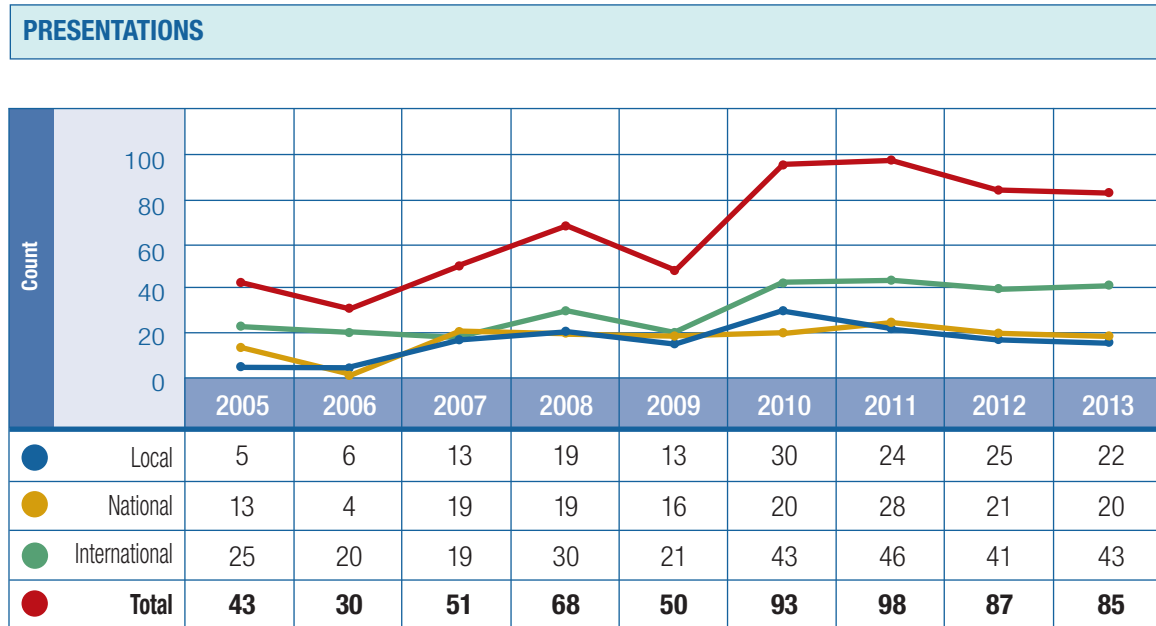


TABLE 10: Number of presentations (local, national, international) relative to FTE protected time for research

PRESENTATIONS RELATIVE TO FTE PROTECTED TIME

	2005	2006	2007	2008	2009	2010	2011	2012	2013
Local	5	5	4	5	3	7	6	6	6
National	12	3	5	5	4	5	7	5	5
International	0	17	5	8	5	10	11	10	12
Total	17	25	14	18	12	22	23	22	23

APPENDIX A – PROTECTED TIME FOR RESEARCH

2013 PROTECTED TIME FOR RESEARCH (NOTE: THE FTES ARE DIRECTLY RELATED ONLY TO ANSI AFP.)

RESEARCHER	PROTECTED TIME
J. Chorney	0.17
A. J. Clark	0.20
A. Finley	0.20
R. George	0.07
O. Hung	0.40
M. Kwapisz	0.05
K. Kwofie	0.20
C. Lehmann	0.60
M. Lynch	0.60
P. MacDougall	0.20
J. McDougall	0.33
A. Milne	0.20
M. Schmidt	0.40
A. Vlatten	0.10

TOTAL PROTECTED TIME	4.0
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Individuals with protected time for anesthesia related research work on national organizations also include **Drs. Richard Hall** (0.1) and **Adam Law** (0.2), but are not included in the total FTE calculation.

Members engaged in research related activities without Anesthesia-funded protected time include **Dr. Jill Chorney** (0.5) in 2013. Dr. Chorney is partially funded by a CIHR New Investigators Award.

APPENDIX B – 2013 RESEARCH PROJECTS

FUNDED PROJECTS: NOTE THAT THE BRACKETED DOLLAR AMOUNT IS THE TOTAL VALUE OF THE AWARD WHEREBY ANNUAL AMOUNTS ARE PROVIDED IN FIGURE 1.

NEW FUNDED PROJECTS IN 2013

1. Birnie KA, Chambers CT, McGrath PJ, Fernandez CV, Chorney J. Catastrophizing and parenting during parent-child interactions about pain and conflict. [Grant] Dalhousie University Department of Psychiatry Research Fund. Aug 2013. (\$10,000)
2. Chorney J, Curren J, Hong P, McGrath P, Ritchie K. Understanding Shared Decisions in Pediatric Surgery [Grant] NSHRF. Aug 2013. (\$147,246)
3. Chorney J, Bailey K, Schmit P, Taylor B. Using a web-based motion tracking game and information pamphlet to prepare children and their parents for scheduled MRI: A Feasibility study [Grant] IWK Health Centre. Jan 2013. (\$3,000)
4. Chorney J, Bird S, Bailey K. Preparing Parents to be Present at their Children's Anesthesia Induction [Grant] IWK Health Centre. Jan 2013. (\$14,992)
5. Chorney J. Augmented reality MRI preparation game for kids. [Industry] Springboard Atlantic Innovation Mobilization Program. Aug 2013. (\$13,347)
6. Clark AJ, Chambers C, Harman K, George R, McDougall J. Dalhousie Pain Group [Grant] Faculty of Medicine, Dalhousie University. May 2013. (\$23,000)
7. Curran J, Chorney J, et al. Closing the loop in pediatric emergency care: A narrative review of best practice for providing discharge instructions to caregivers in the emergency department. [Grant] Canadian Institutes of Health Research (CIHR). Jan 2013. (\$99,339)
8. Curran J, Grimshaw J, McGrath P, Chorney J, et al. Understanding Discharge Instructions for Children and Caregivers in the Transition from Pediatric Emergency Care [Grant] CIHR-NSHRF Regional Partnership Program Operating Grant. Jul 2013. (\$435,804)
9. Curran J, Chorney J, MacPhee S, Murphy A, Plint A, McGrath P. Identifying Essential Content for Discharge Instructions for Caregivers in Pediatric Emergency Care: A Delphi Study [Grant] Jan 2013. (\$14,516)
10. d'Entremont M-A, Lynch ME, Clark AJ. Urine Drug Screening in the Management of Chronic Pain [Grant] Pain Management Unit CDHA. Jul 2013. (\$2,500)
11. Forgeron P, Chorney J, Dick B, Carlson T. To befriend or not: Naturally developing friendships amongst a group of adolescents with chronic pain. [Grant] University of Ottawa, Faculty of Health Sciences Initiative Grant. Aug 2013. (\$4,085)
12. George RB, Islam Saleh Abdo, Dolores McKeen, Jillian Coolen, Christian Lehmann. Maternal Microcirculation & SDF Imaging: A novel assessment of the microcirculation during cesarean delivery with spinal anesthesia and the impact of phenylephrine prophylaxis in preventing spinal anesthesia-induced hypotension. [Grant] IWK Health Centre Category B Grant. Mar 2013. (\$15,000)
13. Hart C, Fraser J, Clark AJ. The Mobile Methadone Program Is it Helping? [Educational Grant] Dalhousie University. Jul 2013. (\$2,500)
14. Hong P, Chorney J. Development of a Team to Study Decision Aids in Pediatric Otolaryngology [Grant] REDI Awards. Jan 2013. (\$9,952)
15. Hung O. Intravenous fluid administration monitor "IV-Tag" [Industry] innovacorp Early Stage Commercialization Fund. Jan 2013. (\$50,000)
16. Kwapisz M, Kent B, Mingo H, Poranek A. The use of Fibrinogen Concentrate in High-Risk Cardiac Surgery: A Prospective Double Blind Randomized Controlled Study [Grant] CSL Behring. Aug 2013. (\$453,674)
17. Kwapisz M. Retrospective Chart Review on the use of Fibrinogen Concentrate in Cardiac Surgery Patients [Grant] CSL Behring. Jun 2013. (\$9,000)
18. Kwapisz M. Retrospective Chart Review on the use of Fibrinogen Concentrate in Jehovah's Witness Cardiac Surgery Patients. [Grant] CSL Behring. Jun 2013. (\$9,000)
19. Lehmann C, Zhou J, Kelly Melanie. Manipulation of the Endocannabinoid System in Experimental Sepsis [Grant] Nova Scotia Health Research Foundation. Mar 2013. (\$147,960)
20. Lehmann C, Zhou J. Modulation of cannabinoid receptor 2 signaling – a new therapeutic approach in CNS injury-induced immune deficiency syndrome (CIDS) [Grant] CDHA Research Fund. Aug 2013. (\$14,881)
21. MacDougall P, Brousseau P, Milne, A. The Relationship Between Hip and Knee Replacement Surgery and Opioid Prescribing: A COAP Dataset Review [Grant] CDHA. Feb 2013. (\$14,600)
22. McKeen DM. The RECITE Study: Residual Curarization and its Incidence at Tracheal Extubation. [Overhead Award] IWK Health Centre. Jan 2013. (\$18,677.18)
23. Nantais J, Lehmann C. Methylene Blue Therapy in Experimental Septic Shock [Grant] CDHA Research Fund. Aug 2013. (\$5,000)
24. Szerb J, M. Kwesi Kwofie. Histological Confirmation of Ultrasound-Guided Needle Placement in Regional Anesthesia Intraplexus Versus Periplexus Approach [Grant] CDHA. Aug 2013. (\$15,000)

ONGOING FUNDED PROJECTS

- 1.** Chorney J, Andreou Pantelis, El-Hawary Ron, Finley GA, Howard Jason, McGrath Patrick JA, Valois Teresa. Pain at Home in Children following Major Surgery: Physical, Psychological, and Economic Consequences [Grant] Canadian Institutes of Health Research. Jun 2010. (\$724,991)
- 2.** Chorney J. Establishment of the Child Health and Perioperative Care Laboratory [Grant] Canadian Foundation for Innovation (CFI). Jan 2012. (\$312,177)
- 3.** Chorney J. Pain in Children at Home Following Major Surgery: New Investigator Award [Grant] CIHR. Jul 2012. (\$300,000)
- 4.** George RB. Enhancing analgesia and anesthesia for women and high-risk pregnancies. [Grant] Canadian Anesthesiologists' Society. Jul 2012. (\$120,000)
- 5.** Kain ZN, Chorney J, Blount RL. Improving pain and anxiety in children undergoing surgery: Changing Healthcare Provider Behavior [Grant] National Institutes of Health. Jan 2012. (\$2,730,034)
- 6.** Latimer M, Rudderham S, Finley GA, Inglis S, Hutt-McLeod D. Understanding pediatric pain in aboriginal communities: Children's project [Grant] Nova Scotia Health Research Foundation. Jan 2011. (\$150,000)
- 7.** Latimer MA, Finley GA, Inglis S, Rudderham SE, Young S. Understanding pain in Aboriginal children: moving forward in Central and Eastern Canada [Grant] CIHR. Sep 2012. (\$22,369)
- 8.** Lehmann C. Iron removal in vivo study (IRIS) [Industry] Mitacs. Jun 2012. (\$119,999)
- 9.** Lehmann, C. Iron Removal Study in Vivo Study (IRIS) [Industry] Chelation Partners. Jun 2012. (\$39,444)
- 10.** Lynch ME, Clark AJ, Flowerdew G, Moulin D, Toth C. A double blind randomized controlled trial examining the efficacy of methadone in treatment of chronic neuropathic pain [Grant] CIHR NSHRF Dal. Oct 2010. (\$502,633)
- 11.** Lynch ME. Clinical Scholar Program, Matching Funds, Dalhousie Faculty of Medicine [Grant] Dalhousie University. Jan 2012. (\$82,949)
- 12.** Lynch ML, Clark, AJ, et al. Infrastructure Operating Fund (CFI): Canadian Pain Trials Network [Grant] CFI – IOF. Mar 2010. (\$105,580)
- 13.** McDougall J. The relationship between proteases, protease activated receptors and cytokines in mediating osteoarthritis pain [Grant] Canadian Institutes of Health Research (CIHR). Jan 2012. (\$601,280)
- 14.** McDougall J. Therapeutic potential of lysophosphatidic acid antagonism to control OA pain [Industry] Canadian Arthritis Network/Eli Lilly & Company Industry Research Programme Grant. Jan 2011. (\$200,000)
- 15.** McDougall J. Effect of cannabinoids and opioids in the control of arthritis pain [Grant] Nova Scotia Health Research Foundation (NSHRF). Aug 2012. (\$149,790)
- 16.** McDougall J. Host-parasite interactions alter joint inflammation in mouse model systems [Grant] Canadian Institutes of Health Research (CIHR). Jan 2010. (\$424,248)
- 17.** McGrath PJ, Craig KD, Finley GA, Grunau RE, Johnston C, Stevens BJ, von Baeyer CL. Pain in child health, an innovative, international, trans-disciplinary research training consortium – Phase II [Grant] CIHR. May 2009. (\$1,950,000)
- 18.** Schmidt M. Commercialization of CO2 removal device for anesthesia circuits [Grant] Atlantic Canada Opportunities Agency. Jun 2012. (\$1,245,617). See specific projects below.
 - a. Schmidt M, Stoyek M., Wilfart F., Croll R., Smith F. A zebrafish model to investigate the cardiac effects of noble gases.
 - b. Schmidt M, Stoyek M, Croll R, Wilfart F, Smith F. The isolated zebrafish heart as a model to investigate the basic mechanisms of cardiac side effects of modern anesthetics.
 - c. Schmidt M, Croll R, Wilfart F. Zebrafish learning as a model for investigating learning disabilities after repeated anesthesia.
 - d. Schmidt M, Croll R, Wilfart F. Zebrafish learning as a model for investigating learning disabilities after exposure to toxic byproducts of anesthesia.
 - e. Schmidt M, Nickerson P, Wilfart F. The mouse as model for the investigation of anaesthetics and its by-products on apoptosis and necrosis of the retina.
 - f. Schmidt M, Wilfart F, Nickerson P, Christie S. Spinal injury in the pig as model for investigating anesthesia strategies and neuro-protective substances.

UNFUNDED PROJECTS

- 1.** Law JA, Gu Y, Robert J. Optimal laryngoscopic view to enable GlideScope-aided tracheal intubation. A Randomized Control Trial [Unfunded] Dec 2013.
- 2.** Dumbarton T, Livingston P, MacLeod A. Curriculum Design and Mapping for the Anesthesia Residency Program at Dalhousie University: An Ethnography [Unfunded] Apr 2013
- 3.** Gallacher W, Kwofie K, Doucette R, Kiberd M. Perioperative echocardiographic evaluation of the aortic valve by anesthesiologist: Can we be taught? [Unfunded] CDHA. Jun 2013.
- 4.** Gilchrist A, Brady J, Goodday R, Milne AD. Effect of Orthognathic Surgery on Airway Grade - A Retrospective Review [Unfunded] Jun 2013.
- 5.** Law JA, Milne A, Morris I, Brousseau P. A retrospective database review of methods used to achieve tracheal intubation in operative patients [Unfunded] Oct 2013.
- 6.** Law JA, Gu Y. King Vision laryngoscope (channeled version): Standard endotracheal tube vs. Parker endotracheal tube for first-pass success. (Working Title) [Unfunded] Oct 2013.
- 7.** Christian Lehmann, Juan Zhou, James Pius. Modulation of the immune response after stroke [Unfunded] Jun 2013.
- 8.** Christian Lehmann, Juan Zhou, Lisanne Kostek, Mel Kelly. Iron Removal In vivo study [Unfunded] May 2013.
- 9.** Milne AD, Pullela R, Valiant EM. Mechanical Strength Characteristics of Plastic Versus Metal Disposable Laryngoscope Blades [Unfunded] Aug 2013.
- 10.** Vargo M, Beauprie I, Chorney J. Evaluation of lumbar facet joint steroid injection in clinical practice, a retrospective cohort analysis. [Unfunded] Sep 2013.
- 11.** Juan Zhou, Christian Lehmann, Lizeth Orozco. Modulation of the immune response after stroke [Unfunded] May 2013.

Note that this list of publications only includes those peer-reviewed articles that are currently published and accessible online (52).

1. Al-Banna N Christian Lehmann. Oxidized LDL and LOX-1 in Experimental Sepsis. *Mediators of Inflammation*, 2013.[doi: [10.1155/2013/761789](https://doi.org/10.1155/2013/761789)].
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APPENDIX C – 2013 Publications (CONT'D.)

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APPENDIX D – 2013 Strategic ACTIONS

ACTIONS	LEAD	DD	FINAL REPORT DATA			
			COMPLETED	ONGOING	IN PROGRESS	NO PROGRESS
Participate in research outreach activities, contribute to a continuous learning environment and pursue collaborative opportunities						
Hold regular meetings related to research (i.e. Research Club)	DM	4/yr		X		
Support and track participation on hospital and university research ethics boards	DM	Ongoing		X		
Encourage participation and attendance at Anesthesia Research Day	DM rRD MD aMC	Ongoing		X		
Solicit feedback from Research Day participants	DM MD aMD	April		X		
Conduct a needs assessment for CPD topics and knowledge gaps	DM	Nov				X
Provide information sessions on IP commercialization	DM RF	March	X			
Reserve a Grand Round session for research	DM MD aMD	July		X		
Promote/Develop a series of events to facilitate collaboration	DM MD aMD	Oct				X
Facilitate the integration of the research agenda into all programs						
Support research component of fellowship program	MD aMD RES	Ongoing		X		
Assist programs and individuals in developing research agendas	DM MD aMD	Ongoing		X		
Engage in knowledge translation activities	RES	Ongoing		X		
Engage learners (residents) with an appreciation for research						
Ongoing recruitment of research-oriented residents	rRD	Ongoing		X		
Encourage continued resident research activities	rRD	Ongoing		X		
Identify strategies that will support residents who wish to pursue research-related graduate	DM rRD	Oct			X	
Evaluate research workshop series	rRD				X	
Capture resident research activities during and after fulfilling research requirement of program	DM	Ongoing		X		
Implement ANES summer studentship award	DM	Dec	X			
Build partnerships, collaborations and awareness of our activities						
Cultivate collaborations with other departments	RES DM MD	Ongoing	X			
Continue securing cross and adjunct appointments	DM RES	Ongoing	X			
Continue inviting other researchers to department events	DM	Ongoing	X			
Develop relationships with Dalhousie ILIO (Priority Action)	DM MD RF	June	X			
Increase the research profile of the department						
Continued profiling research e.g. update posters, post publications, develop video	DM RF	Ongoing		X		
Continue to participate in <i>Applause</i>	DM ExD	4/yr		X		
Advocate for researcher interests	DM MD aMD	Ongoing		X		
Hold regular research operational committee (ROC) meetings	DM MD aMD	4/yr		X		
Ongoing participation on relevant department committees	DM MD RES	Ongoing		X		
Ongoing participation on scientific review committees	DM RES	Ongoing		X		
Ongoing participation in promotional opportunities e.g. public talks	RES	Ongoing		X		
Evaluate communication efforts	DM	Dec				X

APPENDIX D – 2013 Strategic ACTIONS (CONT'D.)

ACTIONS	LEAD	DD	FINAL REPORT DATA			
			COMPLETED	ONGOING	IN PROGRESS	NO PROGRESS
Engage in regular planning and reporting activities to inform future directions						
Ongoing implementation of strategic actions and evergreening of plan	DM RF	Ongoing		X		
Inventory current department resources/competencies	DM RF	Nov				X
Continuing ARAC coordination	DM MD	Ongoing		X		
Increase the capture and reporting of another six (6) established targets	DM aMD	Nov			X	
Develop and conduct a needs assessment for increased capacity for clinical research support and space	DM RF RES	Dec				X
Capacity building						
Develop a strategy to facilitate involvement for novice researchers	DM MD				X	
Develop a policy on the submission of Grants (complete) and REB	DM	Dec			X	
Participate in mentorship program as mentors for novice researchers	RES	Ongoing		X		
Examine research activities and identify strategic directions	DM RES	Ongoing		X		
Establish a Dalhousie University Pain Institute and Endowed Chair for Pain (Priority Action)	RES ExD Head	Ongoing			X	
Establish a QE2 Chair for Perioperative Care and Outcomes	ExD Head	on Hold				
Human Resources						
Re-establish MOU with PERU	DM	Feb	X			
Participate in department Performance Management program	DM RF	Ongoing	X			
Report ACTION progress to ROC	DM	Aug			X	
Financial Resources (2)						
Develop a financial plan	Head DM ExD MD	Dec			X	
Secure agreement from relevant parties to the financial plan	MD aMD	Ongoing			X	
Explore methods to incentivize academic accomplishments (Priority Action)	MD aMD	Sept				X
Move to budget transparency and reporting to ROC	DM	Ongoing			X	
Develop guidelines for requesting for internal research support	DM MD aMD	Sept			X	
Facilities and Equipment (1)						
Reno research space 14th floor of the Tupper (Priority Action)	MD RF	Sept			X	
Technology (3)						
Ongoing database maintenance	DM	Ongoing		X		
Evaluate/Update iis-CV capture and output (Priority Action)	DM aMD	Sept			X	
Implement online option for Research meeting participation	DM	March	X			
TOTAL ACTIONS			9 (18%)	23 (45%)	13 (25%)	6 (12%)

DM: Director managing, MD: Medical director, aMD: Associate medical director, RF: Research facilitator, Head: of the department, ExD: Executive director, rRD: Resident research directors, RES: researchers.

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